Parental Attachment Predicting Emotions and Stress During Positive Life Events

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ABSTRACT. Relationships with parents such as those addressed in attachment theory can dictate emotion processing and perception of situations. Namely, insecure parental attachment (i.e., higher attachment-based anxiety and avoidance scores; Fraley, Heffernan, Vicary, & Brumbaugh, 2011b) can compromise emotion regulation and affect. However, although previous attachment research has addressed emotions during daily positive events (Gentzler, Kerns, & Keener, 2010), to our knowledge no studies have evaluated participants’ attachment in relation to their emotions during major positive life events that involve their parents (e.g., a wedding or holiday). Thus, the present study aimed to evaluate this and extend previous research (Gentzler & Kerns, 2006; Gentzler et al., 2010; Sheinbaum et al., 2015). This is important because major positive life events might solidify internal working models of attachment. Additionally, secure attachment and savoring positive emotions correlate with well-being. Participants (N = 310; M_age = 31.26) completed measures of attachment (i.e., attachment-based anxiety and avoidance) and emotions (e.g., joy, stress) in positive life events involving parents. Results of multiple hierarchical regression showed that insecure attachment predicted decreased joy (p < .001) and increased stress (p < .001) for positive events, after controlling for gender and age. Similarly, for imagined future events, insecure attachment predicted less positive emotions (p < .001) and more negative emotions (p < .001). These results imply that parental attachment can negatively impact positive emotions such as joy during positive life events. Implications and applications are discussed.

R elationships with parents can dictate how emotions are processed (Gentzler, Ramsey, Yuen Yi, Palmer, & Morey, 2013) and situations are perceived (Sheinbaum et al., 2015). Namely, family unpredictability, defined as inconsistent familial behaviors, can lead to the anxious belief that the world is an uncertain place (Burnett, Jones, Bliwise, & Ross, 2006; Ross, Hood, & Short, 2016). This anxiety can be explained by attachment theory (Ainsworth, Blehar, Walters, & Wall, 1978), which posits that people create an “internal working model” of attachment based on prior experiences with parents and other attachment figures (Bowlby, 1980; Bretherton, 1985). Although many parental relationships result in secure attachment, which is associated
with positive psychological outcomes (Schiffrin, 2014), others manifest in insecure attachment, which can be broadly described in two overarching dimensions—anxiety and avoidance (Fraley, Heffernan, Vicary, & Brumbaugh, 2011b; Fraley, Hudson, Heffernan, & Segal, 2015).

**Overview and Importance of the Present Research Topic**

Insecure attachment, or attachment-based anxiety and avoidance, negatively impacts emotional regulation and affective states (Malik, Wells, & Wittkowski, 2015; Quoidbach, Berry, Hansenne, & Mikolajczak, 2010; Schiffrin, 2014; Simpson, Collins, Tran, & Haydon, 2007). However, despite this association between attachment theory and emotion regulation, and previous studies on its application in daily life (Gentzler & Kerns, 2006; Gentzler, Kerns, & Keener, 2010; Sheinbaum et al., 2015), prior work has not addressed the association between attachment orientations and the emotions experienced during major, positive life events (e.g., graduation, marriage). Therefore, in the present study, we explored attachment-based avoidance and anxiety in relationship to the experience of joy and stress in positive major life events that involve participants’ parents, in addition to emotions about imagined future life events with parents. This is an important arena of study because secure attachment (Mikulincer & Shaver, 2013), as well as the savoring of positive emotions (i.e., intensifying and sustaining positive affect), are associated with well-being and life satisfaction (Quoidbach et al., 2010). Moreover, major life events may have the capacity to solidify internal working models of attachment (i.e., schemas of relationships and the self; Hazan & Shaver, 1987), which include the affect associated with the events formulating the schema (Bretherton, 1985). Although these models are established in childhood and adolescence and often remain consistent throughout the lifetime, they have the possibility of changing or becoming more elaborate (Bowlby, 1969; Pietromonaco & Barrett, 2000). For example, major life events often serve as significant memories, and offer an opportunity for parents to respond in a way that is commensurate with, or distinct from, the adult child’s working model—thereby reinforcing or altering the working model and its associated affect. Thus, the goal of the present study was to analyze parental attachment in relationship to the affect and emotions experienced during positive life events that involve one’s parents.

**Attachment Theory and Parental Attachment**

**Brief overview of attachment theory history.** In her seminal work, Ainsworth et al. (1978) built on Bowlby’s attachment theory (1969, 1980) and presented the Strange Situation research paradigm, in which infants were classified in terms of three attachment styles (i.e., secure, ambivalent, avoidant; Ainsworth et al., 1978). Secure individuals use the attachment figure as a “secure base” from which to seek interaction and derive comfort, and then to explore the world from (Ainsworth et al., 1978). Both ambivalent and avoidant attachment are categories of insecure attachment. In the Strange Situation, a confederate stranger enters a playroom that contains a mother-infant dyad. After some time, the mother leaves the child alone in the room with the stranger. Once the mother returns, the way in which the infant responds to her dictates its attachment style (Ainsworth et al., 1978). In the years following this research, Ainsworth’s advisee Main noted a fourth attachment style, disorganized-disoriented, another insecure category (Main & Solomon, 1986).

**Current conceptualization of attachment.** Many recent researchers have transitioned from categorical attachment categories (Main & Solomon, 1986) to continuous dimensions of attachment—anxiety and avoidance—based on taxometric analysis (Fraley et al., 2011b; Fraley et al., 2015; Mikulincer & Shaver, 2013). Attachment-based anxiety is “the extent to which people tend to worry about attachment-based concerns, such as the availability and responsiveness of an attachment figure,” and attachment-based avoidance is “the extent to which people are uncomfortable opening up to others and depending on them” (Fraley et al., 2011b, p. 617). Those who score higher on these two factors are said to be insecurely attached, and those who score low on attachment-based anxiety or avoidance can be said to be securely attached (Fraley et al., 2011b). In the present study, we used Fraley, Heffernan, Vicary, and Brumbaugh’s (2011a) conceptualization of attachment.

**Emotions and Attachment**

**Negative emotions, stress, and depression.** Attachment with parents can influence one’s experience of emotion throughout life. For example, Sheinbaum et al. (2015) found that insecure attachment was associated with lower levels of positive affect and higher levels of negative affect.
One emotional experience related to negative affect is stress. There is a positive relationship between cortisol, a hormone associated with stress response, and poor parenting variables (e.g., insecure attachment, lack of parental warmth, parental conflict; Jaremka et al., 2013; Lucas-Thompson, 2014; Smyth et al., 2015). That is, participants with insecure attachment or higher parental conflict, or with lower levels of maternal warmth, show greater increases in cortisol throughout the day (Jaremka et al., 2013; Lucas-Thompson, 2014) and during a social stress test (Smyth et al., 2015) than their counterparts with secure parental attachment. Moreover, these increased cortisol levels also impact the level of T cells, which are associated with strong cellular immune function, in such a way that those with insecure attachment display lower levels of T cells than those who are securely attached (Jaremka et al., 2013). Therefore, relationships with parents can influence emotional states as well as the associated biological functions. It is possible, then, that individuals with insecure attachment may experience heightened stress in positive life events (see Hypothesis C, below).

A second negative emotional state related to attachment is depression, which positively correlates with insecure attachment, and particularly anxious attachment (Brenning, Soenens, Braet, & Bosmans, 2012; Malik et al., 2015; Reynolds, Searight, & Ratwik, 2014; Schriffin, 2014). In a review, Malik et al. (2015) found, for adults, that the relationship between insecure attachment and depressive symptomology was mediated by emotion regulation. Depression can involve symptoms of rumination (i.e., repetitively, negatively thinking about prior or future actions; Lanciano, Curci, Kafetsios, Elia, & Zammuner, 2012) and anhedonia (i.e., a reduced ability to derive joy; Troisi, Alcini, Goviello, Nanni, & Siracusano, 2010). Insecure attachment is positively associated with rumination (Burnette, Davis, Green, Worthington, & Bradford, 2009; Lanciano et al., 2012) and rumination in romantic relationships (Reynolds et al., 2014). Likewise, anhedonia (specifically social anhedonia) is positively associated with insecure attachment, and is most strongly predicted by avoidant attachment (Troisi et al., 2010). Both anhedonia and rumination are important components when evaluating the relationship between attachment and the experience of emotions during positive life events, because anhedonia and rumination could be related to difficulty experiencing joy in positive life events, or negative reflection about these life events (see Hypotheses A, E, and F, below).

Positive emotions. Attachment theory also serves as a framework to understand the processing and regulation of positive emotions. In recent years, researchers have evaluated the relationship between attachment theory and positive psychology. To this end, Schriffin (2014) evaluated positive affect as a mediator in the relationship between attachment orientation and developmental outcomes (e.g., perceived physical health, social support). Schriffin (2014) found that developmental outcomes are not fully predicted by attachment orientation, but are rather partially mediated by affect, regardless of whether that affect derives from secure attachment or from nonparental means. Thus, notwithstanding the impact of parental relationships on life outcomes, increasing one’s positive affect could promote positive life outcomes (e.g., optimism, ego-resiliency; Schriffin, 2014). Likewise, insecure attachment can improve through positive relationships, such as that with a psychotherapist (Shaver & Mikulincer, 2008).

In addition to relating attachment to positive psychology, researchers have also connected it to the maintenance or suppression of positive emotions. Namely, secure attachment has been associated with savoring, intensifying and sustaining positive affect (Gentzler et al., 2013; Quoidbach et al., 2010). Conversely, regulation of positive emotions also includes dampening, undermining and reducing positive affect (Quoidbach et al., 2010). Savoring includes showing positive emotions through facial expressions, being mindful of the positive event, sharing the joy with others, and “positive mental time travel” (i.e., reminiscing or “anticipating positive events;” Quoidbach et al., 2010, p. 2). Dampening includes concealing joy, “distraction,” “fault finding,” and “negative mental time travel” (e.g., ruminating about the cause or the end of the positive emotions; Quoidbach et al., 2010, p. 2). Savoring is associated with subjective well-being, such as life satisfaction (Quoidbach et al., 2010; Ramsey & Gentzler, 2014), and is negatively correlated with depression (Ramsey & Gentzler, 2014).

In a study of adolescents, Gentzler et al. (2013) found that securely attached individuals reported marginally more savoring than those who were insecurely attached, and Ramsey and Gentzler (2014) found that women acknowledged more savoring than men. Further, insecure attachment has been associated with diminished savoring (Shaver & Mikulincer, 2014), and the dampening...
or repression of positive emotions, particularly for those with avoidant attachment (Goodall, 2015; Mikulincer & Orbach, 1995). Thus, because of the relationship between avoidant attachment and dampening, the experience of joy in positive life events—the focus of the present study—may be more negatively associated with avoidant attachment rather than anxious attachment (see Hypothesis B, below).

Positive Major Life Events, Attachment, and Emotions

Attachment and emotions. Attachment dimensions and their correlated emotion-regulation strategies can provide an avenue for analyzing emotions and stress during positive major life events, in which emotions can be heightened and parents are often present. In a review article, Mikulincer and Shaver (2013) noted that multiple studies have shown that insecure attachment is associated with downplaying positive emotions (Mikulincer & Orbach, 1995) such as those in positive life events. This experience appears to be physical, too, with the facial muscles of insecurely attached individuals shown to display less joy and more negativity (Magai, Hunziker, Mesias, & Culver, 2000; Sonnby-Borgström & Jônsson, 2003). Similarly, insecure attachment is associated with reacting more intensely to negative events (Shaver & Mikulincer, 2014) and experiencing more daily negative affect, particularly with romantic partners (Simpson et al., 2007). Specifically, attachment-based avoidance is associated with emotional inhibition, and attachment-based anxiety is related to distress intensification (Shaver & Mikulincer, 2014). Because of this inhibition and intensification, anxious attachment may be more strongly correlated than avoidant attachment with the experience of stress in positive life events (see Hypothesis C, below), and avoidant attachment may be more negatively correlated than anxious attachment with joy in positive life events (see Hypothesis B, below).

Positive events and future events. One focus of the present study is emotions and stress in major positive life events. For daily positive events, insecurely attached individuals tend to minimize their previously experienced positive affect (Gentzler & Kerns, 2006; Gentzler et al., 2010), and tend to enjoy their daily activities less (Sheinbaum et al., 2015). Similarly, childhood trauma—akin to insecure parental attachment, but not equivalent—has been associated with intensified negative affect and greater decreases in positive affect during daily events (Infurna, Rivers, Reich, & Zautra, 2015). Another focus of the present study is emotions about future life events with parents. Related to future life events, attachment-based anxiety has been shown to predict negative mental time travel (i.e., negative anticipations; Goodall, 2015), and is associated with rumination, which can include negative anticipation (Burnette et al., 2009; Lanciano et al., 2012). Therefore, insecurely attached individuals might predict less positive emotions for future life events (see Hypotheses E and F, below). These connections between attachment and negative and positive affect suggest that positive life events, as well as future life events, would be experienced and anticipated differently by those who are insecurely attached (see Hypotheses A, C, E, and F, below).

Positive Life Events With Parents

Positive affect can be heightened and savored or diminished and dampened (Quoidbach et al., 2010). Likewise, the emotions from positive life events such as holidays, graduations, and weddings, can be experienced as positive or negative. Positive life events often involve families and parents. It may be the case that parents are one factor impacting positive emotions or negative emotions within these events. That is, adult children who are securely attached with their parents may experience positive emotions such as love, gratitude, and comfort (Mikulincer & Shaver, 2013) when they take part in these events with their attachment figures. Conversely, parents could add unpredictability, anxiety (Ross et al., 2016), negative emotions, or stress for those who are insecurely attached with their parents. However, this is an area of research that is not greatly examined.

Present Study

Although previous attachment research has addressed the experience of emotion during daily positive events, to our knowledge, no studies have evaluated attachment in relationship to the experience of emotion during major positive life events with parents (e.g., graduations, weddings), which can serve as significant memories. Because of the importance given to major life events and parents’ involvement in them, these events have the potential to solidify the internal working models of attachment, as previously explained, and are therefore an important topic to study. Moreover, positive life events offer an opportunity for positive affect, which can be savored. Because
savoring of positive affect is related to well-being (Quoidbach et al., 2010; Ramsey & Gentzler, 2014), and because well-being is negatively associated with insecure attachment (Mikulincer & Shaver, 2013), it is important to further evaluate attachment and the experience of emotions in positive life events. This could provide a starting point for interventions addressing emotion regulation during these events. Thus, the goal of the present study was to address this literature gap by evaluating attachment-based avoidance and anxiety in relation to emotions and stress experienced during major positive life events that involved parents.

Specifically, we hypothesized that (a) higher scores on maternal and paternal attachment-based avoidance and anxiety (i.e., insecure attachment) would predict less joy during positive life events that involve parents. Additionally, (b) avoidance, as compared to anxiety, would have a stronger negative correlation with joy. Next, (c) higher avoidance and anxiety scores would predict more stress, and (d) anxiety, as compared to avoidance, would be more strongly correlated with stress. Finally, for imagined future positive life events, higher avoidance and anxiety scores would predict (e) less positive emotions and (f) more negative emotions.

Method

Participants

We recruited 371 participants. Inclusion criteria for participation included residence in the United States and English language ability (i.e., good–very strong on our survey). Forty-three participants were excluded for failing to meet these criteria, or because of significant missing data. The remaining participants (N = 328) included 208 women and 102 men. Eleven individuals were agender, transgender, or fluid, and the seven other participants did not report a gender identity. Because our data analyses were planned to control for gender, and there were not enough gender nonbinary participants to form a representative sample, only those identifying as a “woman” or “man” were included in the following analyses. This left 310 final participants who had an average age of 31.26 years (SD = 14.32, age range: 18–78 years). Additional demographic information is provided in Table 1.

Measures

Participants were administered demographic questions in addition to the following battery of measures.

Parental attachment. Attachment with mother and/or father was measured using the Experiences in Close Relationships—Relationship Structures Questionnaire (ECR-RS; Fraley et al., 2011a). The scale has nine statements and is designed to assess anxiety and avoidance for various interpersonal targets (i.e., parents, romantic partners, friends) by repeating the questionnaire for each target. The instructions tell participants which relationship target to think about while responding to the statements on a 7-point response scale from 1 (strongly disagree) to 7 (strongly agree). After reverse-keying items and averaging responses, the scale produces

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race/Ethnicity</td>
<td></td>
</tr>
<tr>
<td>White/European American</td>
<td>194 (64.0%)</td>
</tr>
<tr>
<td>Asian</td>
<td>66 (21.8%)</td>
</tr>
<tr>
<td>Black/African American</td>
<td>36 (11.9%)</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>13 (4.3%)</td>
</tr>
<tr>
<td>No report</td>
<td>7 (2.3%)</td>
</tr>
<tr>
<td>American Indian/Alaskan Native</td>
<td>5 (1.7%)</td>
</tr>
<tr>
<td>Other</td>
<td>4 (1.3%)</td>
</tr>
<tr>
<td>Native Hawaiian/Pacific Islander</td>
<td>1 (0.3%)</td>
</tr>
<tr>
<td>Education Level</td>
<td></td>
</tr>
<tr>
<td>Some college</td>
<td>96 (31.0%)</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>84 (27.1%)</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>50 (16.1%)</td>
</tr>
<tr>
<td>High school diploma/GED</td>
<td>38 (12.3%)</td>
</tr>
<tr>
<td>Some post-undergraduate work</td>
<td>11 (3.5%)</td>
</tr>
<tr>
<td>Associate’s degree</td>
<td>10 (3.2%)</td>
</tr>
<tr>
<td>Doctorate (e.g., PhD)</td>
<td>8 (2.6%)</td>
</tr>
<tr>
<td>Professional degree (e.g., MD)</td>
<td>8 (2.6%)</td>
</tr>
<tr>
<td>Some high school</td>
<td>3 (1.0%)</td>
</tr>
<tr>
<td>Vocational training</td>
<td>1 (0.3%)</td>
</tr>
<tr>
<td>Other</td>
<td>1 (0.3%)</td>
</tr>
<tr>
<td>Location</td>
<td></td>
</tr>
<tr>
<td>South</td>
<td>182 (59.3%)</td>
</tr>
<tr>
<td>Midwest</td>
<td>40 (13.0%)</td>
</tr>
<tr>
<td>Northeast</td>
<td>52 (16.9%)</td>
</tr>
<tr>
<td>West</td>
<td>33 (10.7%)</td>
</tr>
</tbody>
</table>

Note. N = 310 (nwomen = 208, nmen = 102), Mage = 31.26 (SD = 14.32, age range: 18–78). The frequencies of race/ethnicity do not add up to 310 because participants were directed to “select all that apply to you.”
two scores: one for attachment-based anxiety and one for attachment-based avoidance, with higher scores indicating greater anxiety or avoidance (i.e., more insecure attachment). Attachment-based anxiety is “the extent to which people tend to worry about attachment-based concerns, such as the availability and responsiveness of an attachment figure” (Fraley et al., 2011b, p. 617). An example item is “I often worry that this person doesn’t really care for me.” Attachment-based avoidance is “the extent to which people are uncomfortable opening up to others and depending on them” (Fraley et al., 2011b, p. 617). An example item is “I don’t feel comfortable opening up to this person.” Fraley et al. (2011b) found strong reliability for the ECR-RS, indicated by Cronbach’s αs ranging from .81 to .91 for the anxiety and avoidance scores for mother, father, partner, and friend (α global avoidance = .88, α maternal anxiety = .85). For our sample, we also found the ECR-RS scores to have strong reliability (α maternal avoidance = .91, α maternal anxiety = .89, α paternal avoidance = .92, α paternal anxiety = .90). In terms of discriminant validity, Fraley et al. (2011b) found both scores of the ECR-RS to positively correlate with depression, and negatively correlate with relationship satisfaction, commitment, and investment, when the interpersonal target was romantic (Fraley et al., 2011b).

**Joy in positive life events with parents.** We wrote eight items in order to measure the amount of joy participants experienced in positive life events from the past year (e.g., graduation, Thanksgiving) that involved their parents. The directions given to participants were “Which of the following events happened to you and involved interacting with one or more of your parents or step parents? How much joy did you experience?” Example items are “Your major life events, we wrote 10 items, measured on a response scale from 1 (strongly disagree) to 5 (strongly agree). The directions given were “When you think about future big life events that involve your parent(s) or step parent(s), how do you feel?” Two example items are “Hopeful,” from our Positive Emotions subscale, and “Nervous,” from our Negative Emotions subscale. For scoring, average scores were calculated for the Positive Emotions subscale and the Negative Emotions subscale, with higher scores meaning more positive emotions and more negative emotions, respectively. For the present sample, the Positive Emotions subscale had an α of .94, and the Negative Emotions subscale had an α of .91.

**Procedure**

Data collection took place over the span of about a month and half. Following approval by the Agnes Scott College institutional review board, 20 research assistants recruited participants through snowball sampling, using flyers, e-mail, and social media. Additionally, 60 men were recruited from Amazon Mechanical Turk (MTurk) in order to increase the number of men in the sample.

To ensure that the last 60 men we recruited did not differ significantly from the other men on demographics and main study variables, we ran a series of comparative statistics. Using an independent-samples t test, we found that they did not differ significantly on the main study variables (i.e., maternal attachment-based avoidance or anxiety, paternal avoidance or anxiety, joy or stress for previous positive life events, or positive or negative emotions for imagined future positive life events). In terms of demographic differences, the men did not significantly differ in age. Moreover, results of a chi-square test of independence of the participants’ races/ethnicities showed that being recruited from MTurk was not significantly related to being American Indian/Alaska Native, Black/African American, Hispanic/Latino, or an “other”
race/ethnicity. However, men recruited from MTurk were significantly more likely to be Asian or White. Chi-squares of independence were not calculated for Middle Eastern/North African or Hawaiian/Pacific Islander because there were not enough cases to analyze.

All participants completed the survey through Survey Monkey, and MTurk workers were paid $0.50. Although research participation was voluntary, participants were offered the opportunity to enter a drawing for one of two $50 Amazon gift cards by providing their e-mail (not connected to their survey data).

Data Analysis
Prior to evaluating our hypotheses with multiple hierarchical regression, we analyzed the data for meeting the requisite assumptions of nonmulticollinearity by checking the intercorrelations (see Table 2), tolerance, variance inflation factor, and condition index. The condition index of all four models was 11.26, indicating a small degree of multicollinearity (see Limitations section). All other criteria of multicollinearity indicated that the data was acceptable for further testing. In our hierarchical regression, we controlled for age and gender. We chose to control for gender, but not ethnicity, because Fraley et al. (2011a) reported a difference in ECR-RS scores for sex (albeit different than gender), but not for ethnicity. Additionally, we controlled for age because of the large age range of our participants.

Results
Descriptive statistics and bivariate correlations for all main study variables are provided in Table 2. Results were analyzed for 310 participants, though pairwise deletion by the Statistical Package for the Social Sciences (SPSS) led to differing ns for each analysis (e.g., older participants missing data because of deceased parents).

TABLE 2
Descriptive Statistics and Intercorrelations for All Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mat. Avoid.</td>
<td>307</td>
<td>3.21</td>
<td>1.65</td>
<td>1–7</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>2. Mat. Anx.</td>
<td>307</td>
<td>1.91</td>
<td>1.42</td>
<td>1–7</td>
<td>.41*</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>3. Pat. Avoid.</td>
<td>297</td>
<td>3.72</td>
<td>1.76</td>
<td>1–7</td>
<td>.36*</td>
<td>.16*</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>4. Pat. Anx.</td>
<td>297</td>
<td>2.19</td>
<td>1.66</td>
<td>1–7</td>
<td>.20*</td>
<td>.57*</td>
<td>.52*</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>5. Joy</td>
<td>251</td>
<td>3.78</td>
<td>1.04</td>
<td>1–5</td>
<td>-.30**</td>
<td>-.28*</td>
<td>-.40*</td>
<td>-.31*</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>6. Stress</td>
<td>244</td>
<td>2.56</td>
<td>1.15</td>
<td>1–5</td>
<td>.30**</td>
<td>.25*</td>
<td>.24*</td>
<td>.27*</td>
<td>-.44*</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>7. Pos. Emotion</td>
<td>283</td>
<td>3.71</td>
<td>1.02</td>
<td>1–5</td>
<td>-.42**</td>
<td>-.36*</td>
<td>-.44*</td>
<td>-.31*</td>
<td>.64**</td>
<td>-.42*</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>8. Neg. Emotion</td>
<td>283</td>
<td>2.67</td>
<td>1.05</td>
<td>1–5</td>
<td>.43**</td>
<td>.32**</td>
<td>.34**</td>
<td>.34**</td>
<td>-.52*</td>
<td>-.52*</td>
<td>-.63**</td>
<td>–</td>
</tr>
</tbody>
</table>

Note. Range = range of possible scores; Mat. Avoid. = maternal attachment-based avoidance; Mat. Anx. = maternal attachment-based anxiety; Pat. Avoid. = paternal attachment-based avoidance; Pat. Anx. = paternal attachment-based anxiety; Pos. Emotion = positive emotion about future life events; and Neg. Emotion = negative emotion about future life events.

*p < .01. **p < .001.

TABLE 3
Multiple Hierarchical Regression Results for Attachment-Based Avoidance and Anxiety Predicting Joy

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>R²</th>
<th>ΔR²</th>
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<tbody>
<tr>
<td>Step 1:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.002</td>
<td>.002</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.04</td>
<td>0.15</td>
<td>-0.02</td>
<td>-0.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.003</td>
<td>0.01</td>
<td>-0.05</td>
<td>-0.66</td>
<td></td>
<td></td>
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<td>Step 2:</td>
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<tr>
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Note. *p < .05. **p < .001.
Retrospective Emotions for Positive Events
Predicting joy in previous events. To examine whether attachment-based anxiety and avoidance would predict less joy experienced in positive life events with parents (Hypothesis A), we conducted a multiple hierarchical regression with covariates of age and gender and predictors of maternal and paternal attachment-based avoidance and anxiety. This hypothesis was partially supported (see Table 3), because after controlling for gender and age, attachment-based avoidance but not attachment-based anxiety was negatively related to joy, \( \hat{\beta}_{\text{maternal avoidance}} = -.25, p < .001; \hat{\beta}_{\text{paternal avoidance}} = -.25, p = .002; \hat{\beta}_{\text{maternal anxiety}} = -.12, p = .13; \) and \( \hat{\beta}_{\text{paternal anxiety}} = -.09, p = .33. \) The model as a whole was significant, \( F(6, 220) = 13.04, p < .001, \) and accounted for 26.2% of the variance in joy. Additionally, we did not observe gender differences in reported joy between women and men (\( M = 3.80, SD = 1.05 \)) and men (\( M = 3.80, SD = 1.04 \)), \( t(233) = .02, p = .98, d = .003. \) Thus, Hypothesis A was partially supported, with maternal and paternal attachment-based anxiety predicting the joy experienced in positive events, such that, as anxiety scores increase, joy decreases.

Comparing avoidance and anxiety in association with joy. We conducted a series of correlations and Fisher’s \( r \) to \( z \) transformations to evaluate whether attachment-based avoidance would be more negatively correlated with joy than attachment-based anxiety would be (Hypothesis B). A Pearson correlation coefficient was calculated for the relationship between maternal and paternal avoidance and anxiety and average joy experienced in positive events with parents (see Table 2). A negative correlation was found between maternal attachment-based avoidance and joy, \( r = -.40, p < .001; \) maternal attachment-based anxiety and joy, \( r = -.28, p < .001; \) paternal attachment-based avoidance and joy, \( r = -.40, p < .001; \) and paternal attachment-based anxiety and joy, \( r = -.31, p < .001. \)

To compare these correlation coefficients, we conducted two Fisher \( r \) to \( z \) transformations, first comparing maternal anxiety and avoidance, then paternal anxiety and avoidance. No significant difference was found for maternal attachment, \( z = -1.50, p = .13, \) nor for paternal attachment, \( z = -1.12, p = .26. \) Therefore, Hypothesis B was not supported.

Predicting stress in previous events. We conducted a multiple hierarchical regression to evaluate the hypothesis that increased stress during positive life events with parents would be predicted by attachment-based anxiety and avoidance, after controlling for age and gender (Hypothesis C). This hypothesis was partially supported (see Table 4), with stress predicted by maternal avoidance (\( \hat{\beta}_{\text{maternal avoidance}} = .22, p = .003 \)) and paternal avoidance (\( \hat{\beta}_{\text{paternal avoidance}} = .25, p = .002 \)), but not maternal anxiety (\( \hat{\beta}_{\text{maternal anxiety}} = .03, p = .76 \)) or paternal anxiety (\( \hat{\beta}_{\text{paternal anxiety}} = .03, p = .74 \)), after controlling for gender and age. In the final model, age was also a significant predictor of stress, \( \beta = .13, p = .04. \) The model as a whole was significant, \( F(6, 216) = 6.00, p < .001, \) and explained 14.3% of the variance in stress. Moreover, men (\( M = 2.45, SD = 1.14 \)) and women (\( M = 2.57, SD = 1.14 \)) did not differ significantly in reported stress levels, \( t(228) = -1.76, p = .45, d = .11. \) On the basis of the regression model, Hypothesis C was partially supported, and it appears that, as maternal attachment-based avoidance and paternal attachment-based anxiety scores increase, the stress experienced in positive

### Table 4

<table>
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<tr>
<th>Variable</th>
<th>( b )</th>
<th>SE</th>
<th>( \beta )</th>
<th>( t )</th>
<th>( R^2 )</th>
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<tr>
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<tr>
<td>Paternal Anxiety</td>
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<td>0.07</td>
<td>0.72</td>
<td>2.06*</td>
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</tbody>
</table>

Note: \(* p < .05.\)

### Table 5

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<th>SE</th>
<th>( \beta )</th>
<th>( t )</th>
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</tr>
<tr>
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<td>0.01</td>
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<td>-0.18</td>
<td>-2.82*</td>
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<td></td>
</tr>
<tr>
<td><strong>Step 2:</strong></td>
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<tr>
<td>Maternal Avoidance</td>
<td>-0.32</td>
<td>0.03</td>
<td>-0.52</td>
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<tr>
<td>Maternal Anxiety</td>
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<td>0.03</td>
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<tr>
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<td>0.04</td>
<td>-0.05</td>
<td>-0.73</td>
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<td></td>
</tr>
</tbody>
</table>

Note: \(* p < .05, \) \(* p < .001.\)
life events with parents also increases.

Comparing anxiety and avoidance in association with stress. To evaluate if attachment-based anxiety, as compared to attachment-based avoidance, would be more strongly correlated with stress (Hypothesis D), we conducted a series of correlations and Fisher’s r to z transformations to compare these correlations. Pearson correlation coefficients were calculated for the relationship between maternal and paternal anxiety and avoidance, and the stress experienced in positive life events with parents (see Table 2). There was a positive correlation between maternal attachment-based avoidance and stress, \( r = .30, p < .001 \); maternal attachment-based anxiety and stress, \( r = .25, p < .001 \); paternal attachment-based avoidance and stress, \( r = .24, p < .001 \); and paternal attachment-based anxiety, \( r = .27, p < .001 \). Next, we performed two Fisher’s r to z transformations to compare these correlation coefficients for maternal anxiety and avoidance, and then paternal anxiety and avoidance. No significant difference was found for maternal attachment-based anxiety and avoidance, z = 0.59, \( p = .56 \), nor paternal attachment-based anxiety and avoidance, z = -0.34, \( p = .73 \). Therefore, Hypothesis D was not supported; stress was not more strongly correlated to anxiety than avoidance.

Emotions for Future Events

Predicting positive emotions for future events.

To examine the hypothesis that attachment-based anxiety and avoidance would predict less positive emotions about future life events (Hypothesis E), we conducted a multiple hierarchical regression. This hypothesis was partially supported (see Table 5) because, after controlling for age and gender, maternal avoidance (\( \hat{\beta} = -.52, p < .001 \)) and paternal avoidance (\( \hat{\beta} = -.21, p < .001 \)) were negatively related to positive emotions for anticipated life events, and maternal anxiety (\( \hat{\beta} = -.10, p = .10 \)) and paternal anxiety (\( \hat{\beta} = -.05, p = .47 \)) were not. Additionally, in the final model, age remained a predictor of less positive emotions, \( \hat{\beta} = -.20, p < .001 \). The model as a whole was significant, \( F(6, 249) = 43.03, p < .001, \) and accounted for 50.9% of the variance in positive emotions. Moreover, there were no gender differences in women’s (\( M = 3.78, SD = 0.97 \)) and men’s (\( M = 3.65, SD = 1.10 \)) positive emotions about imagined future life events, \( t(265) = .98, p = .33, d = .12 \). Overall, on the basis of the multiple hierarchical regression, it appears that, as maternal and paternal attachment-based avoidance increase, positive emotions for future events decrease, thereby partially supporting Hypothesis E.

Predicting negative emotions for future events.

To evaluate Hypothesis F that attachment-based anxiety and avoidance would predict more negative emotions about future life events, we conducted a multiple hierarchical regression with the maternal and paternal anxiety and avoidance as predictors of negative emotions. This hypothesis was partially supported (see Table 6), because after controlling for age and gender, maternal avoidance (\( \hat{\beta} = .34, p < .001 \)) was positively related to negative emotions, and maternal anxiety (\( \hat{\beta} = .05, p = .51 \)), paternal avoidance (\( \hat{\beta} = .14, p = .06 \)), and paternal anxiety (\( \hat{\beta} = .15, p = .07 \)) were not. The model as a whole was significant, \( F(6, 249) = 14.10, p < .001 \), and explained 25.4% of the variance in negative emotions. Additionally, we did not find a significant gender difference between the negative emotions of women (\( M = 2.64, SD = 1.05 \)) and men (\( M = 2.58, SD = 1.04 \)), \( t(265) = -.49, p = .63, d = .06 \). Therefore, this multiple hierarchical regression shows that, as maternal attachment-based anxiety scores increase, the negative emotions that participants feel about future positive events with the parent also increase, partially supporting Hypothesis F.

Discussion

The present study addressed the connections between insecure parental attachment and the emotions and stress experienced in adult major positive life events that involve interactions with parents (i.e., attachment figures). Our results showed that, for each criterion variable, some combination of attachment-based avoidance and anxiety predicted decreased joy and increased stress for positive life events with parents. Specifically, joy was predicted

<table>
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<tr>
<th>Variable</th>
<th>( b )</th>
<th>( SE )</th>
<th>( \beta )</th>
<th>( t )</th>
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<tr>
<td>Maternal Avoidance</td>
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<td>5.13**</td>
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<tr>
<td>Maternal Anxiety</td>
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<td>1.82</td>
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</tr>
</tbody>
</table>

Note. ** \( p < .001 \).
by maternal and paternal avoidance, and stress was predicted by maternal avoidance and paternal anxiety. Additionally, contrary to our hypothesis, the correlation between joy and attachment-based avoidance was not significantly stronger than that between joy and attachment-based anxiety. Likewise, we did not find support for our hypothesis that attachment-based anxiety, as compared to avoidance, would be more strongly correlated with stress. For imagined future positive events, we found that maternal and paternal avoidance predicted less positive emotions, and only maternal avoidance predicted more negative emotions. Overall, it appears that attachment-based avoidance was more predictive of emotions in positive life events than was anxiety.

Joy and Stress in Retrospective Positive Events
The present findings connect to previous literature in attachment theory and emotion regulation, both by supporting and contradicting prior findings. Specifically, our finding that decreased joy is predicted by attachment-based avoidance supports the literature on insecure attachment and anhedonia (i.e., trouble experiencing joy; Troisi et al., 2010) and its antecedent of depression (Burnette et al., 2009), because in these studies, insecure attachment and positive affect were inversely related. Similarly, our findings are related to those of Gentzler et al. (2013), who observed that the savoring of positive emotions (i.e., the process of maintaining and heightening positive affect) was marginally lower in insecure participants as compared to secure participants. Our finding that increased avoidance was related to reduced joy also supports previous work on insecure attachment and the minimization of prior positive affect (Gentzler & Kerns, 2006; Gentzler et al., 2010), and Sheinbaum et al.’s (2015) finding that those who are insecurely attached tend to derive less pleasure from their daily activities. Moreover, our finding that attachment-based avoidance and anxiety predicted increased stress is related to the literature on insecure attachment and increased stress and cortisol (Jaremka et al., 2013; Lucas-Thompson, 2014; Smyth et al., 2015). However, contrary to Gentzler et al. (2013), who found that female participants showed more dampening responses (i.e., reducing positive affect) than male participants, we did not observe gender differences in the amount of joy nor stress reported.

Comparing Avoidance and Anxiety
Our finding that attachment-based anxiety and avoidance were not differentially associated with the experiences of joy or stress contradicts those of Troisi et al. (2010). Troisi et al. found that anhedonia (i.e., difficulty deriving joy) was most strongly predicted by avoidant attachment, but our results showed that avoidance, as compared to anxiety, was not significantly more strongly correlated with joy. Further, these results also differ from the literature on the dampening of positive emotions, which shows that dampening is more common for those with higher avoidant attachment (Goodall, 2015; Mikulincer & Orbach, 1995). Our contrasting findings imply that the relationship between attachment-based avoidance and positive emotions is complex, and may differ in positive life events, as compared to the contexts explored in previous literature (Goodall, 2015; Mikulincer & Orbach, 1995; Troisi et al., 2010). Future research should work to disentwine the differences. We also found that, contrary to our hypothesis, the positive correlation between stress and attachment-based anxiety was not significantly stronger than that between stress and attachment-based avoidance. This finding is in opposition to Smyth et al. (2015), who evaluated attachment and stress, and found that attachment-based anxiety (i.e., rather than avoidance) was associated with the greatest increases in cortisol, a stress hormone, during a social stress test. Of course, it may be that our results differ from Smyth et al. (2015) because our study was not a social stress test, and we measured stress by self-report as opposed to cortisol levels. However, it could also be that our contrasting results imply that the expression of attachment-based avoidance and anxiety may differ based on context (e.g., in purely stressful situations, as opposed to positive life events that could be both stressful and joyful).

Perhaps more importantly, our contrasting findings imply that the relationship between attachment and emotion is complex, and future work is thereby warranted.

Positive and Negative Emotions for Future Events
We observed that maternal attachment-based avoidance predicted more negative emotions, and maternal and paternal avoidance predicted less positive emotions about future events. This supports previous connections between insecure attachment and rumination (Lanciano et al., 2012; Reynolds et al., 2014), because our findings suggest that those with higher attachment-based avoidance scores are thinking negatively about the future. Further, this also relates to the negative mental time travel (i.e.,
negative anticipations) that Quoidbach et al. (2010) posited as part of dampening of positive life events. Additionally, other researchers have found an association between dampening and insecure attachment, particularly avoidant attachment (Goodall, 2015; Mikulincer & Orbach, 1995). Because dampening is the suppression of positive affect, our findings that avoidance predicts less positive emotions and more negative emotions about the future support these. However, contrary to Reynolds et al. (2014), who found rumination to be higher in women, we did not find that women reported more negative emotions or less positive emotions for positive life events. Our findings may differ from theirs because we did not explore attachment in the context of romantic relationships, which was the focus of their study. Overall, it appears that the findings of the present research support prior literature on attachment and emotion.

Implications of the Present Study
The current study and its results hold both theoretical and practical implications. Specifically, in terms of attachment theory, it appears that not only is insecure attachment inversely related to the positive affect experienced in daily positive events (Sheinbaum et al., 2015), but also to the positive affect felt in major positive life events such as weddings, holidays, or graduations. Thus, the impact of insecure attachment may be more pervasive than we previously thought, because its correlates of anhedonia (Troisi et al., 2010) and increased stress (Smyth et al., 2015) appear to hold true even in major positive life events. Therefore, the present study supports and extends attachment theory.

In terms of practical implications, the present findings suggest that the negative affective states inherent in insecure parental attachment do not cease after childhood. Instead, they play into adult life and can affect one’s experiences of life events. Our findings may differ from theirs because we did not explore attachment in the context of romantic relationships, which was the focus of their study. Overall, it appears that the findings of the present research support prior literature on attachment and emotion.

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could hinder the generalizability of the findings. Finally, the retrospective reporting of joy and stress complicates interpretation of the results and introduces potential confounds of memory deficit. Namely, we cannot be sure whether our findings are because of participants under-reporting their previous joy (e.g., as Gentzler & Kerns, 2006, and Gentzler et al., 2010, found with insecure participants) or if insecure participants were truly experiencing less joy than their counterparts (e.g., as Sheinbaum et al., 2015, found).

**Directions of Future Research**

The current study could be expanded upon in order to replicate and extend the findings. One interesting finding of the present study was that attachment-based avoidance seemed to be the strongest predictor, or the only predictor in one model, of participants’ emotions in positive life events. This warrants future study to explore why that may be. Another line of future research could evaluate the mediators and moderators within the relationship between insecure attachment (i.e., attachment-based anxiety and attachment-based avoidance) and negative affect (i.e., decreased joy, increased stress, more negative feelings about the future). One such mediator that could account for the relationship between insecure attachment and reduced joy and increased stress is emotional regulation, explored by Malik et al. (2015). Moderators could be the presence of secure attachment figures in positive events with parents, such as those with a romantic partner or best friend. The presence of these individuals could moderate and change the observed phenomenon that insecure attachment is associated with negative affect, because later-life secure attachment relationships have been shown to improve insecure attachment (Shaver & Mikulincer, 2008).

Another future study could measure the current study’s decreased joy for recalled events and negative emotions for future events through the lens of clinical psychology. Namely, researchers could employ measures of depression and anxiety such as the Beck Depression Inventory-II (Beck, Steer, & Brown, 1996), and the symptomatology of anhedonia and rumination, to evaluate correlates and predictors of emotions experienced with parents for insecurely attached individuals. Depression and anxiety could be presented as mediators in a statistical model of the experience of positive life events.

Finally, instead of evaluating positive and negative affect in positive events retrospectively, the “experience sampling method” (Sheinbaum et al., 2015) could be employed to randomly measure affect throughout the experience of the event. However, because this technique could be compromised by the external circumstances of major events (e.g., weddings), same-day journal entry and affect measurement could be used instead to collect data that preserves initial reactions to major life events. These directions for future research could replicate and extend the present findings.

**Conclusion**

This study explored attachment-based avoidance and anxiety in relationship to the emotions experienced in positive life events involving participants’ parents. We found that, for all models, some combination of maternal and paternal avoidance and anxiety, or only avoidance in the case of one model, predicted less positive emotions and more negative emotions. These findings contribute to the literature by extending previous work on attachment and emotions in daily life events (Gentzler et al., 2010) to the domain of major positive life events.

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