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Does Parenting Moderate the Relation between Stress and Children's Emotion Regulation?

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ABSTRACT

Parenting behaviors greatly influence children's ability to regulate their emotions and handle stressful situations. Stressful life events can be particularly problematic for children as they are less able to effectively manage these situations. Parenting behaviors that are warm and focus on directly helping the child handle negative emotions may serve as protective factors against the negative effects of stress on children's regulatory abilities. The aim of this study was to explore the role of parental warmth and parents' emotion-focused reactions as moderators of the effect of stress on children's emotion regulation. A total of 184 children between the ages of three to eleven years old ($M = 7.66$, $SD = 2.30$) participated in this study. Parents reported on their child's emotion regulation, exposure to stressful life events, and on how they, as parents, deal with their child's negative emotions. Parental warmth was coded from an interactive task. Results showed that parental warmth moderated the relation between stress and child emotion regulation, such that children of highly warm parents had better emotion regulation even when experiencing high stress. Parents' reactions to their child's negative emotions moderated the effects of parental warmth on child emotion regulation, such that parental warmth was particularly important for children of parents who place less focus on their child's emotions when they experience a negative event. Our findings partially supported our hypotheses and offer new insight into the importance of parental warmth as a protective factor against the negative consequences of stress on children's emotional functioning.

Keywords: Parental warmth, emotion regulation, emotion-focused reactions, stress, parenting, parent-child interactions



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Karina Lopez-Villegas is a third-year Psychology major with a passion for child development. With the support of her graduate student, Laura E. Quiñones-Camacho, and faculty advisor, Dr. Davis, she has been studying for the past year how stress and parenting behaviors influence child emotion regulation throughout the childhood years. Using her newly acquired knowledge she plans to pursue her PsyD in Clinical Psychology to become a Child Psychologist specializing in counseling hospital bound children in hopes of preventing post-traumatic disorders.



FACULTY MENTOR

Dr. Elizabeth Davis

Assistant Professor in the Department of Psychology

Dr. Elizabeth Davis is an Assistant Professor in the Psychology Department at UC Riverside. She earned her PhD in Developmental Psychology from the University of California, Irvine in 2009. Research in the Emotion Regulation Lab focuses on understanding how emotion regulation relates to adaptive outcomes (e.g., learning) and maladaptive outcomes (e.g., anxiety) in childhood. Emotion regulation can be broadly defined as the set of processes by which people influence the timing, expression, and experience of their emotions. The lab's work to date has aimed to identify regulatory strategies that children can use to effectively alleviate negative emotion, and to identify individual differences in children's biology and social experiences that determine whether they can regulate emotion effectively. This research also focuses on identifying mechanisms responsible for effective emotion regulation (e.g., attentional focus) to explain why certain emotion regulation strategies attenuate negative emotion and distress. Ultimately, this program of research can be viewed as providing an empirical basis for interventions aimed at improving children's emotion regulation abilities and mitigating risk for maladaptive outcomes.

INTRODUCTION

Many studies have shown that children are greatly influenced by their environment (Masten, 1998). Parental characteristics and parenting behaviors are particularly important influences during childhood (Hughes, 2014). Children learn from their parents through coaching and mimicking of socially acceptable behaviors. Throughout childhood, these parenting practices are internalized by the child, shaping their future behavior. The role of parents' behaviors is particularly important for emotional expression and regulation, as children learn how to manage themselves in different emotional situations in large part through observing and interacting with their parents (Moges & Weber, 2014). Although there is substantial evidence for the role parents play in shaping a child's ability to regulate their emotions (Murphy, 2014), less is known about how these patterns might be different for children experiencing high stress (e.g., children who have experienced violence, illness, or death of a loved one).

Experiencing high stress early in life has been associated with many maladaptive outcomes (Dye, 2018), thus, understanding potential risk and protective factors in the face of high stress is necessary to better help children facing these challenges. The experience of high stress might be particularly difficult for children as they are still developing their ability to manage negative and stressful situations. Emotion regulation is defined as the ability to modify emotional responses in the service of a goal (Gross, 2015). For example, in an event of a scary movie, one can change what is on one's mind by thinking that the creature is not real and that it is just a projected image, thus reducing scared feelings. Throughout childhood, children are learning how to change their emotional responses and their goals to change how they feel about negative events (Davis, Levine, Lench, & Quas, 2010). Children experiencing high stress might feel hopeless or defenseless in the situation as they might feel they have no control over the situation and are unable to manage or regulate the negative emotions caused by the stressors. Successfully being able to change how they feel about stressful events can allow them the chance to work through the negative emotions, resulting in more adaptive functioning (Davis et al., 2010).

Parents' contributions to their children's developing

emotion regulation abilities have an impact on how well children will be able to change how they feel when they experience negative emotions. Mothers seem to be particularly important for helping socialize adaptive emotion regulation (Morris, 2007; Morris, Morris, Silk, & Steinberg, 2011). More work is needed to better understand how parents' (especially mothers') socialization of emotion regulation might differ within families living in more versus less stressful environments. This study aimed to shed light on this important gap in our knowledge by exploring two different aspects of parental emotion socialization: parental warmth and parental emotion-focused reactions to their child's negative emotions. Parental warmth refers to verbal and physical actions that provide children with supportive attributes while parental emotion-focused reactions refers to parents' verbal responses to avoid or decrease negative emotions that their children may be feeling.

Current Study

In this study, we examined parental responses to children's negative emotions and the warmth of parents' responses during a stressful laboratory task to assess the different role of these two aspects of parental emotion socialization on children's developing emotion regulation. Moreover, we explored the moderating role of these two aspects of parental emotion socialization on the relation between stress and emotion regulation. We hypothesized that parents who focused more on their child's emotions and were warmer toward them during a stressful task would have children with better emotion regulation even in the presence of high levels of environmental stress.

METHOD

Participants

A total of 184 three to eleven year-old children ($M_{age} = 7.66$, $SD = 2.30$; 49.7% girls) took part in the study. This was a highly diverse sample, with children endorsed by parents as being Caucasian/White (18.2%), African American (10.7%), Hispanic (29.4%), Asian American (2.1%) and other ethnicities or more than one ethnicity (37.4%). Mothers' formal schooling ranged from grade school (1.6%) to a Doctoral degree (2.7%), with the majority-of the mothers reporting some college education (30.5%). Fathers' formal schooling ranged from Grade School (1.6%) to a Doctoral degree (3.6%) with the majority of

fathers having finished high school (31.6%). Household income ranged from \$15,000 or less (15.5%) to above \$100,000 (11.8%) with most families endorsing an income between \$21,000 to \$50,000 (32.1%).

Procedure

Families came to the Emotion Regulation lab at the University of California Riverside for a single visit. Before the study started, a trained research assistant obtained informed consent from the parents and assent from the children. Parents reported on their child's sources of stress, their own reactions to their child's negative emotions, and their child's emotion regulation with surveys while children completed a series of tasks (not considered here). After each task, children were given the opportunity to take a short break, enabling them to return to a calm and non-emotional state between tasks and minimizing any emotional carryover from previous tasks. For the second half of the study, parents joined their child for some dyadic tasks, of importance for this study is a frustrating Lego task in which we measured parental warmth (described below). At the end of the study, families received a small honorarium and the child took home a toy. The procedures were always completed in English.

Stimuli and Measures

Child stressful life events. Parents were asked to indicate if their child had experienced a series of stressful life events in the past year using the *Children's Stressful Life Events Questionnaire* (CSLEQ; Sandler & Ramsay, 1980). There were 32 stressors that parents could potentially endorse. To assess a child's level of life stress, we summed all the stressors that the parents endorsed for their child. A higher number indicates the experience of more life stressors.

Parental warmth. During the second part of the study, parents joined their child to take part in some tasks, including a Lego-building task. This Lego task took a total of 10 minutes and was divided into two phases. In phase one, the parent and child were told they had five minutes to complete a Lego structure, however, the Lego structure was too complex to be completed during that time. During this phase, parents were asked to refrain from physically helping their child but were given the instruction manual for assembling the Lego structure. After this first five

minutes, the experimenter came in and told the parent and child that the parent was now allowed to physically help with building the Lego structure and that they would get five more minutes to work on the Lego structure. After giving the new instructions, the experimenter left the room. The departure of the experimenter indicated the start of phase two. In this phase, parent and child had another five minutes to work on the Lego structure, but this time parents could physically aid the child if they wished to do so. Parental warmth during this task was measured using a 5-point scale (1 = *low warmth*; 5 = *high warmth*) that took parents' behaviors and verbalizations into account for the entire Lego task (i.e., one global warmth code was applied for each family). For example, a parent who ignored the child even if they seemed distressed was scored as being low on warmth. On the other hand, a parent who was physically affectionate with their child during the task and gave frequent praise was scored as being high on warmth.

Parental reactions to children's negative emotions. To measure parents' emotion-focused reactions to children's negative emotions, we administered the *Coping with Children's Negative Emotions Scale* (CCNES; Fabes, Eisenberg, & Bernzweig, 1990). This scale consists of 12 vignettes describing a child's negative reaction to a hypothetical event and seven possible reactions that parents could have for each of the events. Parents reported how likely they were to react in each of the seven hypothetical events on a 7-point scale (1 = *very unlikely*; 7 = *very likely*). This scale yields six subscales that reflect specific types of reactions to children's expressions of negative emotion (*Distress* reactions, *Punitive* reactions, *Expressive encouragement*, *Emotion-focused* reactions, *Problem-focused reactions* and *Minimization* reactions). For this study, we focused only on the emotion-focused reactions subscale. Internal consistency was good ($\alpha = .84$). Higher scores indicate greater parental endorsement of the type of reaction.

Child emotion regulation. We used the *Emotion Regulation Checklist* to assess emotion regulation (ERC; Shields & Cicchetti, 1997). This scale consists of 24 items that form two subscales, an emotion regulation subscale, and an emotional reactivity subscale. We focused on the emotion regulation subscale. The emotion regulation

subscale consists of 12 items (e.g., “Can modulate excitement in emotionally arousing situations”) and the score for the subscale is calculated as the mean of all the items. Parents responded on a 4-point scale how much of the time their child was like the child described in each statement (1 = *never*; 4 = *always*). After removing one item from this scale that negatively impacted the internal consistency, the reliability of the modified scale in our sample was modest but acceptable ($\alpha = .67$). Higher scores indicate better emotion regulation.

RESULTS

Gender differences. There were no significant gender differences in any variables of interest, all t s < 1.135, p s > .258.

Correlations. There was a positive correlation between parental warmth and child emotion regulation, $r = .257$, $p = .001$, $n = 162$, as well as between parental emotion-focused reactions and child emotion regulation, $r = .274$, $p < .001$, $n = 176$. Contrary to our expectations, a high level of stress was not correlated with child emotion regulation, $r = -.093$, $p = .220$, $n = 176$. Additionally, parental emotion-focused reactions and parental warmth were not significantly correlated, $r = -.045$, $p = .569$, $n = 160$.

Regression model predicting child’s emotion regulation.

At the first step, we entered children’s level of stress, parents’ emotion-focused reactions, and parental warmth. This step was significant $F(3, 155) = 8.910$, $p < .001$, $R^2 = .147$. As expected, both parents’ emotion-focused reactions ($b = .124$, $t = 3.482$, $p = .001$) and parental

warmth ($b = .085$, $t = 3.663$, $p < .001$) predicted child emotion regulation, but level of stress did not ($b = -.018$, $t = -1.370$, $p = .173$). At the second step, we added the interactions between stress and parents’ emotion-focused reactions, stress and parental warmth, and parents’ emotion focused-reactions and parental warmth. This step was also significant $F_{\Delta}(3, 152) = 4.231$, $p = .007$, $R^2_{\Delta} = .066$. The interaction between parents’ emotion focused-reactions and parental warmth was significant ($b = -.070$, $t = -2.395$, $p = .018$), as was the interaction of stress and parental warmth ($b = -.019$, $t = -2.190$, $p = .030$). Interactions between these continuous variables were plotted at +/- 1SD (corresponding to low and high levels) from the mean (Aiken, West, & Reno, 1991) as is typical in developmental work. At the third and last step, we entered the three-way interaction of stress, parents’ emotion-focused reactions, and parental warmth, but this step was not a significant improvement to the model $F_{\Delta}(1, 151) = .676$, $p = .412$, $R^2_{\Delta} = .004$.

A look at the two-way interaction between parents’ emotion-focused reactions and parental warmth (see **Figure 1**) revealed that the level of warmth of the parent predicted children’s emotion regulation only for children who had parents who less often endorsed emotion-focused reactions to their child’s negative emotions (low emotion-focused reactions: $b = .170$, $t = 3.432$, $p = .001$; high emotion-focused reactions: $b = .036$, $t = .916$, $p = .361$). Therefore, a closer look at the second two-way interaction of stress and warmth (see **Figure 2**) revealed that children with low-warmth parents had overall lower emotion regulation

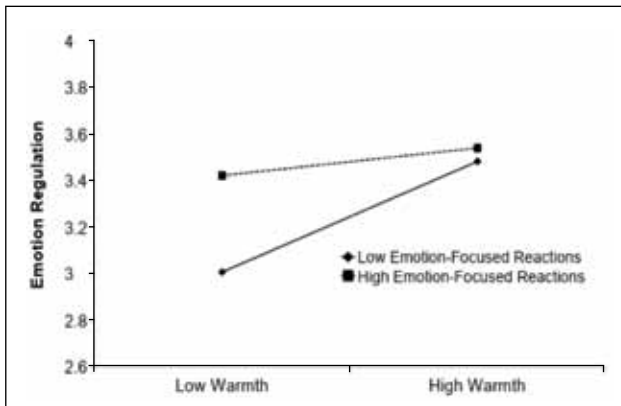


Figure 1. Two-way interaction of warmth and emotion-focused reactions predicting child’s emotion regulation. Low emotion-focused reactions: $b = .170$, $t = 3.432$, $p = .001$; High emotion-focused reactions: $b = .036$, $t = .916$, $p = .361$

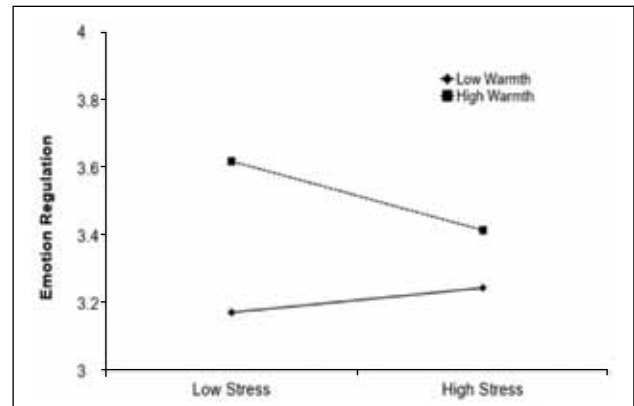


Figure 2. Two-way interaction of stress and warmth predicting child’s emotion regulation. Low warmth: $b = .006$, $t = .343$, $p = .732$; High warmth: $b = -.032$, $t = -2.257$, $p = .025$.

independent of the amount of stress they were experiencing ($b = .006, t = .343, p = .732$). On the other hand, children with high-warmth parents showed the expected association of higher stress being associated with poorer emotion regulation ability ($b = -.032, t = -2.257, p = .025$).

DISCUSSION

The goal of our study was to examine parental warmth and parental emotion-focused reactions as protective factors against the deleterious effect of stress on children's emotion regulation. We hypothesized that children whose parents primarily focused on their child's emotions during a negative event to make them feel better and who were warmer towards their child during a stressful laboratory task would show a greater ability to regulate their emotions. Our findings partially supported our hypothesis that parental emotion socialization would buffer against the effects of stress, but this was true only for parental warmth (not for emotion-focused reactions). Additionally, we found an unexpected moderating effect, that emotion-focused reactions qualified the link between parental warmth and child emotion regulation.

It is not surprising that parental emotion-focused reactions were associated with child emotion regulation. Greater parental focus on how to manage emotions would support children's development by giving them more opportunity to practice their emotion regulation skills, supported by emotion regulation modeling and coaching from parents. It is interesting to note that parental emotion-focused reactions interacted with parental warmth, such that parents high in emotion-focused reactions had children with better emotion regulation independent of their level of warmth. One reason why emotion-focused reactions might have moderated the effects of parental warmth on children's emotion regulation could be that in the absence of direct guidance on how to manage negative emotions. Having a parent who was still warm, and comforting might have given children the confidence and support to manage difficult experiences better. Our study adds to the growing body of research on how parenting can influence child emotion regulation and advances research in this area by

showing how parental warmth and behavior focused on children's emotions are both important for understanding children's developing emotion regulation abilities.

The main aim of our study was to investigate the protective effect of these parenting practices against the negative effects of stress on emotion regulation. Our findings suggest that parental warmth is a particularly important aspect of parental emotion socialization for children's emotion regulation in the presence of stress. Specifically, children with warmer parents had better emotion regulation even in the presence of high stress. A parent's ability to connect with their child in the presence of uncontrollable stress and continue to be warm and supportive towards them could give children a sense of security and the confidence needed to regulate their emotions on their own.

Some limitations of the current study should be noted. First, parents were the ones who reported on their child's stressors and their child's emotion regulation. This was done because of the wide age range in this study, but it may have biased our results as most measures relied on parent report. Future studies should have children report on their own experiences and reactions through interviews with an experimenter to capture the child's subjective experience and perception of the stressors they encounter. This would provide another perspective on children's experiences of stress that will ultimately help clarify the role of parental emotion socialization on children's emotion regulation across various developmental contexts. Additionally, our study was cross-sectional, which limits what can be said about how the pattern of associations we detected may change over time. The directionality of effects and potential causal explanations for the results. Therefore, future studies should adopt a prospective longitudinal approach to assess how these associations change throughout children's lives.

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