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Safe haven gratitude improves emotions, well-being, and parenting outcomes among parents with high levels of attachment insecurity

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ABSTRACT

Attachment insecurity undermines emotions, well-being, and adaptive parenting behaviors. In this experiment ($N = 614$), we investigate whether expressing gratitude improves parents' emotions, feelings of connectedness, well-being, and parenting outcomes. Furthermore, we evaluate whether a specific type of gratitude – *safe haven gratitude* – is especially beneficial for parents with greater attachment anxiety or avoidance relative to general gratitude or a control activity. Both general and safe haven gratitude led to immediate improvements in positive emotions, empathic emotions, and meaning in life. Safe haven gratitude increased feelings of connectedness for parents high in attachment insecurity, which in turn predicted improved well-being (i.e., happiness, positive emotions, negative emotions, psychological need satisfaction) and parenting outcomes (i.e., parental reflective functioning, parenting satisfaction, perceptions of children's behavior, parental overcontrol) concurrently and 5 days later. These findings suggest that this relatively simple, self-directed positive activity offers a path for parents to improve their well-being and relationships with their children.

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Many parents describe their children as their life's greatest joy, as well as the source of their greatest stress (Nelson et al., 2014). Additionally, individual differences among parents predict whether their parenting experiences are predominantly joyful or stressful (Nelson et al., 2014; Nelson-Coffey et al., 2017). For example, attachment avoidance and anxiety predict elevated negative emotions and diminished positive emotions (Jones et al., 2015; Kerr et al., 2019; Nelson-Coffey et al., 2017). Furthermore, the variety of parents' emotions, particularly when caregiving, predict their well-being and parenting behaviors (Bornstein et al., 2018; Dix, 1991; Nelson et al., 2014), suggesting that improving parents' emotions may have important downstream consequences for parents and their children.

Few positive psychology interventions have been developed to improve parents' well-being and family functioning (Waters, 2020). Drawing on the robust literature demonstrating the emotional and relationship benefits of gratitude (Algoe, 2012; Dickens, 2017), in the current experiment, we evaluate whether expressing gratitude leads to improvements in parents' emotions, feelings of connectedness, well-being, and parenting outcomes immediately, as well as their emotions and parenting outcomes 5 days later. Furthermore, we

evaluate whether a new form of gratitude expression – *safe haven gratitude* – is especially beneficial for parents with high levels of attachment anxiety or avoidance.

Gratitude

Gratitude is a social emotion that is commonly felt after benefiting from another person's actions (McCullough et al., 2001) and strengthens relationships by drawing attention to high quality relationship partners (Algoe, 2012). Experiments reveal that expressing gratitude leads to immediate boosts in connectedness, positive emotions, and more diverse social emotions (Layous et al., 2017), which may generate upward spirals of positive change in other areas of one's life (Armenta et al., 2017; Fredrickson, 2004), such as parenting. Longitudinal studies also reveal that expressing gratitude via letter leads to increases in happiness, reductions in depressive and anxiety symptoms, and improvements in relationship quality (Cregg & Cheavens, 2020; Davis et al., 2016; Dickens, 2017).

Participants in many gratitude experiments are instructed to express gratitude to someone who was kind to them (e.g., Layous et al., 2017). Thus, their expressions of gratitude may be directed to a variety of targets – for example, strangers or loved ones, current or

former relationship partners, or highly or minimally supportive partners. Although gratitude is especially advantageous in the context of close relationships (Algoe, 2012), few studies have evaluated whether encouraging participants to express gratitude to especially close and supportive people in their lives (i.e., high quality relationships) would enhance the benefits of gratitude. In the current study, we introduce a new gratitude activity, which we refer to as *safe haven gratitude*, in which participants are prompted to write a gratitude letter to someone who made them feel cherished, protected, or accepted. Drawing on the robust literature on attachment (Borelli et al., 2020; Mikulincer & Shaver, 2016), this approach encourages a focus on positive, high quality attachment interactions that may be more beneficial for insecurely attached parents than the broad instruction to focus on a time someone was kind to them.

Additionally, investigations of gratitude in parents have primarily focused on the associations between parents' and children's gratitude (Hoy et al., 2012) or how parents can cultivate gratitude in their children (Rothenberg et al., 2017), rather than the benefits of expressing gratitude for parents themselves. One study found that, in a sample of parents of adolescents or adults with emotional and/or behavioral problems, parents who completed a 6-week guided journal intervention (including gratitude and other positive activities) reported reductions in stress, anxiety, somatic symptoms, and depression, as well as increases in gratitude (Kim-Godwin, 2020). This study, however, did not include a control condition, nor did it separate the benefits of gratitude from the other activities, which limits the interpretation of these results. Much more work is needed to consider the benefits of gratitude among parents.

Attachment and parenting

Adult attachment orientations are commonly measured in reference to their romantic partners along dimensions of anxiety and avoidance, with low scores on both representing secure attachment. Individuals with high levels of attachment avoidance tend to minimize their own emotions, distrust relationship partners, and seek independence (Mikulincer & Shaver, 2003, 2016). People with high levels of attachment anxiety tend to amplify their emotions and distress signals to increase the likelihood of receiving adequate care from their caregivers, and their views of relationships tend to be characterized by helplessness and fear of being alone (Mikulincer & Shaver, 2003). Notably, both attachment anxiety and

avoidance disrupt individuals' experiences in relationships, thus contributing to reduced feelings of connectedness (Lee & Gillath, 2016; Li & Chan, 2012).

Evidence suggests that attachment orientations are also related to parents' cognitions, emotions, and behaviors providing care for their children (Jones et al., 2015). When parents' own attachment needs are unmet, they seem to have greater difficulties providing sensitive care for their children. Several studies reveal that parents with high levels of attachment anxiety or avoidance report diminished positive emotions during caregiving (Impett et al., 2011; Kerr et al., 2019; Nelson-Coffey et al., 2017). Additionally, attachment avoidance has been associated with less maternal supportiveness (Berlin et al., 2011) and sensitivity (Mills-Koonce et al., 2011), and attachment anxiety has been linked to overprotective parenting behaviors (Feeney, 2002). Attachment anxiety and avoidance have each been linked to engaging in fewer problem-solving behaviors during parent-child conflict (Feeney, 2006), providing less physical comfort during a painful medical procedure (Goodman et al., 1997), and poorer parental reflective functioning (Camoirano, 2017; Nijssens et al., 2018).

Thus, providing parents with strategies to feel connected to others – for example, by expressing gratitude – and to fulfill their own attachment needs may translate into more effective care for their children; however, few studies have investigated the benefits of gratitude for individuals high in attachment anxiety or avoidance. Perceiving gratitude from a romantic partner predicts declines in attachment anxiety over a 7-year period (Park, Johnson et al., 2019) and buffered the negative effects of attachment avoidance on relationship satisfaction and commitment (Park, Impett et al., 2019). Notably, however, these studies evaluated the benefits of perceiving a partner's expressions of gratitude, rather than the benefits of expressing gratitude oneself. Less is known about the benefits of expressing gratitude for individuals with high levels of attachment insecurity.

The relationship-strengthening benefits of gratitude may be especially pronounced for people with insecure attachment orientations because their needs for connection are less fulfilled and show greater room for growth. Consistent with this possibility, evidence suggests that cherishing positive attachment interactions (i.e., relational savoring) improves insecure parents' well-being (Borelli et al., 2020). Alternatively, gratitude exercises could backfire for people with high levels of attachment anxiety or avoidance because they tend to experience mixed emotions even in response to positive experiences (Shaver & Mikulincer, 2008). For example, one study found that people high in attachment avoidance reported relatively less gratitude in response to

a partner's positive behavior (Mikulincer et al., 2006). Given this evidence, we designed the safe haven gratitude activity to nudge parents high in attachment anxiety or avoidance to focus on positive attachment interactions – those that made them feel cherished, protected, or accepted.

The mediating role of connectedness

We postulate that gratitude will benefit parents high in attachment anxiety or avoidance in part by promoting feelings of connectedness. Maintaining high quality close relationships has been described as a fundamental human need (Baumeister & Leary, 1995; Deci & Ryan, 2000) and is among the strongest predictors of mental and physical well-being (Algoe, 2019; Holt-Lunstad et al., 2010). Among parents, social connection predicted increases in parent-child warmth and decreases in parent-child hostility (Lippold et al., 2018), as well as improved trajectories of distress during the transition to parenthood (Figueiredo et al., 2018). Furthermore, individuals with high levels of attachment anxiety and avoidance report relatively lower relationship quality and closeness (Lee & Gillath, 2016). For parents, unfulfilled attachment needs for comfort and care from others partially explain how and why attachment insecurity may disrupt their ability to provide sensitive and responsive care to their own children (Mikulincer & Shaver, 2016). Some evidence indicates that priming attachment security can override barriers to caregiving and prosocial behavior in romantic relationships (Shaver et al., 2019). Thus, promoting feelings of connectedness via safe haven gratitude may similarly override some of these barriers for parents high in attachment anxiety or avoidance.

Current study

We investigated the benefits of practicing gratitude for parents' well-being and parenting outcomes. Given the diverse traditions to investigating psychological well-being (King et al., 2016; Ryan & Deci, 2001), and evidence that parenthood is uniquely associated with various aspects of well-being (Nelson et al., 2014), we included multiple indicators of well-being in this investigation (i.e., positive emotions, negative emotions, empathic emotions, meaning in life, psychological need satisfaction, subjective happiness). Our follow-up survey included the Day Reconstruction Method (DRM; Kahneman et al., 2004), which instructs parents to recount an entire day episode by episode. This daily diary methodology records parents' emotions over the course of one day, which may more sensitively capture

emotion changes in response to our intervention (Moskowitz et al., 2021). We also report effects of the gratitude activities on parents' emotions during caregiving relative to non-caregiving episodes in Supplemental Online Material (SOM).

We theorize that expressing gratitude will improve parents' functioning in their parenting roles as well. We include several measures of parenting outcomes to capture self-reported parenting cognitions (i.e., parental reflective functioning, parents' perceptions of their children's behavior), parenting emotions (i.e., parenting satisfaction), and parenting behaviors (i.e., parental over-control), each of which have been linked to parents' attachment orientations (Jones et al., 2015) and well-being (Luthar & Ciciolla, 2015; Nelson et al., 2014).

We preregistered two primary hypotheses on AsPredicted.org (<https://aspredicted.org/5nj7b.pdf>). First, we hypothesized that parents who wrote general and safe haven gratitude letters would show improvements in well-being and emotions immediately after writing the letter (Hypothesis 1). Second, we hypothesized that the benefits of safe haven gratitude would be moderated by attachment insecurity, such that participants high in attachment anxiety or avoidance who expressed gratitude for someone who made them feel cherished, protected, or accepted would show immediate emotional benefits of the activity (Hypothesis 2). We focus the immediate benefits for parents high in attachment anxiety or avoidance on feelings of connectedness, given prior research suggesting that attachment anxiety and avoidance diminish feelings of connectedness (Lee & Gillath, 2016; Li & Chan, 2012). Finally, we test an exploratory moderated mediation hypothesis that attachment anxiety and avoidance will moderate the effects of the safe haven gratitude activity on feelings of connectedness, which will in turn mediate well-being and parenting outcomes 5 days later (Hypothesis 3).

Method

Participants

Parents ($N = 614$; 70.2% female) with at least one child under age 18 were recruited online via Amazon's Mechanical Turk. Parents' ages ranged from 21 to 63 ($M_{age} = 36.25$, $SD = 7.52$). On average, participants had 2.06 children ($SD = 1.25$) with an average child age of 8.39 ($SD = 5.69$). A majority of participants identified as White (79.8%), followed by Black/African American (11.3%), Latinx (5.9%), Asian American (4.7%), American Indian/Alaska Native (1.4%), Hawaiian/Pacific Islander (0.5%), Middle Eastern (0.5%), and other (0.5%). Most participants were married (69.9%),

and 11.1% were in a relationship, 8.4% were cohabiting, 1.8% were separated, 8.6% were not in a relationship, and 0.2% were widowed. Most participants reported that their current or most recent relationship was with someone of a different gender (92.9%), and 7.1% reported their current or most recent relationship was with someone of the same gender.

Based on evidence that gratitude interventions elicit small-to-medium effects on positive emotions (Layous et al., 2017), we estimated that we would need 417 participants to achieve 90% power using the *pwr* package in R ($k = 3$, $f = .175$, sig. level = .05, power = .9). We decided to recruit 600 participants to account for attrition and to provide additional power to detect moderation effects. Sample size was determined prior to collecting or analyzing any data.

Of the original 614 participants, 188 did not complete the follow-up survey. Attrition was evenly distributed across conditions, $\chi^2(2) = 1.00$, $p = .61$, as well as participant demographics, $\chi^2s < 3.20$, $ts < 0.55$, $ps > .30$, and was unrelated to attachment anxiety and avoidance, $ts < 0.35$, $ps > .72$. Additionally, 18 participants failed at least one attention check. Excluding these participants did not alter the pattern of findings reported here. Thus, following the intention-to-treat principle, all available data were used in analyses, and participants who failed the attention checks were included. For analyses of the immediate effects of gratitude, we included all participants who completed the initial survey, whereas analyses of the follow-up measures only included participants who completed those measures. Notably, the 426 participants who completed the follow-up questionnaires provide >90% power to detect a small-to-medium effect.

Procedure

After logging into the survey, participants completed a measure of attachment anxiety and avoidance and were randomly assigned to one of three conditions: (a) to write a gratitude letter to someone for whom they are extremely grateful (general gratitude), (b) to write a gratitude letter for someone who made them feel cherished, protected, or accepted (safe haven gratitude), or (c) to write about their actions from the previous week (control; full instructions available on the Open Science Framework [OSF]: <https://osf.io/j5hfr/>). After the writing activity, participants reported their emotions, psychological need satisfaction, meaning in life, happiness, and parenting outcomes (parenting satisfaction, parental reflective functioning, parental overcontrol, autonomy support).

Five days later, participants responded to a second survey in which they completed the DRM (Kahneman et al., 2004), a valid and reliable measure of people's experiences and emotions in daily life that has been used to investigate parents' emotions (e.g., Nelson-Coffey et al., 2017). Participants recounted an entire day from the moment they woke up, until they went to sleep, episode by episode. Participants categorized their activities based on a list of 15 common activities (e.g., relaxing, socializing, taking care of your children; Kahneman et al., 2004), and they indicated whether and with whom they were interacting (e.g., spouse/significant other, friends, children). On average, parents reported 15.06 total episodes in their days ($SD = 5.26$). Participants completed measures of emotions and meaning in life for each episode, followed by general measures of psychological need satisfaction, and parenting (perceptions of children's behavior, parental overcontrol, parenting satisfaction, and parental autonomy support). The measure of parental autonomy support demonstrated poor reliability ($\alpha = .43$), so we did not analyze it further. This study was approved by the University of the South IRB (#17-5). All measures and data are available on OSF (<https://osf.io/j5hfr/>).

Measures

Attachment Avoidance and Anxiety. Before completing their assigned activity, parents completed the Experiences in Close Relationships – Revised (Fraley et al., 2000), which includes subscales for attachment anxiety (e.g., 'My desire to be very close sometimes scares people away'; $\alpha = .94$) and avoidance (e.g., 'I prefer not to show a partner how I feel deep down'; $\alpha = .88$). Participants rated each item on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Emotions. After completing their activity, parents reported 6 positive (i.e., happy, pleased, joyful, enjoyment/fun, love, interested; $\alpha = .92$), 6 empathic (i.e., compassion, tenderness, sympathetic, softhearted, caring, affection; $\alpha = .90$), and 9 negative (i.e., worried/anxious, angry/hostile, frustrated, depressed/blue, unhappy, guilt, sad, concerned, disgusted; $\alpha = .91$) emotions on a scale ranging from 1 (*not at all*) to 7 (*very much*; adapted from the Affect Adjective Scale (Diener & Emmons, 1984) to include empathic emotions (Lishner et al., 2011)). Parents also completed this measure of emotions for each episode of the DRM (positive emotions $\alpha > .87$, empathic emotions $\alpha > .92$, negative emotions $\alpha > .79$). We calculated composites of positive, empathic, and negative emotions reported across episodes during the DRM in the follow-up.

Meaning in Life. Participants rated their feelings of meaning in life on the Daily Meaning Scale (e.g., 'How meaningful did you feel your life was today?'; Steger et al., 2008) on a scale ranging from 1 (*not at all*) to 7 (*very much*). Parents completed this measure immediately after their assigned activity ($\alpha = .85$), and again for each episode of the DRM ($\alpha > .91$). We created a composite of meaning in life reported across episodes on the DRM.

Psychological Need Satisfaction. At each time point, parents completed the 18-item Balanced Measure of Psychological Needs (Sheldon & Hilpert, 2012), which includes subscales for autonomy (e.g., 'I was free to do things my own way'; $\alpha = .77$ and $\alpha = .73$), competence (e.g., 'I took on and mastered hard challenges'; $\alpha = .79$ and $\alpha = .66$), and connectedness (e.g., 'I felt close and connected with other people who are important to me'; $\alpha = .82$ and $\alpha = .85$). Participants rated each statement on a scale from 1 (*no agreement*) to 5 (*much agreement*).

Subjective Happiness. In the post-activity survey, parents completed the 4-item Subjective Happiness Scale (Lyubomirsky & Lepper, 1999); e.g., 'In general, I consider myself: 1 = *not a very happy person*, 7 = *a very happy person*', which demonstrated good reliability in the current sample ($\alpha = .90$).

Parenting Satisfaction. In the post-activity survey, parents completed the 3-item Kansas Parental Satisfaction Scale (e.g., 'How satisfied are you with yourself as a parent?' 1 = *extremely dissatisfied*, 7 = *extremely satisfied*; James et al., 1985). Reliability in this sample was good ($\alpha = .80$).

Parental Reflective Functioning. In the post-activity survey, parents completed the Parental Reflective Functioning Questionnaire (Luyten et al., 2017), an 18-item scale including three subscales: pre-mentalizing (e.g., 'My child cries around strangers to embarrass me'; $\alpha = .82$), certainty about mental states (e.g., 'I can always predict what my child will do'; $\alpha = .72$), and interest and curiosity (e.g., 'I like to think about the reasons behind the way my child behaves and feels'; $\alpha = .76$). Agreement with each item was rated on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Perceptions of Children's Behavior. In the follow-up survey, parents rated their child's positive (e.g., 'My child is respectful to me'; $\alpha = .90$) and negative (e.g., 'My child is rude to me'; $\alpha = .86$) behavior towards the parent, as well as perceptions of children's maladjustment (e.g., 'My child is irritable'; $\alpha = .92$) on a scale ranging from 1 (*very rarely*) to 5 (*usually*; Luthar & Ciciolla, 2015).

Parental Overcontrol. In the follow-up survey, parents completed the 10-item USC Parental Overcontrol Scale (e.g., 'There are lots of ways I'd like to change my

child'; 0 = *not at all descriptive*, 4 = *extremely descriptive*; Borelli & Margolin, 2013; Borelli et al., 2015). Reliability in this sample was good, $\alpha = .79$.

Results

Hypothesis 1: Main Effects of Gratitude

To evaluate the immediate benefits of gratitude, we conducted focused contrast analyses comparing the two gratitude conditions (each weighted +1) to the control condition (−2) on all immediate outcomes (see Table 1 for descriptive statistics, effect sizes, and confidence intervals). Immediately after practicing safe haven and general gratitude, parents reported feeling more positive emotions, empathic emotions, and meaning in life, but they did not report differences in negative emotions, psychological need satisfaction (autonomy, competence, connectedness), subjective happiness, parenting satisfaction, or parental reflective functioning.

Table 1. Descriptive statistics, contrast tests, and effect sizes for post-activity measures.

Contrast Weights	Control (<i>n</i> = 217)	Safe Haven Gratitude (<i>n</i> = 194)	General Gratitude (<i>n</i> = 201)	<i>t</i> -contrast (609)	<i>r</i> [95% CI]
	−2	+1	+1		
	<i>M</i> (<i>SE</i>)	<i>M</i> (<i>SE</i>)	<i>M</i> (<i>SE</i>)		
Positive Emotions	4.12 (0.11)	4.86 (0.10)	4.88 (0.10)	5.97***	.24 [.16, .31]
Negative Emotions	1.86 (0.07)	1.92 (0.08)	1.81 (0.08)	0.002	.0001 [−.08, .08]
Empathic Emotions	3.76 (0.11)	5.04 (0.09)	4.96 (0.09)	10.35***	.39 [.32, .45]
Meaning	5.15 (0.11)	5.64 (0.10)	5.56 (0.10)	3.57***	.14 [.06, .22]
Autonomy	3.45 (0.06)	3.44 (0.05)	3.62 (0.05)	1.31	.06 [−.02, .13]
Competence	3.67 (0.06)	3.65 (0.05)	3.69 (0.05)	−0.11	−.004 [−.08, .08]
Connectedness	3.74 (0.06)	3.83 (0.05)	3.84 (0.06)	1.34	.05 [−.03, .13]
Happiness	4.66 (0.10)	4.82 (0.10)	4.90 (0.10)	1.64	.07 [−.01, .15]
Parenting Satisfaction	5.40 (0.07)	5.32 (0.07)	5.49 (0.07)	0.03	.002 [−.08, .08]
PRFQ Pre Mentalizing	2.03 (0.07)	2.17 (0.08)	2.07 (0.08)	0.94	.04 [−.04, .12]
PRFQ Certainty	3.99 (0.08)	3.94 (0.08)	4.13 (0.08)	0.52	.02 [−.06, .10]
PRFQ Interest and Curiosity	5.47 (0.06)	5.41 (0.07)	5.37 (0.07)	−1.07	−.04 [−.12, .04]

Note. *** $p < .001$

Hypothesis 2: Attachment Insecurity Moderates the Benefits of Close Relationship Gratitude on Connectedness

We evaluated whether attachment anxiety and avoidance, respectively, moderated the effects of the two gratitude conditions on feelings of connectedness using the Process Macro (Model 1) in SPSS (Hayes, 2018), including attachment avoidance as a covariate in models testing the moderation effects of attachment anxiety and vice versa. These analyses revealed that attachment anxiety ($b = 0.16$, $SE = 0.05$, $p = .0005$, 95% CI: 0.07, 0.25) and avoidance (marginally, $b = 0.11$, $SE = 0.06$, $p = .077$, 95% CI: -0.01 , 0.23) each moderated the effects of safe haven gratitude on feelings of connectedness. By contrast, neither attachment anxiety ($b = 0.07$, $SE = 0.05$, $p = .105$, 95% CI: -0.02 , 0.16) or attachment avoidance ($b = 0.09$, $SE = 0.06$, $p = .15$, 95% CI: -0.03 , 0.22) moderated the effects of general gratitude on connectedness.

Analyses of the simple slopes revealed that safe haven gratitude led to greater feelings of connectedness at average ($b = 0.12$, $SE = 0.06$, $p = .048$, 95% CI: 0.001, 0.24) and high levels (1 standard deviation above the mean) of attachment anxiety ($b = 0.33$, $SE = 0.08$, $p = .001$, 95% CI: 0.17, 0.50), but not low (1 standard deviation below the mean; $b = -0.09$, $SE = 0.09$, $p = .293$, 95% CI: -0.27 , 0.08) levels of attachment anxiety. Similarly, safe haven gratitude led to greater feelings of connectedness at average ($b = 0.13$, $SE = 0.06$, $p = .035$, 95% CI: 0.01, 0.25), and high ($b = 0.24$, $SE = 0.09$, $p = .006$, 95% CI: 0.07, 0.41), but not low ($b = 0.02$, $SE = 0.09$, $p = .798$, 95% CI: -0.15 , 0.19) levels of attachment avoidance. Analyses of simple slopes did not reveal any benefits of general gratitude by levels of attachment anxiety or avoidance ($|bs| < 0.14$, $ps > .13$). In sum, safe haven gratitude improved connectedness for parents with high attachment anxiety or avoidance.

Hypothesis 3: Conditional Indirect Effects of Safe Haven Gratitude on Well-Being and Parenting Outcomes via Connectedness for Parents High in Attachment Insecurity

We tested moderated mediation models using the Process Macro in SPSS (Model 7; Hayes, 2018). Attachment avoidance was included as a covariate in all models testing the moderation effect of attachment anxiety, and attachment anxiety was included as a covariate in all models testing the moderation effect of attachment avoidance. As described above, attachment anxiety ($b = 0.16$, $SE = 0.05$, $p = .001$) and avoidance (marginally, $b = 0.11$, $SE = 0.06$, $p = .078$) moderated the effects of safe haven gratitude, but not general gratitude

($bs < 0.09$, $ps > .10$), on feelings of connectedness. In turn, connectedness predicted greater post-activity subjective happiness ($b = 0.87$, $SE = 0.07$, $p < .001$), parenting satisfaction ($b = 0.47$, $SE = 0.05$, $p < .001$), less PRFQ prementalizing ($b = -0.34$, $SE = 0.06$, $p < .001$), greater PRFQ certainty ($b = 0.32$, $SE = 0.06$, $p < .001$), but not PRFQ interest and curiosity ($b = 0.08$, $SE = 0.05$, $p = .135$). Furthermore, indices of moderated mediation (see Table 2) indicate significant conditional indirect effects of safe haven gratitude by attachment anxiety, but not general gratitude by attachment anxiety or either gratitude condition by attachment avoidance, via feelings of connectedness on all of these outcomes except PRFQ interest and curiosity.

Furthermore, feelings of connectedness immediately following the gratitude activity predicted well-being and parenting outcomes 5 days later. Connectedness was associated with greater positive emotions ($b = 0.28$, $SE = 0.09$, $p = .001$), less negative emotions ($b = -0.34$, $SE = 0.06$, $p < .001$), greater meaning ($b = 0.39$, $SE = 0.09$, $p < .001$), more autonomy ($b = 0.25$, $SE = 0.05$, $p < .001$), competence ($b = 0.28$, $SE = 0.05$, $p < .001$), and connectedness ($b = 0.59$, $SE = 0.05$, $p < .001$), as well as more positive perceptions of children's behavior ($b = 0.13$, $SE = 0.05$, $p = .01$), less negative perceptions ($b = -0.21$, $SE = 0.05$, $p < .001$), less child maladjustment (-0.15 , $SE = 0.05$, $p = .002$), and less parental overcontrol (-0.10 , $SE = 0.05$, $p = .041$), but not empathic emotions ($b = 0.15$, $SE = 0.10$, $p = .127$). Indices of moderated mediation (see Table 2) also indicate significant conditional indirect effects of safe haven gratitude, but not general gratitude, via feelings of connectedness for both attachment anxiety and attachment avoidance on all of these outcomes, except empathic emotions.

Discussion

In this experiment, we introduce a new approach to expressing gratitude focused on times when people felt cherished, protected, or accepted (i.e., safe haven gratitude), which elicited greater positive emotions, empathic emotions, and meaning in life relative to a neutral activity. Additionally, safe haven gratitude was especially beneficial for parents with high levels of attachment insecurity. Parents with high levels of attachment anxiety or avoidance who expressed safe haven gratitude reported immediate boosts in feelings of connectedness, which in turn predicted greater well-being and parenting outcomes both concurrently and 5 days later.

Table 2. Indices of moderated mediation.

	Attachment Anxiety		Attachment Avoidance	
	Safe Haven Gratitude	General Gratitude	Safe Haven Gratitude	General Gratitude
<i>Post-Activity</i>				
Happiness	0.17* [0.08, 0.26]	0.07 [−0.03, 0.18]	0.10 [−0.01, 0.20]	0.14 [−0.03, 0.30]
Parenting Satisfaction	0.09* [0.04, 0.14]	0.04 [−0.02, 0.10]	0.05 [−0.004, 0.12]	0.04 [−0.03, 0.12]
PRFQ Prementalizing	−0.07* [−0.12, −0.03]	−0.03 [−0.08, 0.01]	−0.04 [−0.08, 0.007]	−0.03 [−0.09, 0.02]
PRFQ Certainty	0.05* [0.02, 0.09]	0.02 [−0.01, 0.06]	0.04 [−0.004, 0.09]	0.03 [−0.02, 0.09]
PRFQ Interest and Curiosity	0.01 [−0.004, 0.03]	0.01 [−0.004, 0.02]	0.03 [−0.004, 0.07]	0.02 [−0.02, 0.07]
<i>Follow-Up</i>				
Positive Emotions	0.06* [0.01, 0.11]	0.02 [−0.01, 0.07]	0.06* [0.01, 0.12]	0.04 [−0.02, 0.11]
Negative Emotions	−0.07* [−0.12, −0.03]	−0.03 [−0.08, 0.01]	−0.07* [−0.12, −0.02]	−0.04 [−0.12, 0.02]
Empathic Emotions	0.03 [−0.007, 0.08]	0.01 [−0.006, 0.05]	0.03 [−0.01, 0.08]	0.02 [−0.02, 0.07]
Meaning	0.08* [0.03, 0.15]	0.03 [−0.01, 0.09]	0.08* [0.02, 0.15]	0.05 [−0.05, 0.14]
Autonomy	0.06* [0.03, 0.10]	0.02 [−0.01, 0.06]	0.05* [0.01, 0.09]	0.03 [−0.02, 0.08]
Competence	0.07* [0.03, 0.11]	0.03 [−0.01, 0.07]	0.05* [0.02, 0.10]	0.03 [−0.02, 0.09]
Connectedness	0.12* [0.06, 0.19]	0.05 [−0.02, 0.13]	0.12* [0.03, 0.19]	0.07 [−0.05, 0.18]
Positive Child Behavior	0.03* [0.01, 0.06]	0.01 [−0.01, 0.04]	0.03* [0.003, 0.05]	0.02 [−0.01, 0.06]
Negative Child Behavior	−0.06* [−0.09, −0.03]	−0.02 [−0.06, 0.01]	−0.04* [−0.08, −0.01]	−0.03 [−0.09, 0.01]
Child Maladjustment	−0.05* [−0.08, −0.02]	−0.02 [−0.06, 0.01]	−0.03* [−0.06, −0.005]	−0.02 [−0.07, 0.01]
Parental Overcontrol	−0.03* [−0.06, −0.01]	−0.01 [−0.04, 0.01]	−0.02* [−0.05, −0.001]	−0.01 [−0.05, 0.01]

Note. * $p < .05$. Attachment anxiety and avoidance were mean-centered prior to analysis. Attachment avoidance was included as a covariate in models testing the conditional indirect effect of attachment anxiety, and attachment anxiety was included as a covariate in models testing the conditional indirect effect of attachment avoidance.

These findings advance the growing body of literature on the benefits of gratitude (Algoe, 2012; Cregg & Cheavens, 2020; Davis et al., 2016; Dickens, 2017; Layouts et al., 2017) by demonstrating that gratitude benefits relationships outside the specific context of gratitude expression. We found that expressing gratitude leads to increases in positive emotions, such as joy and happiness; empathic emotions, such as

compassion and tenderness; and feelings of meaning in life. Positive emotions – including gratitude – cultivate upward spirals of positive change, thus leading to self-improvement and even greater well-being (Armenta et al., 2017; Fredrickson, 2004). Thus, the short-term boosts in positive emotions generated by the gratitude activity in the current study may accrue over time leading to benefits for parents' well-being, relationships with others, and lives more broadly. These positive effects of gratitude are especially beneficial for people with insecure attachment orientations who typically experience lower well-being and fewer positive emotions (Mikulincer & Shaver, 2016).

Safe haven gratitude

This study also demonstrates the benefits of expressing gratitude in the context of especially positive relationship experiences – to someone who made participants feel cherished, protected, or accepted – which we refer to as safe haven gratitude. Gratitude is theorized to draw people's attention to high quality relationship partners (Algoe, 2012), and we postulate that by explicitly directing people's attention to those individuals who have provided supportive care in the past, safe haven gratitude may further capitalize on this specific relational benefit of gratitude. Like general gratitude, safe haven gratitude elicited greater positive emotions, empathic emotions, and meaning in life, relative to the control activity.

Safe haven gratitude was particularly beneficial for parents with high levels of attachment insecurity. Parents with high levels of attachment anxiety or avoidance reported greater feelings of connectedness after expressing safe haven gratitude, but not general gratitude, which in turn predicted subsequent well-being and parenting outcomes immediately following the activity, and 5 days later. The findings of the current study suggest that safe haven gratitude may mitigate some of the emotional consequences associated with attachment insecurity for parents. Individuals high in attachment insecurity may be less inclined to notice positive and supportive interactions on their own, so the guided instructions to focus on these relationships may be especially beneficial for parents with high levels of attachment anxiety or avoidance. These findings are consistent with evidence suggesting that positive relationship experiences were associated with declines in attachment avoidance during the transition to parenthood (Rholes et al., 2020) and that priming attachment security may override barriers to providing care in romantic relationships (Shaver et al., 2019).

Notably, the safe haven gratitude activity did not directly instruct parents to focus on their children, yet encouraging parents to express gratitude to anyone who made them feel cherished, protected, or accepted translated into benefits for parents and children. Specifically, parents were better at reflective functioning, less over controlling, and perceived their children's behaviors more positively. These findings are consistent with previous evidence demonstrating that priming attachment security increases empathic responses to others' needs (Mikulincer et al., 2001) and with family systems theory, which suggests that improving one component of the family system may improve other aspects of the system as well (Von Bertalanffy, 1968; Waters, 2020). Our results demonstrate that reflecting on positive attachment interactions involving receiving adequate care may translate into more adequate provision of care to one's children without expecting parents to focus directly on parenting or on their children.

The role of connectedness

Our findings point to connectedness as one potential mechanism by which safe haven gratitude promotes positive outcomes for insecure parents. Attachment insecurity is characterized by disruption to close relationships, which often results in feelings of disconnection (Lee & Gillath, 2016; Li & Chan, 2012). In addition, unmet attachment needs for high quality connection with others have been theorized as one reason why attachment insecurity disrupts parenting experiences (Jones et al., 2015). Specifically, Jones et al. (2015) argue that parents continuously monitor their environment in the context of their own attachment orientations, which may disrupt their ability to provide sensitive care to their children. Thus, feelings of closeness and connection are central to the link between attachment insecurity and parenting. The results of our study support this possibility and suggest that promoting general connection among insecure parents is one way to override the attachment-related barriers to high quality parenting.

In the current study, connectedness was a common mechanism explaining the benefits of safe haven gratitude for individuals high in attachment anxiety or avoidance. This finding is notable, given that attachment anxiety and avoidance are related to unique relationship challenges, emotion regulation patterns, and parenting outcomes (Jones et al., 2015; Mikulincer & Shaver, 2016). Although neither attachment anxiety or avoidance moderated the benefits of safe haven gratitude on other outcomes in our study, other psychological processes

may differentiate the benefits of this activity for individuals with high levels of attachment anxiety or avoidance. People high in attachment avoidance may experience relationship disconnection because they seek independence and distance themselves from relationship partners, whereas individuals high in attachment anxiety may experience relationship disconnection because they hyperactivate their need for support and may come across as clingy to their relationship partners (Li & Chan, 2012; Mikulincer & Shaver, 2016). Thus, safe haven gratitude may benefit people high in attachment avoidance by increasing positive emotions associated with being close to others, whereas safe haven gratitude may benefit people high in attachment anxiety by helping them focus on relationship partners they trust to be available during times of need. Future studies investigating these and other mechanisms explaining the benefits of safe haven gratitude would be informative.

Strengths, limitations, and future directions

The strengths of this study include the reliance on a large, well-powered sample and the use of an experimental design to test our pre-registered hypotheses that safe haven gratitude would benefit parents high in attachment insecurity. Our use of a 5-day follow-up for emotions, well-being, and parenting outcomes informed the durability of the effects presented here. The longitudinal experimental design strengthens our test of the mediational role of connectedness by allowing us to determine whether safe haven gratitude causally predicts feelings of connectedness and whether feelings of connectedness longitudinally predict subsequent well-being and parenting outcomes. Furthermore, this study represents an important advance in understanding how positive psychology interventions may benefit families, a largely underexplored topic (Waters, 2020).

Despite these strengths, our findings should be considered in light of a few limitations, which offer directions for future research. First, participants in our study only practiced their gratitude activity at a single time point, followed by a 5-day follow-up assessment. These findings provide insight into the immediate and short-term benefits of safe haven gratitude, but they do not inform whether this activity could lead to lasting changes in attachment security or parent-child relationships. Some evidence suggests that savoring improves parent-child closeness 2 years later for parents high in attachment avoidance (Burkhart et al., 2015), and that repeatedly priming attachment security over short periods of

time improves attachment anxiety, self-views, and expectations about relationships (Carnelley & Rowe, 2007). Additionally, longitudinal experiments instructing participants to express gratitude to others leads to improvements in emotions and well-being (Dickens, 2017). Future studies employing a longitudinal experimental design would inform the long-term benefits of safe haven gratitude.

In addition, all parenting outcomes in the current study were assessed via self-report. Although these measures reflect important parenting characteristics that have implications for parent-child interactions, it would be informative to measure parenting behavior using alternative methods, such as observations of parent-child interactions. Future studies could also explore whether children benefit when their parents practice safe haven gratitude by measuring children's emotions or perceptions of their relationships with their parents directly.

Concluding remark

Attachment insecurity is linked with challenges to emotions, well-being, and relationships and is often transmitted across generations via interactions between parents and children (Jones et al., 2015; Mikulincer & Shaver, 2016). The findings of the current study offer hope for insecure parents to improve their own emotions, well-being, and relationships with their children via a relatively simple, self-directed positive activity that does not even involve their children. This activity may be useful for clinicians working with insecure parents who are overwhelmed by parenting advice.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Data availability statement

The data described in this article are openly available in the Open Science Framework at <https://osf.io/j5hfr/>.

Open Scholarship



This article has earned the Center for Open Science badges for Open Data, Open Materials and Preregistered. The data and materials are openly accessible at <https://osf.io/j5hfr/>.

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