RELATIONS AMONG PARENTAL RESPONDING TO OFFSPRING EMOTION, EMOTION APPROACH COPING, AND POSTTRAUMATIC STRESS SYMPTOMS AMONG TRAUMA-EXPOSED COLLEGE STUDENTS

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The present investigation evaluated whether dispositional use of emotional approach coping partially accounts for the association between parental response to emotional expression and posttraumatic stress symptoms (PTSS) in a sample of 252 trauma-exposed individuals drawn from a pool of college students and college-age members of the community at-large. An online survey assessed parental reactions to participants’ negative emotions during childhood (i.e., offspring retrospective report), as well as participant trauma history, PTSS, and use of emotional approach coping. Findings complement literature illustrating the long-lasting implications of the parent-child relationship, such that both supportive and unsupportive parenting were related to PTSS. Supportive parental reactions also were related to emotional expression, but not emotional processing, and unsupportive reactions did not significantly relate to either aspect of emotional approach coping. Notably, emotional approach coping strategies were unrelated to PTSS in the full sample, and thus the indirect effects models were not supported. Post hoc analyses indicated preliminary support for the indirect effect of emotional expression on the relation between supportive parenting and PTSS in the local college student sample ($n = 117$). Limitations and implications for future research are discussed.
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CHAPTER 1
INTRODUCTION

Previous literature suggests that difficulty regulating emotions is a key feature of trauma-exposed individuals struggling with posttraumatic stress symptoms (PTSS; Bonn-Miller, Vujanovic, Boden & Gross, 2011; Eftekhari, Zoellner, & Vigil, 2009; Tull, Barrett, McMillan, & Roemer, 2007), which may be linked to the types of strategies that they employ to regulate negative emotions (Shepherd & Wild, 2014). Within the social development literature, research indicates linkages among several parenting behaviors and children’s emotional and social development (e.g., parental acceptance of children’s emotions, parental coaching strategies to aid children in managing emotions; Eisenberg, Fabes, Shepard, et. al., 1999; Lemerise, 2016; Morris, Silk, Steinberg, Myers, & Robinson, 2007). Of note, this work highlights that how a parent reacts to their child’s emotional experience may play a large role in the development of adaptive, healthy emotional expression and management later in life (Gottman, Katz, & Hooven, 1997; Morris et al., 2007); however, the relation between parental responses to early emotional experiences and child PTSS remains understudied. Further, the majority of work examining coping in the context of PTSS has focused primarily on the avoidance aspect of emotion-focused coping, whereas preliminary findings largely drawn from clinical work suggests coping through emotional approach may be beneficial for those individuals experiencing symptoms of posttraumatic stress (e.g., Hassija, Luterek, Naragon-Gainey, Moore, & Simpson, 2012). Indeed, consistent with efficacious treatment approaches grounded in behavioral orientations (e.g., acceptance and commitment therapy (ACT; Orsillo & Batten, 2005), cognitive behavioral therapy (CBT; Diehle, 2015), work targeting emotional approach coping (i.e., expression, processing) evidences not only a negative relation with PTSS but also a positive link with
posttraumatic growth (Salsman, 2006; Smart, 2006). Together, although extant work indicates that parental responses may influence risk for PTSS among trauma-exposed offspring, and emotional avoidance/approach may both be learned from such early experiences and more proximally impact PTSS, no work has yet to directly test these relations. Lastly, given the (a) high prevalence of trauma exposure among emerging adult, college students (Bernat, Ronfeldt, Calhoun, & Arias, 1998), (b) the importance of early emotional learning on expression and management during this period (John, & Gross, 2004), and (c) the role of the college context in promoting not only self-focus and psychosocial development (Arnett, 2000), but also access to mental health services (Laurent, & Powers, 2007), testing such questions in emerging adult, college student samples may have particular relevance to subsequent preventative intervention and treatment efforts.

With this backdrop, the present study is aimed at investigating whether emotional approach coping partially accounts for the relation between parental response (i.e., supportive and unsupportive) to childhood emotions and current PTSS severity in an undergraduate sample of trauma-exposed individuals. More specifically, it is hypothesized that trauma-exposed individuals who perceive their parents as having supportive reactions to their negative emotions in childhood will report lower PTSS (whereas unsupportive reactions will relate to elevated PTSS), that supportive reactions will positively relate to use of emotion approach coping strategies (and unsupportive will negatively associate), and emotion approach coping will negatively correlate with PTSS as well as partially account for the relation between parental response and PTSS. Lastly, it is expected that these relations will be robust to the inclusion of age and gender as covariates.
Traumatic Event Exposure among College Students: Posttraumatic Stress and Coping

As defined by the American Psychiatric Association (APA) in the Diagnostic Statistical Manual-5 (DSM-5), a traumatic event is one in which an individual is exposed to, actual or threatened death, serious injury, or sexual violence, via direct contact with the traumatic event, learning about the event, or through experiencing repeated or extreme exposure to such events (e.g., police officers, first responders, emergency service personnel; APA, 2013). Prevalence estimates indicate that roughly 75% of college students report having experienced a traumatic event in his/her lifetime (Bernat, Ronfeldt, Calhoun, et al., 1998; Humphrey & White, 2000; Marx & Sloan, 2002; Read, Griffin, & Wardell, 2014; Vrana & Lauterbach, 1994). For example, in a study of 6,053 undergraduate college students from various geographic regions Smyth and colleagues (2008) found between 55.8-84.5% of the students reported experiencing potentially traumatic events (PTEs); other work suggests that the range in prevalence estimates of trauma exposure among college students may start even higher, beginning at 67% rather than 55.8% (Bernat, Ronfeldt, Calhoun, et al., 1998). Read and colleagues (2011) speaks to why there is such variability in these estimates, and argues one reason is that studies often apply broad definitions to what constitutes a traumatic event, counting any and all PTEs (e.g., combat experience, physical or sexual assault, unwanted sexual propositions, life-threatening illness, sudden death of a family member or close friend, 'learning of' an event that happened to another person). Moreover, research indicates that trauma history prevalence rates for these emerging adults are comparable to or slightly higher than the prevalence rates in community samples of older adults (56-85% and 55-69% respectively), with undergraduates often experiencing more than one traumatic event in their lifetime (Gabert-Quillen, Selya & Delahanty, 2015; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Smyth, Hockemeyer, Heron, Wonderlich, &
Pennebaker, 2008). Thus, research suggests using college samples for the study of stressful life events is an advantageous and reasonable strategy as it is fairly representative of this population (Smyth, et. al., 2008). Meanwhile, such high prevalence illustrates the importance of the potential risk for mental health issues that is clearly impacting this population.

Although many individuals experience a traumatic event, only a small subset of trauma survivors develop posttraumatic stress disorder (PTSD; National Institute of Mental Health, 2016), which includes the continued presence of several distressing symptoms across four domains (i.e., intrusion, avoidance, alteration in cognition/mood, hyperarousal; APA, 2013) at least one month after the traumatic experience. In an epidemiologic study of trauma, PTSD, and other related disorders, Breslau (2009) found that less than 10% of individuals presented with PTSD following traumatic event exposure. Other studies have found similar rates across both younger and older adult populations; of note, the prevalence of PTSD in college samples is about 8% to 9%, which is comparable with the rates of PTSD in general community samples (Frans, Rimmö, Åberg, & Fredrikson, 2005; Read, Ouimette, et. al., 2011; Vrana, 2001; Vrana & Lauterbach, 1994).

Despite the prevalence, limited research has been conducted on people who have experienced trauma but who may have subclinical PTSS, which Erickson and colleagues (2013) argues is problematic for two major reasons: first, PTSD may exist on a continuum rather than be categorical with clear distinctions between having the diagnosis or not, and second, the PTSS that individuals are experiencing can be very troubling, despite not meeting diagnostic criteria for PTSD. For instance, individuals with subclinical PTSD report substantial distress (Dickstein, Walter, Schumm, & Chard, 2013), including impairment in social and family functioning (Zlotnick, Franklin, & Zimmerman, 2002). Furthermore, subthreshold PTSD also commonly co-
occurs with depressive symptoms (Cukor, Wyka, Jayasinghe, &, Difede, 2010), alcohol use problems, and overall poor health (Yarvis, & Schiess, 2008). Lastly, studying PTSS can potentially lead to a better understanding of both risk and protective factors for PTSD.

While an extensive body of work has identified consistent correlates of PTSD (e.g., gender, age, education, ethnicity, number of traumas, type of trauma, comorbid mental health problems, somatic complaints; Greene, Neria & Gross, 2016), less is known about PTSS in nonclinical populations (Erickson et. al., 2013). The *DSM-5* delineates risk and preventative factors into three categories, which include pretraumatic, peritraumatic, and posttraumatic, and comprise both temperamental and environmental factors (APA, 2013). One significant factor that may cut across categories is difficulty in the processing, expression, and regulation of emotions (Etkin, & Wager, 2007; Foa, Chrestman, & Gilboa-Schechtman, 2008; Nightingale, & Williams, 2000). Indeed, coping and emotion regulation skills play a central role in transdiagnostic models of psychological treatments and preventative interventions for a broad range of psychological problems, such as PTSS, and disorders, including PTSD (Compas, Jaser, Dunbar, Watson, Bettis, et. al., 2014). Individuals diagnosed with PTSD have demonstrated emotion regulation difficulties (Ehring, & Quack 2010), and the ability to recognize emotion as well as process emotions often are impaired in individuals suffering with PTSS (Lanius, Vermetten, Loewenstein, et. al., 2010).

Avoidance coping in particular has been linked to the development of PTSS following a trauma (Ullman, Townsend, Filipas, & Starzynski, 2007). For instance, in a study examining readjustment patterns among 152 Vietnam combat veterans, those who endorsed extreme avoidance were significantly more symptomatic than those who relied on more active forms of coping (e.g., positive acceptance/optimism, cognitive reanalysis or reframing of traumatic event;
Wolfe, Keane, Kaloupek, Mora, & Wine, 1993). In a more recent study, Hassija and colleagues (2012), found the use of avoidant coping strategies among trauma-exposed Veterans placed individuals at greater risk for depression following exposure to a traumatic event.

Further, some symptoms specific to PTSS, such as intrusive thoughts about the traumatic event and avoidance of the recollections of the event, directly reflect cognitive avoidance coping, which may lead to or maintain more severe PTSD and related outcomes more generally (Ehlers, Mayou & Bryant, 1998). Overall, trauma-exposed individuals who have an avoidant coping style in particular are at higher risk of developing PTSD (Amir, & Ramati, 2002; Krause, Kaltman, Goodman, & Dutton, 2008; Pineles, Mostoufi, Ready, Street, Griffin, & Resick, 2011; Widows, Jacobsen, Booth-Jones, & Fields, 2005). In contrast, research on coping and PTSD indicates that approach coping (e.g., strategizing, consulting with others for advice) is associated with better symptom outcomes than avoidance coping (e.g., ignoring the problem). Therapists who work with trauma- exposed individuals also report that implementing therapeutic techniques through emotional approach often will decrease PTSD symptom severity (Angus, & Greensberg, 2011). For instance, preliminary evidence suggests that trauma-exposed individuals who employ emotional approach coping techniques, specifically emotional expression (EE), experience an improvement in adjustment (Hassija, et. al., 2012). Thus, implementing appropriate coping strategies seems to play an active role not only in the risk for developing PTSD, but also in decreasing the severity of PTSD symptomology.

Although genetic and neuro-biological factors are known to contribute to an individuals’ ability to regulate emotions (Etkin, Egner, & Kalisch, 2011; Schardt, Erk, et al., 2010), a large body of work indicates that emotional development is also heavily socialized (e.g., Baker, & Fenning, 2011; Eisenberg, Cumberland, & Spirnrad, 1998; Jabeen, Anis-ul- Haque, & Riaz,
Parental Socialization of Offspring Emotion and Coping

Drawing upon an extensive review of the literature, and grounded in developmental theory, Compas and colleagues (2014) proposed that individuals first learn to regulate emotions under normal conditions in early childhood, from which they later learn how to regulate thoughts and behaviors under stressful conditions. Thus, the skills needed to properly regulate emotions provide a foundation that individuals can reference in stressful circumstances. This purposed sequence emphasizes the importance of investigating factors that influence one’s ability to regulate emotion broadly, as this ability may dictate available resources one has to cope with stressful events more specifically. Emotion regulation includes the active influence of both intrinsic processes (i.e., self-regulation), as well as extrinsic processes (i.e., emotion that is regulated by an outside factor), with initial management and internalization of expectancies and behaviors dominated by information transmitted by caregivers early in development (Thompson, 1994).

In Eisenberg and colleague’s seminal review (1998) of the literature on parental socialization of children’s emotion and emotion-related behavior, three primary contributing factors to the socialization of children’s emotion were identified: (1) parental reactions to
children’s emotion, (2) socializers’ discussion of emotion (i.e., parent-child discussion of emotions), and (3) socializers’ own expression of emotion. These learning experiences typically take place in the context of the child’s emotional expression (e.g., facially, behaviorally, or verbally), which is then met with socializers’ reactions to the displays, providing frequent, rich opportunities for emotion socialization. For instance, in a longitudinal study looking at the impact of parental reactions to children’s negative emotions, Eisenberg (1999) found that parental distress or punitive responses to children’s negative emotion at age 6-8 predicted reports of children’s emotion regulation difficulties at ages 8-10 years. Further, in a more recent longitudinal study that investigated the link between maternal emotion philosophy (e.g., parents’ active acknowledgement of their child’s emotion, attitude toward accepting their child’s emotions, and verbal coaching to help their child understand, appropriately express, and cope with his or her own emotional experience; Gottman et al., 1996) and offspring emotion regulation, Dunsmore and colleagues (2013) found that maternal emotion coaching was a protective factor for emotion regulation and emotion lability/negativity among children with oppositional defiant disorder (ODD). While this study did not include children without an ODD diagnosis, the findings further support previous work reporting associations between parental emotion coaching and various child outcomes, including the negative socialization and practice of emotion dismissing, which have been found to contribute to poorer emotion regulation and behavioral problems (Lunkenheimer, Shields, & Cortina, 2007). Finally, researchers studying emotional contagion, or the “catching” of an emotion through facial, verbal, or emotional gestures, which is found to occur in early infancy and beyond (Saarni, Campos, Camras, & Witherington, 1998), have theorized that expressive behavior, and the action of others including parents, play a significant role in a child’s emotional development (Saarni, et al., 1998).
Consistent with this perspective, Eisenberg and colleagues (1998) found that parental negative emotionality (e.g., the frequency and intensity one experiences negative emotions such as anger, stress, sadness) as well as negative reactions to children’s expression of emotion were associated with children’s negative emotionality and low social competence. Together, this work indicates that parents socialize children’s emotion and emotion regulation both directly and indirectly (Morris et al., 2007), providing early, potent models for children’s own coping strategies (Lemerise, 2016).

Prior work has categorized parental response patterns into two distinct approaches; namely, supportive and unsupportive practices (Gottman, Katz, & Hooven, 1997; Morris et al., 2007). Ways parents react that are characterized as ‘supportive’ include being accepting of children’s expressions of emotion, and helping children learn how to manage emotions through coaching appropriate strategies (Eisenberg, Fabes, & Murphy, 1996). ‘Unsupportive’ reactions include disapproving, dismissing, and punitive reactions to children’s emotions (Gottman et al., 1997). This work also indicates important links between parental supportive and unsupportive emotion socialization behaviors and children’s emotion understanding, affective and behavioral patterns, as well as coping in the context of acute stress.

First, in a study of 134 families examining offspring emotion understanding in relation to parents’ socialization of emotion, data was obtained through interviewing and observing the children, as well as parental self-reports and observing the parents interacting with their children at home. In this longitudinal study, Denham and colleagues (2002) found that emotion knowledge for children at both 3 and 4 years of age were predicted by supportive parenting practices, including mothers’ attentiveness to their children’s emotions, willingness to help children address negative emotions through letting the feelings out, and to help children figure
out how to deal with the feelings. Moreover, mothers’ actively aiding their children to learn
about emotions were the strongest predictor of child emotion knowledge at age 3. Lastly,
mothers who were accepting of their children’s emotions at age 2 had children who demonstrated
better emotion knowledge with regard to mixed emotion at age 5. This work is complemented by
Perlman and colleagues’ (2008) laboratory study of 42 children (age 4 to 5 years), which found
that parents’ unsupportive parenting, such as dismissing behavior, was negatively associated
with their children’s emotion expression and emotion situation knowledge.

Second, this body of work indicates that supportive parental emotion socialization
practices are positively associated with adaptive outcomes, while in contrast, less
supportive/unsupportive practices are associated with symptoms of mental health problems
(Dunsmore, Brooker, Ollendick, & Greene, 2016). For instance, Eisenberg, Fabes and Murphy
(1996) found parental emotion-related practices are associated with children’s social functioning.
More specifically, in a sample of 148 children, ages 8 to 13, they found that unsupportive
parenting toward children’s emotion (e.g., maternal minimization of children’s negative
emotions) was negatively correlated with children’s social skills, and supportive parenting of
child emotion (e.g., expressive encouragement) positively correlated with children’s social skills.
Further, one study using nationally representative data from the National Survey of Families and
Household (NSFH) tested links between various parenting practices and child outcomes, and
found unsupportive parenting more broadly (e.g., low levels of parental support and the use of
harsh punishment) was associated with more behavioral problems in children 5-11 years of age
(e.g., parents’ reports of children’s adjustment, school grades, and behavior problems; Amato
and Fowler, 2002).

Third, parents also play an essential role in modeling and teaching children how to
properly approach and cope with acute stressors. One component of supportive parental socialization is reflected in how parents react to children’s negative emotions when faced with stressful situations (Smith, et. al., 2006). It has been argued that when parents respond in a supportive manner, it can promote effective coping, and in contrast, negative parental reactions can undermine the utilization and internalization of such skills (Skinner & Edge, 2002). For instance, Eisenberg and colleagues (1996) found unsupportive parenting, such as punitive or minimizing reactions to children’s negative emotions, negatively correlated with teacher-reported constructive coping (i.e., support-seeking, problem solving, low cognitive avoidance), whereas observed supportive maternal parenting (e.g., responded in a positive supportive manner to children’s negative emotions) positively related to children’s constructive coping. Further, Smith and colleagues (2006) highlighted the potential socialization correlates of coping efficacy, suggesting that children also may feel more efficacious if their parents are supportive in the context of child distress. It was hypothesized that parental socialization would be associated with children’s coping strategies and efficacy, which in turn would be related to the children’s psychological adjustment. In a test of these questions among 293 children (Mage = 7.43 years), Smith (2006) found that active and support-seeking coping and coping efficacy mediated the association of parent socialization to children’s psychological adjustment. Taken together, supportive parenting may enhance children’s social skills and emotional understanding whereas unsupportive parenting is correlated with behavior problems as well as children who are less likely to express their emotions, and cope less effectively in stressful situations; all of which may have serious implications later in life, especially for individuals faced with trauma.

Although there are no studies that have investigated the link between unsupportive parental responses to children’s negative emotions and the development of PTSS/PTSD
specifically, theoretical, and empirical evidence drawn from the literature targeting emotional inhibition provides preliminary support for this claim. Specifically, unsupportive practices often include aspects of emotional invalidation (e.g., parental punishment, minimization, distress response to negative emotions), and emotional invalidation in childhood has been associated with chronic emotional inhibition in adulthood (Krause, Mendelson, & Lynch, 2003), including aspects consistent with symptoms of posttraumatic stress (e.g., thought suppression, avoidant stress responses). For example, findings suggest trauma-related thought suppression, accompanied by a rebound effect (i.e., defined by increased occurrences of the thought after suppression instructions are removed), is specifically related to the pathology of PTSD (Shipherd & Beck, 1999; Shipherd, & Beck, 2005), and thus has been proposed as a risk and maintenance factor for the re-experiencing/interference symptom cluster. Moreover, emotional inhibition in terms of avoidant stress responses has been extensively studied among trauma-exposed individuals; not only are trauma-exposed individuals consistently found to implement avoidant coping styles (Bryant, & Harvey, 1995; Krause, Kaltman, Goodman, & Dutton, 2008), avoidance of thoughts, feelings, and/or reminders of the event is an explicit symptom cluster and diagnostic criterion (APA, 2013). Taken together, unsupportive parental response to offspring emotional expression not only is associated with psychological problems and difficulty coping with stress broadly (Dunsmore et al., 2016; Eisenberg et al., 1996), but also chronic emotional inhibition specifically, which holds direct relevance to several facets of PTSS/PTSD. However, further research is needed to help clarify the relations among parental response to offspring emotions, emotion coping, and risk of PTSS later on in life.
Integrative Summary and Current Study among Emerging Adults

Trauma among college students is common (Bernat, Ronfeldt, Calhoun, & Arias, 1998). Although only a small percentage of trauma-exposed individuals go on to develop PTSD (Breslau, 2009), preclinical PTSS can be extremely distressing (Erickson, et. al., 2013). Thus, further investigation of potentially protective or predictive factors among college students exposed to a trauma is warranted. Drawing from a large body of research highlighting avoidant coping as a risk and/or maintenance factor of PTSD (e.g., heart rate reactivity; Pineles, et. al., 2012), and a subset of literature suggesting that coping through emotional approach, is an effective target for PTSD treatments and may serve as a protective factor in its development (e.g., emotion expression; Hassija, et. al., 2012), investigating factors that influence an individual’s dispositional coping strategies holds significant relevance. Although coping and emotion regulation are seemingly separate, coping includes emotion regulation under stress.

Arguably, parents are partially at the root of the development of children’s coping tendencies (Hardy, Power, & Jaedicke, 1993) and abilities (Skinner & Edge, 2002) as well as children’s emotion regulation (Compas, et. al., 2014). Although there is a gap within the literature, how parents respond to their children’s negative emotions may play a long-lasting and influential role on how a young adult copes with trauma, through an emotional approach (e.g., Smith, et. al., 2006). Moreover, limited work has examined how each of these constructs (i.e., parental response, emotion approach coping, PTSS) relate to one another specifically, and no study has yet sought to test the relations among all of these constructs together.

Lastly, despite a large literature addressing psychological factors among college students, often as ‘convenience samples’ (Peterson, & Merunka, 2014), little work has examined these specific relations, which actually hold particular relevance to this population. Arnett (2000)
regarded the period of life extending from age 18 to 25 as a distinct life stage called emerging adulthood. Johnson and colleagues (2010) highlight this period as a challenging time of newfound independence, and importantly the shift is often culturally driven; for instance, young adults in America who experience the transition away from home and into college have an extended period of time to focus on their own personal beliefs and development. In addition to the high prevalence of trauma exposure among emerging adult college students (Bernat, Ronfeldt, Calhoun, & Arias, 1998), previous literature has also highlighted the importance of early emotional learning on expression and management during this emerging adulthood period (John, & Gross, 2004). For instance, Aquilino and Supple (2001) argued the need for investigating the effects of early family experiences, especially that of parenting, on the developmental success and well-being of emerging adults given extensive theoretical and empirical work highlighting the pervasive impact of childhood experiences across the life course, both positively (e.g., higher levels of social competence and college adjustment; Fass, & Tubman, 2002., and academic achievement; Sillick, & Schutte, 2006; Strage & Brandt, 1999) and negatively (e.g., decreased well-being, greater substance abuse during emerging adulthood; Aquilino and Supple, 2001; Steinberg, Elmen, & Mounts 1989). Moreover, the role of the college context in promoting not only self-focus and psychosocial development (Arnett, 2000; Marsiglia, Walczyk et. al., 2007), but also access to mental health services (Laurent, & Powers, 2007), further supports the importance of testing such questions in emerging adult college student samples. Indeed, recent research has highlighted the significance of better understanding the course and correlates of PTSD symptom severity among emerging adult college students specifically (Read, Bachrach, Wright, & Colder, 2016).

The current study aimed to investigate whether retrospective reports of supportive and
unsupportive parental response styles were associated with an individual’s ability to properly regulate the expression and processing of his or her emotions, and how each of these factors related to the experience of PTSS in a sample of emerging adult college students. Specifically, four primary models tested the following hypotheses (i.e., two included the ‘supportive parenting’ index as the initial/distal predictor and either [1] emotional expression or [2] emotional processing as the mediator, and two included the ‘unsupportive parenting’ index as the initial/distal predictor, with one having [3] emotional expression as the mediator and the last model included [4] emotional processing as the mediator): (1) supportive parenting responses would be negatively related to participant’s PTSS, and unsupportive parenting practices would be positively related to PTSS (path c); supportive parenting would be positively related to dispositional emotional expression as well as emotional processing, and unsupportive parenting would be negatively related to both emotional expression and emotional processing (path a); dispositional emotional expression and processing would be negatively correlated with PTSS (path b); and both EAC strategies would indirectly account for the relations between supportive/unsupportive parenting and PTSS. Lastly, all four models were tested again with age (Read, Bachrach, et. al, 2016) and gender (Berghuis & Stanton, 2002; Breslau, Davis, Andreski, et. al., 1997; Perry, et. al., 2015) as covariates.
CHAPTER 2

METHOD

Participants

Participants were recruited from two sources: college students participating in the University’s psychology research pool (SONA), and traditionally-college age adults (i.e., 18-26 years) participating in online survey research through Amazon’s Mechanical Turk system (MTurk). Participants included in the SONA sample were 117 college students between the ages of 18 to 26 years old ($M = 18.93$, $SD = 1.46$; 69.2% women; 0.9% gender nonconforming/non-binary) who reported a positive history of trauma exposure (i.e., trauma happened to them, was witnessed, or was part of their job). Of these participants, 35.9% identified as White (not of Hispanic origin), 28.2% African American/Black, 2.6% Asian or Pacific Islander, 27.4% Hispanic, 0.9% Native American, and 5.1% “other”. All participants from the SONA sample were current undergraduate students attending the University of North Texas.

Participants included in the MTurk sample were 135 adults between the ages of 18 to 26 years old ($M = 23.41$, $SD = 1.99$; 81.5% women, 2.2% nonconforming/non-binary) who reported a positive history of trauma exposure (i.e., trauma happened to them, was witnessed, or was part of their job). Of these participants, 74.1% identified as White (not of Hispanic origin), 9.6% African American/Black, 4.4% Asian or Pacific Islander, 7.4% Hispanic, 2.2% Native American, and 2.2% “other.” Of the 135 total, 55 were current university students (48 undergraduates, 7 graduate students), and the remaining 80 were not current students. Other educational history questions were not included in the current study.

Together, participants were 252 adults between the ages of 18 to 26 years old ($M = 21.33$, $SD = 2.85$; 22.2% males, 75.8% females, 2% nonconforming/non-binary, with one participant
indicating their gender was not listed on the questionnaire) who reported a positive history of trauma exposure. Participants selected for analysis according to age parameters (i.e., 18-26) and endorsement of trauma-exposure within the SONA sample did not differ significantly from those selected from the larger community sample gathered via MTurk across key demographic (e.g., ethnicity), primary predictor (e.g., emotion-based coping strategies and parental reactions) or criterion (e.g., PTSS level) variables. The ethnic and racial composition of the full analyzed sample was as follows: 56.3% White (not of Hispanic origin), 18.3% African American/Black, 16.7% Hispanic, 3.6% Asian or Pacific Islander, 3.6% “other” and 1.6% Native American. Participant education was as follows: 172 were currently a student while 80 were not. Of the participants who were currently a student, 165 were undergraduates, and 7 were graduate students.

Measures

Assessment tools include those targeting inclusionary criteria (i.e., 18-26 years old, traumatic event exposure), PTSS, retrospective parental response to childhood emotions, and proclivity for emotion approach coping.

Inclusionary Criteria

Age (i.e., 18-26 years) was listed as an inclusionary criterion in the study description and later assessed via a standard demographic form. Traumatic event exposure was assessed via the Life Events Checklist (LEC; Gray, Litz, Hsu, & Lombardo, 2004). Participants were asked to indicate whether they have ever experienced any of a list of 16 traumatic events (e.g., serious accident, non-sexual or sexual assault, natural disaster, military combat). Notably, participants
could also nominate Item 17, “any other very stressful event or experience.” If participants endorsed “any other stressful event or experience,” those individuals were asked to briefly identify the event. A conservative approach to inclusion was taken in the current study, such that events detailed in response to the “other” option, as well as events marked as indirect/unclear exposure (e.g., learned about, not sure, or N/A) did not meet criteria for inclusion. The LEC is the most widely used self-report assessment of traumatic event exposure (Elhai, Gray, Kashdan & Franklin, 2005), including with emerging adult, college student samples (Gray, et al., 2004).

Posttraumatic Stress Disorder Checklist

The PTSD Checklist for DSM-5 (PCL-5) is a widely used diagnostic tool and self-report measure that assesses PTSD symptoms (PTSS; Weathers et al., 2013). Following completion of the LEC, participants were asked to identify the most distressing event they reported directly experiencing, and to reference that event when answering the PCL-5 questions. There are 20 items total, all of which correspond to the DSM-5 symptom criteria for PTSD; items embody each of the four symptom criteria: intrusion (e.g., ‘repeated, disturbing dreams of [the stressful experience]’), avoidance (e.g., ‘avoiding memories, thoughts, or feelings related to [the stressful experience]’), negative alterations in cognitions and mood (e.g., ‘blaming yourself or someone else for [the stressful experience] or what happened after it?’), and alterations in arousal and reactivity (e.g., ‘being “super alert” or watchful or on guard?’). Participants answered each item on a 5-point scale regarding lifetime (post-trauma) experience, ranging from 0 being not at all, to 4 being extremely. The possible sum of the items ranges from 0-80, representing the participant’s total score. The PCL-5 is highly correlated with clinically administered measures of PTSD symptom severity (e.g., PTSD Symptom Scale-Interview version; r = .68) and has high internal
consistency ($\alpha = .95$; Wortmann, Jordan, Weathers, Resick, et al., 2016). In the current sample, the internal consistency was $\alpha = 96$.

Coping with Children’s Negative Emotions Scale (CCNES), Modified for Offspring Report

The CCNES (Fabes, Eisenberg, Bernzweig, 1990) is a self-report measure that was initially designed to assess parent-reported response style to children’s negative affect. The measure consists of 12 vignettes that involve a theoretical, distressing situation that provokes the child to experience negative emotions. Parents then use a 7-point scale (1 = very unlikely to 7 = very likely) to indicate how likely they are to respond in six different ways.

Each response option matches one of six subscales, three of which represent supportive parenting and the other three represent unsupportive parenting. Specifically, supportive parenting includes expressive encouragement (e.g., “encourage my child to express his/her feelings of anger and frustration”), emotion-focused reactions (e.g., “comfort my child and try to make him/her feel better”), and problem-focused reactions (e.g., “help my child think of things that he/she could do so that being at the friend's house without me wasn't scary”); unsupportive responses include punitive reactions (e.g., “send my child to his/her room to cool off”), minimization reactions (e.g., “tell my child not to make a big deal about missing the party”), and distress reactions (“get angry at my child”). Consistent with prior work (Smith et al., 2006) the expressive-encouragement, emotion-focused, and problem-focused subscales were averaged together to create the final “supportive” score, and the punitive, minimizing, and distress subscales were averaged to create the final “unsupportive” score in the current study.

The CCNES demonstrates good construct validity, internal consistency, and adequate test-retest reliability in the parent population (Fabes, Poulin, Eisenberg, & Madden-Derdich,
For the purpose of the current study, the instruction set of the CCNES was altered to allow emerging adult participants to retrospectively report on parent responses during childhood. Specifically, participants were instructed to complete the CCNES according to how they believe their parents would have reacted in each vignette; thus, the interpretations of the CCNES was solely based on the face validity of the measure. In the current sample, the internal consistency was $\alpha = .94$ for the supportive subscale, and $\alpha = .93$ for the unsupportive subscale.

Emotional Approach Coping (EAC)

The EAC questionnaire (Stanton, Kirk, Cameron, & Danoff-Burg, 2000) is an eight-item self-report measure with two distinct subscales: the emotional expression subscale (EAC-EE) and the emotional processing subscale (EAC-EP). The EAC-EE items assess the outward expressions of emotions. Some examples include, “I feel free to express my emotions” and “I take time to express my emotions.” The EAC-EP items assess conscious attempts to identify and understand one’s emotions, with items including, “I realize my feelings are valid and important” and “I delve into my feelings to get a thorough understanding of them.” Participants were asked to rate each item on a 4-point Likert-type scale (1 = I haven’t been doing this at all; 4 = I’ve been doing this a lot), with higher scores representing typically healthier, more approach-oriented emotional coping. Scores range from 0 to 16 within each subscale. Adequate test-retest reliability as well as high internal consistency have been found for both dispositional and situational versions of the EAC scale (e.g., $r = .72$-.78, $\alpha = .72$ to .94 respectively); moreover, evidence for discriminant, convergent and predictive validity of the EAC also have been reported (Stanton, Danoff-Burg, Cameron, Bishop, et al., 2000; Stanton, Kirk, Cameron, et al., 2000). In the current sample, we utilized the dispositional instruction set that asked participants to what extent (how
much or how frequently) do they typically do what each item says. The internal consistency was \( \alpha = .84 \) for the emotional processing subscale, and \( \alpha = .90 \) for the emotional expression subscale.

**Study Procedure**

Institutional Review Board (IRB) approval was received from the University of North Texas (UNT) prior to the start of the study. Participants were recruited via two different sources—the psychology subject pool at UNT and Amazon’s MTurk. Participants who completed the survey from the subject pool received course credit. Participants came to Dr. Boals’ research computer laboratory in Terrill Hall at the University of North Texas, where they then sat at a computer to complete the survey. Each participant that fully completed the study was compensated with the standard of one SONA credit for each 30 minutes; the current study took about 45 minutes to an hour to complete, and thus participants received 2 credits.

Participants who completed the survey on MTURK were paid either $0.50 or $1.00 for completing the survey.\(^1\) In an effort to speed up recruitment, after 91 participants MTurk representatives suggested to increase the payment to $1.00 to align with other surveys payments that were currently posted on MTurk. The survey was temporarily paused on the MTurk website, and was re-launched with an increase in pay after we received IRB approval. Questionnaires were presented in the following order: EAC, LEC, PCL-5, CCNES, and demographics.

Data collected were then checked and cleaned (e.g., assuring inclusionary criteria, management of missing data), and sample descriptives calculated. Following Preacher and Hayes’ (2004) method for testing of indirect effects, the mediator (i.e., dispositional EAC) must be associated with both the predictor (i.e., parenting) and outcome (i.e., PTSS symptoms). In

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\(^1\) Key demographic (e.g., ethnicity), primary predictor (e.g., emotion-based coping strategies and parental reactions) and criterion (e.g., PTSS level) variables did not differ significantly as a function of either (1) college status, or (2) MTurk compensation.
order to test whether these associations existed before proceeding to running the full models, correlations were computed among the two emotional approach coping scales—emotional expression and emotional processing, the two parenting scales—supportive parenting and unsupportive parenting, and the PTSS scale.

Planned primary analyses were conducted using the PROCESS custom dialog for SPSS 19 (Hayes, 2008). Specifically, the first two of the proposed four models looked at supportive parenting. The first model tested the hypotheses that (1) supportive parenting negatively related to PTSS (pathway c), (2) supportive parenting positively related to emotional expression (pathway a), (3) emotional expression positively related to PTSS (pathway b), and (4) a significant proportion of the total effect of supportive parenting on the PTSS would be accounted for by the indirect effect via emotional expression (pathway ab). The second model tested the same series of hypotheses in regard to emotional processing rather than emotional expression. A bias-corrected 95% confidence interval (CI) was used to examine the indirect effect in each model. As recommended, this approach included 5000 bootstrapping samples, and the interpretation of the indirect effect was based upon a CI that does not include zero (Preacher & Hayes, 2008). The third and fourth models then took the same approach in the examination of unsupportive parenting. Specifically, the third model tested the hypotheses that (1) unsupportive parenting positively related to PTSS (pathway c), (2) unsupportive parenting negatively related to emotional expression (pathway a), (3) emotional expression negatively related to PTSS (pathway b), and (4) a significant proportion of the total effect of unsupportive parenting on the PTSS would be accounted for by the indirect effect via emotional expression (pathway ab). The fourth model tested the same series of hypotheses in regard to emotional processing rather than emotional expression.
CHAPTER 3
RESULTS
Addressing Data Issues

A total of 394 participants completed both surveys (130 via SONA; 264 via MTurk); however only 252 of these participants were included in the current analyses. Participants missing more than 10% of the data on the measures of interest (n = 21) were removed from the final sample. Nine participants did not meet criteria for being trauma-exposed and thus also were removed. There were no participants under the age of 18; however, 99 participants were removed due to being over the age of 26. A mean imputation approach was taken for all other missing data.

Preliminary Analyses

First, analyses were conducted to check the assumptions for multiple linear regression (i.e., linear relationship, multivariate normality, homoscedasticity, no concerns of multicollinearity, and no auto correlation); all parameters were acceptable. Descriptives and bivariate correlations then were run; the means and standard deviations for all continuous variables can be found in Table 1. As expected, the two parenting scales (Supportive and Unsupportive) negatively correlated with one another. Moreover, supportive parenting negatively correlated with PTSS, whereas unsupported parenting positively correlated with PTSS, which also was expected. Although supportive parenting positively correlated with not significantly correlate with PTSS; thus, running the indirect effects model to test whether emotional expression mediates the relationship between supportive parenting and PTSS was no longer appropriate. Notably, correlations for paths a and b for the other three proposed mediation
models also were not significant; however, we still conducted the four indirect effect analyses (without covariates) for the purposes of fulfilling the requirement of the thesis proposal.

Primary Analyses

Supportive Parenting

Please see Figures 1 and 2 for final path coefficients in each model.

Emotional Expression

The first model, testing the total effect of supportive parenting on PTSS, accounted for a significant amount of the variance ($F[1,250] = 7.43, p = .006$, adjusted $R^2 = .02$). Specifically, supportive parenting significantly related to PTSS ($b = -2.74, p = .006$). Supportive parenting also accounted for a significant amount of variance in emotional expression ($F[1,250] = 10.71, p = .001$, adjusted $R^2 = .04$; $t = 3.27, p = .001$); however, as indicated in the preliminary analyses, while the final model including both supportive parenting and emotional expression was significant ($F[2,249] = 4.21, p = .015$, adjusted $R^2 = .03$), emotional expression was not significantly related to PTSS ($b = 0.39, p = .322$), and the direct effect of supportive parenting remained significant ($b = -2.95, p = .004$). Together, the model did not provide support for an indirect effect of emotional expression (path ab; 95% CI [-.15, .82]). Please see Figure 1 for further detail.

Emotional Processing

The second model, also tested the total effect of supportive parenting on PTSS, which as previously stated, did account for a significant amount of the variance. As indicated, supportive
parenting significantly related to PTSS. In contrast with emotional expression, supportive parenting did not account for a significant amount of variance in emotional processing ($F[1,250] = 1.39, p = .238$, adjusted $R^2 = .00; t = 1.18, p = .238$). As indicated in the preliminary analyses, while the final model including both supportive parenting and emotional processing was significant ($F[2,249] = 3.81, p = .023$, adjusted $R^2 = .02$), emotional processing was not significantly related to PTSS (path $b; b = 0.19, p = .649$), and the direct effect of supportive parenting remained significant (path $c; b = -2.78, p = .006$). Together, the model did not provide support for an indirect effect of emotional processing (path $ab; 95\%\ CI [-.08, .38]$). Please see Figure 2 for further detail.

Unsupportive Parenting

Please see Figures 3 and 4 for final path coefficients in each model.

**Emotional Expression**

The third model, testing the total effect of unsupportive parenting on PTSS, accounted for a significant amount of the variance ($F[1,250] = 40.69, p = .000$, adjusted $R^2 = .14$). Specifically, unsupportive parenting significantly related to PTSS (path $c; b = 7.07, p = .000$). Notably, unsupportive parenting did not account for a significant amount of variance in emotional expression ($F[1,250] = .55, p = .456$, adjusted $R^2 = .00$); however, as indicated in the preliminary analyses, while the final model including both unsupportive parenting and emotional expression was significant ($F[2,249] = 20.28, p = .000$, adjusted $R^2 = .14$), emotional expression was not significantly related to PTSS (path $b; b = 0.05, p = .885$), and the direct effect of unsupportive parenting remained significant (path $c; b = 7.06, p = .000$). Together, the model did
not provide support for an indirect effect of emotional expression (path ab; 95% CI [-.13, .31]). Please see Figure 3 for further detail.

*Emotional Processing*

The fourth model, also tested the total effect of unsupportive parenting on PTSS, which as previously stated, did account for a significant amount of the variance. As indicated, unsupportive parenting significantly related to PTSS. Unsupportive parenting also did not accounted for a significant amount of variance in emotional processing ($F[1,250] = 0.06, p = .794$, adjusted $R^2 = .00; t = -0.26, p = .794$). As indicated in the preliminary analyses, while the final model including both unsupportive parenting and emotional processing was significant ($F[2,249] = 20.34, p = .000$, adjusted $R^2 = .02$), emotional processing was not significantly related to PTSS (path b; $b = 0.15, p = .710$), and the direct effect of unsupportive parenting remained significant (path $c'$; $b = 7.07, p = .000$). Together, the model did not provide support for an indirect effect of emotional processing (path ab; 95% CI [-.25, .11]). Please see Figure 4 for further detail.

*Post-Hoc Examination*

Given that the current sample included data drawn from two sources, post-hoc analyses were conducted to examine the proposed relations among (1) the SONA and MTurk samples separately, and (2) as a function of current student status. Please see Tables 2 and 3 for the descriptives and correlations. Of note, findings were largely consistent with that found in the overall sample, with one key exception: preliminary support for the first model (i.e. testing the role of emotional expression in the relation between supportive reactions and PTSS) was found
in the SONA sample (please see Table 2). Accordingly, the indirect effects model was re-run using only the SONA sample. As before, supportive parenting was negatively related to PTSS (path c; $b = -4.44$, $p = .002$), as well as positively related to emotional expression (path a; $b = 0.61$, $p = .014$); however, in this model emotional expression also was negatively related to PTSS (path b; $b = -1.13$, $p = .037$), and there was evidence of an indirect effect (path ab; 95% CI [-1.77, -0.09]). Finally, supportive parenting remained significantly related to PTSS when emotional expression was included in the model (path c’; $b = -3.75$, $p = .011$).
CHAPTER 4

DISCUSSION

The current study aimed to explore parental influence on the use of dispositional emotional approach coping in hopes of better understanding PTSS severity among trauma-exposed college students. Consistent with hypotheses, trauma-exposed individuals that endorsed having parents who reacted in a more supportive manner to negative emotions (e.g., expressive encouragement, or problem-solving and emotion-focused reactions) had lower levels of PTSS. Similarly, individuals that endorsed having parents who reacted in an unsupportive manner to negative emotions (e.g., minimization, punitive or distress reactions) endorsed higher levels of PTSS. Moreover, individuals who endorsed having a parent that responded supportively to their negative emotions also endorsed the use of approach coping via emotional expression, although not via emotional processing. Interestingly, the use of emotional approach strategies was unrelated to unsupportive parental reactions. Finally, neither emotional expression nor emotional processing were related to PTSS in the full sample, and thus the findings form the current study did not support the primary indirect effects models proposed.

First, several study findings were consistent with previous research. A large body of literature demonstrates that supportive parenting is related to positive child outcomes, and unsupportive or negative parenting is associated with increased risk for their children experiencing internalizing and externalizing problems (Denham, Workman, Cole, et al., 2000; Hudson, & Rapee, 2004; Kim, Ge, Brody, et al., 2003). Consistent with hypotheses, supportive and unsupportive parental reactions were strong predictors of PTSS; this finding aligns with prior studies that have demonstrated a significant association between other parenting behaviors (e.g., hostility, warmth) and child endorsement of PTSS specifically. For instance, in a 2010
study by Valentino and colleagues, hostile and coercive parenting behaviors were strong predictors of child-reported PTSD symptoms, and supportive and engaged parenting behaviors (e.g., dimensions corresponding closely to the construct of parental warmth; Lovejoy, Weis, O'Hare, & Rubin, 1999) were associated with child-reported adjustment. The current study’s results echo these findings in a young adult population, indicating not only concurrent associations but also continued relations later in life.

The current study also found that supportive parenting was associated with the use of emotional expression, a strategy used to regulate emotions under stressful situations. Parents who are encouraging and react supportively to children in distress may create a safe environment for children to express emotions freely. Further, parents who are emotionally expressive themselves can help children label emotions. For instance, researchers who study parental socialization have emphasized the importance in modeling emotional expression, as it facilitates the skill to identify emotions and recognize when others are experiencing emotions (Alegre, 2011; Dunn, & Brown, 1994; Eisenberg, Valiente, Morris, et al., 2003; Steele, Steele, Croft, & Fonagy, 1999). Thus, as evidenced in our findings, individuals with supportive parents may be more inclined to utilize this coping approach (i.e., emotional expression) during times of stress as they have learned how to identify and express their emotions as opposed to those who experienced unsupportive parental reactions.

Conversely, although emotional expression was related to supportive parental reactions, it was not related to unsupportive parental reactions. A large body of work provides evidence that negative parenting practices are associated with less effective coping strategies (Eisenberg, Fabes, & Murphy, 1996; Lunkenheimer, Shields & Cortina, 2007, McEwen & Flouri, 2009; McKee, Harvey, Danforth, et al., 2004). Previous literature suggests that parents who minimize
or are insensitive to their children’s emotions are thought to communicate a message that emotions are unacceptable and should not be expressed (Eisenberg et al., 1998) and thus, may result in children taking a more avoidant coping approach in regards to emotionality. Similarly, in more recent work researchers have found that negative parenting behaviors may exacerbate children’s emotional reactivity, thereby increasing the likelihood that children would utilize avoidance coping in hopes to diminish their reactivity (Jaffe, Gullone, & Hughes, 2010).

Together, these findings suggest that while supportive parenting may promote emotion approach coping, unsupportive reactions to emotions may engender a proclivity toward avoidance; critically, this further supports the contention that neither supportive/unsupportive parental reactions nor emotional approach/avoidance are unidimensional constructs.

Replication of this pattern of findings first is needed, and if supported, further theoretical, empirical, and assessment efforts will be required to advance not only our understanding of the proposed relations, but also that of the parenting and emotion constructs more broadly.

Unexpectedly, neither emotional expression nor emotional processing were related to PTSS. As such, the hypothesis that emotional approach coping would mediate the relationship between parental reactions and PTSS was not supported. These findings stand in contrast to previous studies in this area. For example, coping strategies employing emotional expression have been shown to mitigate PTSS among Veterans (Hassija, 2012). In terms of emotional processing, and the direction of this relation, findings are more mixed: some work indicates that emotional processing can have a positive impact on reducing stress (e.g., facilitating adjustment after cancer diagnosis; Stanton, Danoff-Burg, Cameron, et al., 2000), and others suggest that emotional processing can exacerbate existing PTSS depending on trauma type (Morrow, & Nolen-Hoeksema, 1990). Regardless of the direction of the change in PTSS by emotional
expression and emotional processing, both have demonstrated to have some type of influence on
PTSS which was not found in the current study. In addition to sample-specific considerations
(e.g., treatment, general college/community), there may be important moderating factors (e.g.,
trauma type; Morrow, & Nolen-Hoeksema, 1990) not captured in the current study that help
clarify the relationship between emotional approach coping and PTSS.

In this vein, preliminary post-hoc analyses were conducted to examine whether this
unexpected finding was consistent across the SONA and MTurk samples. These analyses
indicated that individuals in the SONA sample who endorsed utilizing emotional expression had
lower levels of PTSS. Moreover, emotional expression evidenced an indirect effect on the
relationship between supportive parenting and PTSS thus providing preliminary support for one
of the proposed models (i.e., only found in the SONA sample). Undoubtedly, the interpretation
of this finding warrants caution as this sample was small ($n = 117$), participants’ testing
environment was controlled, and generalizability needs to be considered as this sample was
collected from one university.

Nevertheless, this finding as well as the discrepancy between samples warrant additional
attention. First, although both samples were limited to participants age 18-26 years,
chronological age is not a sufficient indicator of ‘emerging adulthood’ as a developmental period
(Arnett, 2000). Given the four-year university setting for the SONA assessment, that sample may
have included a greater proportion of ‘emerging adults’ than the MTurk sample; future research
could include a measure assessing the degree to which individuals fit the characteristics of
emerging adulthood (e.g., Inventory of the Dimensions of Emerging Adulthood; Reifman,
Arnett, & Colwell, 2003), using this as either an inclusionary criterion or moderator of the
proposed relations. Additional factors which may have differed across the samples include
depressive symptomology and SES, both of which may influence results (McLoyd, 1998) and thus should be assessed in future work. Lastly, the name of the study varied between samples, which may have introduced a potential “priming effects.” Priming effects refers to the idea that exposure to a certain stimulus (i.e., title) influences the responses thereafter. In this study the title of the survey posted on the SONA system was “Growing from Stressful Life Events,” which may have influenced (1) who took the survey via interest in impacts of stressful events and (2) how they interpreted the instruction set to the coping measure (e.g., dispositional vs. situational). The title of the survey posed on the MTurk platform was “What Have Your Parents Done?: Influence of Parenting Styles on Psychological Outcomes.” Subsequently, those in the MTurk sample may have had more interest and thus focused more on the parenting measure. It will be important to see whether the post hoc analyses can be replicated in other college student (emerging adult) samples, and only then seek to vary sample composition, study approach, and more subtle influences on sampling and reporting in an effort to ascertain the boundaries of the findings.

Limitations and Future Research

The current study has several limitations. First, the sample was drawn from two different sources, one being relatively homogenous in that it came from an undergraduate population of psychology students attending UNT. The other being more heterogeneous online sample with a wider range of geographical locations. Thus, issues of generalizability may be salient. Of note, the differences in the testing environments could have influenced results. For example, individuals who came into the laboratory to take the survey were in a controlled setting such that the testing environment was quiet and contained other participants and a research assistant that
monitored the lab. In contrast, the testing environment for those who took the survey online through MTurk is unknown. No environmental distractions could be controlled for. Further, in the current study all participants were administered the questionnaires in the same order, which introduces the potential for order effects. Order effects refer to the notion that the order in which the information is being presented can influence the response pattern across participants. Future research should control for this by randomizing the survey flow (i.e., the order that questionnaires are being administered) for each participant.

Additionally, increase in sample size is desirable to increase statistical power and clarify true significant relationships among variables. Of further note in regards to the sample we tested, much of the previous literature cited includes those of clinical or severely struggling samples and have found emotional approach coping to be beneficial for facilitating symptom reduction for those enduring severely stressful circumstances. Current findings may have contradicted previous literature due to the application of emotional approach coping throughout a subclinical population (i.e., the current sample). While the primary utility for assessing emotional approach coping might lie in the prognosis and treatment realms, further research its role as an etiological factor should be pursued.

Additionally, the measure that assessed the predictor (i.e., supportive or unsupportive parental reactions) has not been validated in the way that it was employed for this study (i.e., utilized as a child-report retrospective measure). Future research should consider validating the modified CCNES that was utilized in this study as it depicted strong internal validity for both subscales. Research that has used parent reports like the CCNES to measure parenting has been criticized for a potentially critical design flaw; that is, parents often take great pride in their own parenting practices and are therefore susceptible to underreporting undesirable aspects of their
parenting practices. They are also susceptible to over-reporting desirable aspects. Arguably, an individual’s perspective and interpretation of their parent’s reactions or behaviors can have the most long-term effects. Validation of this measure as a retrospective self-report measure could contribute to the literature on the influence of parenting practices into young adulthood.

Moreover, participants were instructed to keep in mind their “primary caregiver” while completing the CCNES; future research should not only ask for clarification on who the participant is reporting on, but should also ask for them to report on both of their parents, if applicable. This information is valuable in that it provides a clearer depiction of what the participant was exposed to as typically, both parents are reactive agents. Furthermore, multiple participants among the collected sample indicated parental abuse (e.g., participant victim of physical or sexual abuse by a parent). This should be identified and controlled for in future research as the type of trauma should be considered when evaluating parenting practices. On a similar note, this study focused solely on parenting influence, and neglected to encapsulate the bi-directional nature of the parent-child relationship (Loulis, & Kuczynski, 1997; O’Connor, Hetherington, Clingempeel, 1997). Including measures of temperament and personality of the participant may add important information to the overall model. Moreover, the current study included a cross-sectional design, thus there is difficulty in interpreting directionality. This is especially important when considering how parenting practices, and the parent-child dynamic can change over time. Notably, during this period of emerging adulthood, individuals are in an exploratory phase which may involve changes in how they cope with stress and approach their emotions.

Finally, although parents are pivotal in the socialization of emotions and coping mechanisms, other figures can be influential (e.g., siblings, media exposure, etc.; Brody, 2004;
Gordon, 1991; Kammerl, & Kramer, 2016). This may be more relevant than ever considering societal changes from the traditional family dynamics (e.g., stay-at-home mothers; Pew Research Center, 2014). Further, social media as well as general media exposure is more pervasive than ever, and this is another source from which children may learn how to approach their emotions. Future work should explicitly ask participants to identify who are the most influential figures in their life, and proportion of time spent with each of these figures during childhood. Research including reflection on alternative role models will be an important extension to this work.
Table 1

*Descriptives and Correlations of Variables in the Full Sample*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (SD)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.Unsupportive</td>
<td>3.85 (1.14)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2.Supportive</td>
<td>3.68 (1.33)</td>
<td>-.36**</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>3.EAC_EE</td>
<td>9.83 (3.45)</td>
<td>.04</td>
<td>.20**</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4.EAC_EP</td>
<td>10.87 (3.12)</td>
<td>-.16</td>
<td>.07</td>
<td>.56**</td>
<td>--</td>
</tr>
<tr>
<td>5.PTSS</td>
<td>48.94 (21.46)</td>
<td>.37**</td>
<td>-.17**</td>
<td>.02</td>
<td>.16</td>
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</table>

Table 2

Descriptives and Correlations of Variables as a Function of Sample

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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.Unsupportive</td>
<td>3.58 (1.08)</td>
<td>--</td>
<td>-.45**</td>
<td>.03</td>
<td>-.14</td>
<td>.38**</td>
<td>4.07 (1.13)</td>
</tr>
<tr>
<td>2.Supportive</td>
<td>3.75 (1.24)</td>
<td>-.22**</td>
<td>--</td>
<td>.22**</td>
<td>.14</td>
<td>-.07</td>
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<td>3.EAC_EE</td>
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<td>.22**</td>
<td>--</td>
<td>.60**</td>
<td>.10</td>
<td>10.71 (3.27)</td>
</tr>
<tr>
<td>4.EAC_EP</td>
<td>10.58 (3.30)</td>
<td>.07</td>
<td>.00</td>
<td>.51**</td>
<td>--</td>
<td>.035</td>
<td>11.11 (2.95)</td>
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<tr>
<td>5.PTSS</td>
<td>42.66 (20.66)</td>
<td>.27**</td>
<td>-.27**</td>
<td>-.24**</td>
<td>-.05</td>
<td>--</td>
<td>54.38 (21.20)</td>
</tr>
</tbody>
</table>

Note. Data regarding the SONA sample (n = 117) are presented on the left and below the diagonal, and the MTurk (n = 135) sample are presented reversed. EAC-EE = Emotional Approach coping - Emotional Expression; EAC-EP = Emotional Approach coping - Emotional Processing; PTSS = Posttraumatic Stress Symptoms.

**p<.01 (two-tailed)
Table 3

Descriptives and Correlations of Sample Split via College Status

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (SD)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.Unsupportive</td>
<td>3.74 (1.08)</td>
<td>-.53**</td>
<td>.03</td>
<td>-.08</td>
<td>.38**</td>
<td>4.07 (1.20)</td>
<td></td>
</tr>
<tr>
<td>2.Supportive</td>
<td>3.69 (1.26)</td>
<td>-.26**</td>
<td>-.26**</td>
<td>.14</td>
<td>-.24**</td>
<td>3.64 (1.46)</td>
<td></td>
</tr>
<tr>
<td>3.EAC_EE</td>
<td>9.47 (3.42)</td>
<td>.03</td>
<td>.19**</td>
<td>-.67**</td>
<td>.05</td>
<td>10.58 (3.39)</td>
<td></td>
</tr>
<tr>
<td>4.EAC_EP</td>
<td>10.82 (3.13)</td>
<td>.01</td>
<td>.04</td>
<td>.51**</td>
<td>-.04</td>
<td>10.95 (3.12)</td>
<td></td>
</tr>
<tr>
<td>5.PTSS</td>
<td>45.95 (20.01)</td>
<td>.33**</td>
<td>-.14</td>
<td>-.03</td>
<td>-.05</td>
<td>--</td>
<td>55.37 (23.13)</td>
</tr>
</tbody>
</table>

*Note.* Data regarding the current student sample ($n = 172$) are presented on the left and below the diagonal, and the sample of individuals who were not currently students ($n = 80$) are presented reversed. EAC-EE = Emotional Approach coping - Emotional Expression; EAC-EP = Emotional Approach coping - Emotional Processing; PTSS = Posttraumatic Stress Symptoms. **$p<.01$ (two-tailed)
Supportive Parenting $\rightarrow$ Posttraumatic stress symptoms

$b = -2.74, p = .006$ (c)

Emotional Expression

$b = 0.52, p = .001$ (a)

$b = 0.39, p = .322$ (b)

Supportive Parenting $\rightarrow$ Posttraumatic stress symptoms

$b = -2.95, p = .004$ (c’)

Figure 1. Diagram of the first proposed model predicting PTSS.
Supportive Parenting $\rightarrow$ Posttraumatic stress symptoms

$\beta = -2.74, p = .006$

(a)

Supportive Parenting $\rightarrow$ Emotional Processing

$\beta = 0.17, p = .238$

(b)

Emotional Processing $\rightarrow$ Posttraumatic stress symptoms

$\beta = 0.19, p = .649$

(c)

Figure 2. Diagram of the second proposed model predicting PTSS.
Figure 3. Diagram of the third proposed model predicting PTSS.
Figure 4. Diagram of the fourth proposed model predicting PTSS.

Unsupportive Parenting $\rightarrow$ Posttraumatic stress symptoms

$\beta = 7.07, p = .000$

(a) $b = -0.04, p = .794$

(b) $b = 0.15, p = .710$

(c) $b = 7.07, p = .000$

(c') $b = 0.15, p = .710$
REFERENCES


emotionally. Psychology Press.


dismissing in family interaction. Social Development, 16(2), 232-248.
parenting styles and locus of control on emerging adults’ psychosocial success.
Marx, B. P., & Sloan, D. M. (2002). The role of emotion in the psychological functioning of
emotional and eating disorder symptoms: The role of emotion regulation. European
Child Adolescent Psychiatry, 18, 206-216.
relation between parental coping styles and parent-child interactions before and after
treatment for children with ADHD and oppositional behavior. Journal of Clinical Child
and Adolescent Psychology, 33(1), 158-168.
American Psychologist, 53, 185–204.
Morris, A. S., Silk, J. S., Steinberg, L., Myers, S. S., & Robinson, L. R. (2007). The role of
the family context in the development of emotion regulation. Social development,
16(2), 361-388.
cognitive reappraisal associated with stress-related symptoms? Behaviour research
and therapy, 46(9), 993-1000.

remediation of depressive affect. *Journal of personality and social psychology*, 58(3), 519.


http://doi.org/10.1016/j.jbtep.2014.03.002


social psychology, 78(6), 1150.


