**Creation of a Short-Form and Brief Short-Form Version of The Coping with Children's
Negative Emotions Scale**

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Abstract

The Coping with Children's Negative Emotions Scale (CCNES) is a widely used measure of parent emotion socialization; however, it is a lengthy measure and it is unclear whether all items are appropriately aligned with, and fully capture, the underlying constructs. We aimed to examine content validity of the CCNES, evaluating theoretical alignment between the CCNES and Gottman, Katz and Hooven's meta-emotion theory, and develop two short-forms. Participants were parents of children aged 4-10 years ($N = 937$) from the longitudinal study, the [name of study redacted] (link to protocol). Content experts qualitatively evaluated parent-report items of the CCNES and additional items that measured empathy. Nineteen of the 84 items were found to not align with meta-emotion theory. The latent structures of the CCNES and empathy subscales were quantitatively evaluated via confirmatory factor analysis. Items with undesirable psychometric properties were subsequently removed. An 18-item short-form (three emotion coaching subscales, three emotion dismissing subscales), and 6-item brief short-form (emotion coaching subscale, emotion dismissing subscale) with strong psychometric properties were created using a calibration sample ($n = 469$, i.e., 50% of $N = 937$) and cross-validated with a validation sample. The short-form CCNES measures provide viable, theoretically-consistent alternatives to the original CCNES measure.

The manner in which parents respond to children's emotions forms a critical part of children's early emotion socialization environment, shaping child and adolescent development (Eisenberg et al., 1998; Eisenberg et al., 1998; Johnson et al., 2017; Katz et al., 2012). The *Coping with Children's Negative Emotions Scale* (CCNES) (Fabes et al., 2002) is commonly used to assess parents' reactions to children's negative emotions. The CCNES has frequently been used to assess parent's emotion socialization behaviors, as aligned with emotion socialization theory generally (Eisenberg et al., 1998; Morris et al., 2007). However, while many of the CCNES items appear to be congruent with emotion socialization theory, their theoretical alignment has never been formally tested. In fact, two subscales from the CCNES were originally designed to measure parenting behaviors in accordance with Lazarus and Folkman's Transactional Model of Stress and Coping (Fabes et al., 2002; Lazarus & Folkman, 1984). Since the original development of the CCNES in 1990 (Eisenberg, 1996; Fabes et al., 2002), Gottman, Katz and Hooven's (1996) theory of meta-emotion and parenting has become prominent in emotion socialization literature. The CCNES has also been used as a measure of Gottman et al. (1996) meta-emotion theory, i.e., emotion coaching and emotion dismissing parenting (Bertie et al., 2021; Gamble et al., 2007; Perry et al., 2012). A key limitation of the CCNES however is that it is lengthy, with 72 items in total, which can lead to participant burden and poorer quality responses, and thus limit its utility in research (Lingler et al., 2014; Scott et al., 2011).

Meta-Emotion Theory

Parent emotion socialization can be defined as the process by which children learn culturally relevant beliefs and behaviors related to emotion competence via everyday social interactions within their environment (Bugental & Goodnow, 1998; Friedlmeier et al., 2011). Emotion socialization theory posits that parents' emotion socialization behaviors, such as parent's role modeling of optimal emotion expression, and emotion discussion, influence

child emotion competence (Eisenberg et al., 1998; Morris et al., 2007). A theoretical framework that has been highly influential in emotion socialization theory is *meta-emotion theory* (Gottman et al., 1996). Meta-emotion theory describes the role of a parent's thoughts and feelings about their own and their child's emotions in influencing their emotion socialization and their child's emotional development, also known as meta-emotion philosophy (Gottman et al., 1997; Katz et al., 2012). These thoughts and feelings influence parenting behaviors, specifically the way parents respond to their own and their children's emotions (Gottman et al., 1997; Katz et al., 2012). Further, Gottman et al. (1996) originally proposed that parent's emotion socialization can be distinguished into two distinct classifications, termed *emotion coaching* and *emotion dismissing* parenting. Emotion coaching describes supportive responses to children's emotions, whereby parents believe emotions are desirable, have high emotion awareness and regulation, and validate, encourage, and accept children's emotion expression (Author; Denham et al., 2007; Katz et al., 2012). Emotion coaching is associated with optimal child development, such as improved emotion competence (Björk et al., 2020; Buckholdt et al., 2016; Gottman et al., 1996).

In contrast, emotion dismissing parenting describes unsupportive responses to children's emotions, whereby parents are more likely to believe emotions are undesirable, have lower levels of emotion regulation and awareness, and tend to invalidate children's emotion expression (Gottman et al., 1997; Katz et al., 2012). Emotion dismissing behaviors do not provide children with the same opportunities to learn about and discuss emotions, or practice adaptive emotion regulation strategies (Morris et al., 2017). Gottman and DeClaire (1997) distinguished between three specific styles of emotion dismissing parenting: emotion dismissing, a style that minimizes emotions; *laissez-faire*, where parents may acknowledge emotions but do not set limits or coach children; and emotion disapproving, where parents may respond to emotions with harsher, more punitive responses (Gottman & DeClaire, 1997).

These three emotion dismissing parenting styles are associated with negative child development outcomes, such as less optimal emotion regulation, and increased internalizing and externalizing problems (Gottman et al., 1996; Johnson et al., 2017; Lunkenheimer et al., 2007).

Meta-emotion theory, and emotion socialization theory more broadly, posits that a parent's own emotion competence is a key contributing factor in determining their parenting behaviors (Gottman et al., 1997). Children observe and imitate their parents' emotion expression and regulation, known as modelling (Bandura, 1977). Further, children look to their parents for guidance on experiencing and expressing emotions, referred to as social referencing (Bariola et al., 2011; Morris et al., 2007; Saarni, 1999). It is posited that parents with less optimal emotion regulation demonstrate increased levels of unsupportive emotion socialization behaviors (Crandall et al., 2015; Eisenberg et al., 1998). This may be because negative emotions interfere with cognitive and emotional processes key to supportive parenting, such as empathy and problem-solving (Crandall et al., 2015). Emerging evidence supports that parents with optimal emotion competence measure higher for emotion coaching behaviors, and parents with less optimal emotion competence measure higher for emotion dismissing behaviors (Hajal & Paley, 2020; Morelen et al., 2016).

During observational studies, Gottman et al. (1997) found that parents who measured higher for emotion coaching parenting typically responded to their child's emotions using five steps, as described in their self-help parenting guide (outlined in Figure 1) (Gottman & DeClaire, 1997): Step 1 refers to parent's emotion regulation, and awareness of their own, as well as their children's, emotions; Step 2 refers to viewing emotions as an opportunity for connection and teaching; Step 3 refers to empathic responding to children's emotions; Step 4 refers to naming and labelling of children's emotions; and Step 5 refers to problem-solving what may have led to the negative emotions, and limit-setting of children's behaviors

(Gottman & DeClaire, 1997; Gottman et al., 1997). Further, the steps imply a temporal sequence, whereby Step 5 should always occur *after* the emotion has been validated (Gottman, 2001). While Gottman and DeClaire (1997) did not describe a defined sequence of steps for emotion dismissing parenting, the [intervention name redacted] suite of programs have successfully taught emotion coaching to parents following this sequential process, which focuses on connection and calming before limit setting and problem-solving (Author). In this research, it is proposed that the inverse of the 5 steps of emotion coaching can be described as parents invalidation of emotions and unsupportive behaviors, such as harsh comments and emotion distraction in response to children's negative emotions (i.e., emotion dismissing and disapproving parenting, as outlined in Figure 1) (Gottman & DeClaire, 1997).

The Coping With Children's Negative Emotions Scale

The Coping with Children's Negative Emotions Scale (CCNES) (Fabes et al., 2002) is a parent-report questionnaire used to assess parent emotion socialization responses to children's negative emotions, with subscales that capture minimization reactions, punitive reactions, distress reactions, expressive encouragement, problem-focused responses, and emotion-focused responses. The CCNES is a relatively unique measure of emotion socialization because it utilizes vignettes (e.g., "If my child loses some prized possession and reacts with tears, I would..."). A vignette provides a brief description of a situation in order to provide a situation for parents to imagine, and then report specifically on what they would do, in a more realistic manner compared to conventional self-report measures (Steiner et al., 2016). It is posited that using vignettes reduces social desirability (Steiner et al., 2016). Although the CCNES was originally validated with a sample of parents of children aged 3-6 years (Fabes et al., 2002), it is frequently used with children above 6 years of age (Bertie et al., 2021). The findings of studies that have used the CCNES for this age group have performed as expected, suggesting that the CCNES is suitable for this age group (Bertie et al.,

2021). In 2004 (Spinrad et al.) the CCNES was adapted to use with toddlers, called the Coping with Toddler's Negative Emotions Scale (CTNES); no known study has validated the CTNES or assessed its factor structure. There is evidence of internal consistency and cross-cultural validity of the CCNES (Altan-Aytun et al., 2013; Lins et al., 2017). Further, one study has found that the CCNES is suitable for use with both mothers and fathers, i.e., there is evidence of measurement invariance of the measure across mothers and fathers (Brown et al., 2015).

Despite its strengths, it is not clear whether the CCNES is precise in measuring current theoretical conceptualizations of parent's emotional socialization. At the time of its initial development in 1990, there was growing support for the idea that parent's responses to negative emotions contribute to child emotion development (Buck, 1984; Leavitt & Power, 1989). However, the emotion-focused responses and problem-focused responses subscales of the CCNES were developed in line with Lazarus and Folkman's Transactional Model of Stress and Coping (Lazarus & Folkman, 1984) to assess parent's use of emotion-focused and problem-focused coping strategies in response to children's negative emotions (Fabes et al., 2002). Problem-focused coping refers to removing or modifying the stressor/situation that led to distress, while emotion-focused coping refers to directly reducing distress (Altshuler & Ruble, 1989; Carroll, 2013; Fabes et al., 2002).

As the field of emotion socialization has grown over the past few decades, the CCNES has commonly been used to assess parent emotion socialization constructs. Three CCNES subscales assess unsupportive (also referred to as nonsupportive) emotion socialization parenting, conceptualized by Eisenberg (1998) as parenting that invalidates children's emotions and does not help children regulate their emotions. The unsupportive subscales broadly align with Gottman et al. (1996) meta-emotion theory of emotion dismissing parenting. The minimization reactions subscale measures emotion dismissing behaviors that

minimize and invalidate emotions (e.g., “tell my child that he/she is over-reacting.”); the punitive reactions subscale also measures parent’s invalidation and minimization of emotions, but assesses more ‘harsh’ responses, and parent’s threat of punitive parenting (e.g., “tell my child to straighten up or we’ll go home right away.”); and the distress reactions subscale measures distress and emotion dysregulation (e.g., “feel upset and uncomfortable because of my child’s reactions.”) (Fabes et al., 2002; Hajal & Paley, 2020; Yagmurlu & Altan, 2009).

Three CCNES subscales assess supportive emotion socialization parenting, which are described by Eisenberg (1996) as responses that guide and teach children how to regulate their emotions. The expressive encouragement subscale measures acceptance of children’s emotion expression (e.g., “tell my child it’s OK to cry when he/she feels bad.”); problem-focused responses assesses problem-focused coping (e.g., “help my child think of something to do so that he/she can get to sleep (e.g., take a toy to bed, leave the lights on).”; and emotion-focused responses assesses emotion-focused coping, specifically, emotion distraction and soothing/comforting behaviors (e.g., “comfort my child and try to get him/her to forget about the accident.”) (Altshuler & Ruble, 1989; Carroll, 2013; Fabes et al., 2002). While the expressive encouragement and problem-focused responses subscales appear to align with emotion coaching parenting, alignment between the emotion-focused responses subscale and emotion coaching parenting is questionable (Author; Eisenberg, 1996; Gottman et al., 1997). Although the majority of items describe parents’ comfort/soothing behaviors, most items also refer to parents distracting children from negative emotions (e.g., “comfort my child and try to get him/her to think about something happy.”). Gottman et al. (1996), and other emotion socialization researchers (Björk et al., 2020; Denham & Burton, 2003; Eisenberg, 1996; Halberstadt et al., 2008; Magai & O’Neal, 1997), consider emotion distraction an emotion dismissing response that does not facilitate emotion competence,

because emotion distraction does not provide children the opportunity to discuss and understand their emotions (Shenk & Fruzzetti, 2014).

Additionally, a key limitation of the CCNES in regard to meta-emotion theory is that it does not assess parent empathy. For the purpose of measuring emotion coaching, items that capture empathy may be important to include because according to emotion socialization theory, parent's empathy of their children's emotions is a key aspect of emotion coaching. Empirical studies have provided support that parent empathy is associated with optimal child emotional development (Meng et al., 2020; Stern et al., 2015). Further, it has been difficult to assess the temporal sequence of the five steps of emotion coaching, where ideally, empathic responding occurs prior to parents' problem-solving (Author). While this is difficult to measure via questionnaires, the assessment of parents' empathy may allow researchers to assess 'complete emotion coaching' (i.e., high levels of empathy, expressive encouragement, and problem-focused responses) vs emotion dismissing problem solving (i.e., high levels of problem-focused responses, low levels of both empathy and expressive encouragement). At the same time, adding a subscale measuring parent empathy does not preclude use of the CCNES with other emotion socialization theoretical frameworks.

Factor Structure of the CCNES

A small number of studies have examined the factor structure of the CCNES. In a principal components analysis (PCA), Fabes et al. (2002) assessed a small sample of predominantly mothers (mothers = 96; fathers = 5) of children aged 3-6 years, with findings suggestive of four factors: 1) minimization reactions/punitive reactions; 2) emotion-focused responses/problem-focused responses; 3); expressive encouragement 4); distress reactions. In another PCA, Davidov and Grusec (2006) assessed a sample of 197 parents (mothers = 106, fathers = 91) with children aged 6-8 years, with findings supporting two underlying factors of the CCNES: 1) emotion coaching (i.e., emotion-focused responses, problem-focused

responses, expressive encouragement); 2) emotion dismissing (i.e., minimization reactions, punitive reactions distress reactions). Of note, PCA is a data reduction method, and as such does not identify latent factors, unlike confirmatory factor analysis (Bandalos & Boehm-Kaufman, 2009). Just one known study has examined the factor structure of the CCNES via CFA, which was with a large sample of mothers ($N = 1,972$) of children aged 4 (Pintar Breen, 2018). However, this study did not include the expressive encouragement and distress reactions subscales (Pintar Breen, 2018). The results suggested that two factors represented the subscales which were included: 1) minimization reactions/punitive reactions; 2) emotion-focused responses/problem-focused responses). As such, no known studies have examined the factor structure of the CCNES via a robust method (e.g., CFA), and with all subscales included.

The Current Study

Within psychology, experts of measurement development often argue that content validity is rarely examined in studies focused on assessment practice (Johnston et al., 2014; Koller et al., 2017). Content validity refers to how relevant the items of an instrument are to the construct that the instrument purports to assess (Koller et al., 2017; Rossiter, 2008). According to Koller et al. (2017), content validity can refer to a number of elements, such as how representative the items are of the construct of interest, and clarity of the items. Marsh et al. (2005) argue that the theoretical basis of a measure is a key aspect of content validity, and that across psychology, measures should be theoretically examined and updated regularly to account for paradigm shifts and advances in empirical research. However, this is not a common practice, which often leads to measures becoming outdated (Marsh et al., 2005).

Within emotion socialization research, the CCNES is one of the most widely used measures of parent's emotion socialization behaviors (Johnson et al., 2017). While there have been measures developed to specifically assess Gottman et al. (1996; Katz et al., 2012)

conceptualization of emotion coaching and emotion dismissing parenting, such as the Emotion-Related Parenting Styles Self-Test (Gottman & DeClaire, 1997), the CCNES is commonly used to assess these constructs, despite the CCNES not originally being designed to assess them (Bertie et al., 2021; Gamble et al., 2007; Perry et al., 2012). It is clear that there are parallels between the constructs the CCNES assesses and emotion coaching and emotion dismissing parenting. As quoted in a commentary piece by Eisenberg (1996, p. 270), a key researcher within the field of emotion socialization and one of the original authors of the CCNES, “These six scales [the CCNES subscales] are very similar to components of Gottman et al.'s coaching measure...Eisenberg and Fabes' scales formed groupings that were consistent with the content of Gottman et al.'s dismissing [punitive reactions, minimization reactions, distress reactions] versus coaching index [emotion-focused responses, expressive encouragement, problem-focused responses]” (p. 270).

However, the theoretical alignment of the CCNES with Gottman et al. (1996; Katz et al., 2012) meta-emotion theory has never been formally tested. Further, a limitation of the CCNES scale is that it is lengthy, which can lead to participant burden and poorer quality responses, and thus limit its utility in research (Lingler et al., 2014; Scott et al., 2011). The objective of the current study is to refine the CCNES measure into two short-forms. The short-forms will be developed with a mixed-methods procedure, consisting of both a qualitative and quantitative approach. Our first aim is to evaluate content validity of the CCNES, i.e., the alignment of items from the CCNES and an additional empathy subscale with Gottman et al. (1996) meta-emotion theory. This will involve examining how relevant 10 socialization behaviors are to each item (outlined in Figure 1) with the aid of content validity indexes. Our second aim is to test the CCNES subscales via confirmatory factor analysis and then refine the CCNES into two short-forms, which will be a set of parsimonious items that are robust indicators of the constructs of interest. As a robustness

check, we still include items that are flagged as having poor content validity during the theoretical evaluation, and examine how they perform in the CFA. A ‘brief’ short-form version of the CCNES will be created using items from the short-form, which could be potentially used as a screening tool in clinical settings. Our third aim is to examine psychometric properties of the short-forms; the following tests will be conducted: 1) cross-validation with a different sample of parents; 2) internal consistency (e.g., Cronbach’s alpha); 3) test-retest reliability, i.e., the association between the short-forms measured at baseline and approximately 12 months later; 4) criterion validity, by assessing correlations between the short-forms and other measures of theoretically similar constructs (i.e., convergent validity), and correlations between the original CCNES subscales and the short-form CCNES subscales; 4) measurement invariance testing of the short-forms for mothers versus fathers, and parents of children in early childhood (i.e., aged 4-6 years) versus mid-childhood (i.e., aged 7-10 years).

Method

Participants and Study Design

[Name of study redacted]

We report how we determined our sample size, all data exclusions, all manipulations, and all measures in the study. The current study used parent-report survey data collected at baseline (Time 1), and approximately 12 months later (Time 2). We drew data from an age-stratified longitudinal cohort study, the (name of study redacted) (Author). Participants were recruited through two primary methods: 1) community organizations, paid and unpaid social media advertisements ; 2) the paid participant research platform Prolific. Participants recruited in the former method were recruited largely via Facebook. Unpaid advertisements of (name of study redacted) that aimed to recruit participants were posted in several Facebook groups (e.g., parenting groups). Paid ads were also posted on Facebook, which were targeted

to parents. Further, several community and not-for-profit organizations (e.g., libraries) were contacted via email and asked to print and distribute flyers of the study on noticeboards. The latter method of participant recruitment involved Prolific, a UK-based website used by researchers to recruit participants for survey-based research. Researchers typically reward participants with a payment for completing their survey. Prolific was used to ensure that a large number of hard-to-reach groups were recruited, primarily fathers. In the current study, we used data collected from parents who were aged 18-65 years, were residing in Australia, New Zealand, the United Kingdom, Ireland, the United States, or Canada, and who had a child aged 4-10 years. A detailed description of participant recruitment and data collection can be found from the protocol paper of (name of study redacted) (Author). The data analysis code used for the current study can be accessed online at the following link: (weblink redacted)

Sample Characteristics

Descriptive statistics of the complete study sample ($N = 937$), calibration sample ($n = 468$), and validation sample ($n = 469$) are presented in Table 1. Data were missing for several parent and child demographics: 53 missing child age, 111 missing parent age, 47 missing child sex, 38 missing parent sex, 40 missing household income, 35 missing parent education. There were 118 dyads in total where both parents in the household participated.

Measures

Parent Emotion Socialization Behaviors

Parent-report emotion socialization behaviors were measured with The Coping with Children's Negative Emotions Scale (CCNES; Fabes et al., 2002) and a 12-item measure of empathy (Author). The CCNES consists of twelve vignettes that describe a hypothetical situation whereby a child experiences a negative emotion. For the current study, each vignette had a list of seven possible responses to the situation, corresponding to the six original

SHORT-FORM CCNES

subscales of the measure and the added empathy subscale: 1) minimization reactions; 2) punitive reactions; 3) distress reactions; 4) expressive encouragement; 5) problem-focused responses; 6) emotion-focused responses; 7) empathy (Author). Items are assessed on a 7-point Likert scale (1 = very unlikely, 4 = medium, 7 = very unlikely). The empathy items were not originally included in the CCNES (Fabes et al., 2002). They were developed by emotion socialization researchers to add to the CCNES (Author). See Appendix A of the supplementary materials for the complete set of empathy items.

Measures Used to Assess Convergent Validity of the Short-Forms

Parenting (Warmth and Irritability). Parent-report of parenting from the Longitudinal Study of Australian Children (Zubrick et al., 2014) measured parenting warmth (6 items, $\alpha = .89$) and irritability (5 items, $\alpha = .87$). For parenting warmth, items are assessed on a 5-point Likert scale (1 = never/almost never, 5 = almost/always). For parenting irritability, items are assessed on a 10-point Likert scale (1 = not at all, 10 = all the time).

Parents' Beliefs About Children's Emotions. Parent-reported beliefs about children's emotions were measured with 5 subscales from the Parents' Beliefs about Children's Emotions Questionnaire (Halberstadt et al., 2013) assessing: 1) control, i.e., the belief that children can control their emotions (5 items, $\alpha = .77$); 2) autonomy, i.e., the belief that children can manage their emotions alone (7 items, $\alpha = .86$); 3) stability, i.e., the belief that emotions are long-lasting (4 items, $\alpha = .70$); 4) manipulation, i.e., the belief that children use emotions to manipulate others (4 items, $\alpha = .84$); 5) value of anger, i.e., the belief that anger is valuable (6 items, $\alpha = .77$). Items are assessed on a 6-point Likert scale (1 = strongly disagree, 6 = strongly agree).

Parent Emotion Regulation. Parent-reported emotion regulation was measured with a modified version of the Difficulties in Emotion Regulation Scale, 16-Item Short-Form (total subscale, 19 items, $\alpha = .94$) with three additional items from the original DERS included

(Bjureberg et al., 2016). Items are assessed on a 5-point Likert scale (1 = almost never, 5 = almost always).

Family Emotional Climate. Parent-reported positive expressiveness (12 items, $\alpha = .90$) and negative expressiveness (12 items, $\alpha = .91$) within the family were measured with the short-form Self-Expressiveness in the Family Questionnaire (Halberstadt et al., 1995). Items are assessed on a 9-point scale (1 = not at all frequently, 9 = very frequently).

Parent Affect. Parent-reported affect was measured with the Positive and Negative Affect Schedule (positive affect subscale only; 5 items, $\alpha = .83$) (Watson et al., 1988). Items are assessed on a 5-point Likert scale (1 = very slightly or not at all, 5 = extremely).

Theoretical Evaluation

The expert raters were required to read each CCNES item (including the vignette it originated from) and then provide a score reflecting how relevant 10 socialization behaviors (see Figure 1) were to each item, using a 6-point ordinal scale (0 = emotion socialization behavior is not relevant to item, 5 = emotion socialization behavior is relevant to item). Raters were masked to the subscales that items were drawn from and the order of vignettes was randomized. We then derived an item-level content validity index (I-CVI) for all of the emotion socialization behaviors, for each item (i.e., 10 I-CVIs were derived for each item). An I-CVI is one of the most common methods used to examine content validity of an item quantitatively (Rodrigues et al., 2017). Although typically just one I-CVI is calculated per item, and usually assesses whether the item is relevant or not to the measure of interest (Rodrigues et al., 2017; Zamanzadeh et al., 2015). We also calculated the mean of all I-CVIs for each behavior within a subscale (thus, 10 composite scores for each subscale), to provide an overview of which emotion socialization behaviors were assessed by each subscale, and to what extent; this is referred to as a scale-level content validity index (S-CVI/Ave) (Rodrigues et al., 2017; Zamanzadeh et al., 2015). Researchers have established appropriate cut-off

SHORT-FORM CCNES

scores/ranges of scores for these indexes in order to remove items (Lynn, 1986; Polit & Beck, 2006). However, we instead used the content validity indexes to formally assess how well the CCNES and empathy subscales assess emotion socialization behaviors that are key to emotion coaching parenting and emotion dismissing parenting, according to Gottman et al. (1996; Katz et al., 2012).

We calculated 840 I-CVIs in total (10 emotion socialization behaviors x 84 items), and 70 S-CVI/Aves in total (10 emotion socialization behaviors x 7 subscales), using an excel spreadsheet. To derive the I-CVIs, every rater's scores were dichotomised (score of 0-2 = 0, suggesting the behavior is not relevant to the item; score of 3-5 = 1, suggesting the behavior is relevant to the item). For each behavior, every score of 1 was summed and then divided by the total number of raters (5). For instance, for item 7 of empathy ("acknowledge it can be difficult with people watching you, and can feel overwhelming"), the emotion socialization behavior Step 4 (label emotions) of emotion coaching received 3 x scores of 5, 1 x score of 4, and 1 x score of 2. After dichotomising these scores, it received a total of 4, which divided by 5 = .80. The S-CVI/Ave score was derived by calculating the average across the I-CVIs received for each behavior, across the 12 items within the subscale. For example, the expressive encouragement items in total received 6 x I-CVIs of 1, 4 x I-CVIs of .80, 1 x I-CVI of .60, and 1 x I-CVI of 0. These scores summed together (9.20) and then divided by the number of items within expressive encouragement (12) result in an S-CVI/Ave of .77.

Data Analysis

Short-Form Calibration

All CCNES and empathy items were tested in a confirmatory factor analysis (CFA) via Mplus (V8.6) after we conducted the theoretical evaluation. We generated a calibration and validation sample by randomly splitting the full sample ($N = 937$), resulting in a calibration sample with $N = 468$ participants and a validation sample with $N = 469$

participants. We used the 'seed' function of STATA to randomly split the sample, which is a base function that allows the same group/s of participants from a sample to be randomly selected every time, thus allows reproducibility. We iterated this function so that a similar number of full-parent dyads were randomized into the calibration and validation samples; we were blinded to who the dyads were. There were 118 full-parent dyads within the full sample of participants (i.e., 236 parents in total). Within the validation sample, there were 29 dyads allocated (58 parents in total), and within the calibration sample, 31 dyads allocated (62 parents in total). The remaining dyads ($n = 58$) were evenly split across the samples (i.e., 116 parents in total were split across the groups). The calibration and validation samples met Savalei and Bentler (2005) and Yuan and Bentler (2008) sample size recommendations, i.e., 400 participants for a CFA utilising MLR estimation. A small number of participants (<1%) did not provide complete data. Missing data were accounted for using a full information maximum likelihood approach. We used a robust maximum likelihood estimator (MLR estimation) for all models which accounted for clustering of parent dyads. Four items from distress reactions that are designed to be reverse coded were reverse coded in STATA prior to being tested in the CFA.

The main purpose of the CFA was to identify a parsimonious set of items that formed robust indicators of each latent factor. The factor structure was first examined by testing the CCNES and empathy subscales in one-factor models with the calibration sample. From this, decisions as to whether an item should be removed was based on examination of the overall model fit. Items with undesirable psychometric properties were preferentially removed based on the following:

1. We examined the psychometric properties of all items which were found to have poor content validity during the theoretical evaluation. If these items were found to also have

SHORT-FORM CCNES

poor psychometric properties (i.e., factor loading $<.40$, or negative factor loading), this provided additional support that they had poor content validity, thus should be removed.

2. Items with a factor loading $<.40$ were automatically removed. Items with the highest factor loadings were prioritized. For instances where items had the same factor loading, we randomly selected the item to remove using an excel spreadsheet.
3. All items within a subscale needed to have the same factor loading direction. A different direction signified the item was not measuring the intended construct of the subscale.
4. Goodness-of-fit indices were examined to assess performance of each one-factor model of the subscales, and the complete short-form models, based on expert recommendations (Sivo et al., 2006): TLI and CFI $\geq .95$; RMSEA and SRMR $<.05$. Since the chi square test (χ^2) has an increased sensitivity for samples ≥ 500 , a nonsignificant χ^2 statistic ($p >.05$) was not used to assess models (Bollen, 1989).
5. In instances where removing an item led to a considerable decrease in model fit for several goodness-of-fit indices, we brought back the item and removed a different item which had the second lowest factor loading in the previous model (if the item removed had a positive factor loading $\geq .40$).
6. After all of the one-factor models were conducted, we removed vignettes with only 1-2 items, based on the goal of reducing the total number of vignettes used in the short-forms. Other items that fit out inclusion criteria were brought back to replace them.
7. We brought back two items from vignette one that still fit the criteria listed above so that the short-form would include at least one vignette that describes a parent's response to children's anger.

The final short-form subscales were tested altogether in a seven-factor model. The final short-form model was then tested with the remaining sample of participants, i.e., validation sample. A brief short-form version of the CCNES was subsequently developed,

preferencing items originating from the same vignettes to minimize the overall number of vignettes, and selecting items with strong factor loadings. The brief short-form models were evaluated using the following goodness-of-fit indices and criterion cut-offs (Sivo et al., 2006): TLI and CFI $\geq .95$; RMSEA and SRMR $< .05$. Since the chi-square test (χ^2) has an increased sensitivity for large samples ($N \geq 500$), a nonsignificant χ^2 statistic ($p > .05$) was not used to assess model fit (Bollen, 1989). The final brief short-form model was then tested with the validation sample.

Short-Form Internal Consistency, and Test-Retest Reliability

Cronbach's alpha, Raykov's composite reliability, and Omega coefficients were calculated to examine internal consistency of the short-form subscales with the validation sample, using Stata (Version 15.1). We used the following criterion values to assess internal consistency: $\leq .60$ = poor internal consistency, $.61-.70$ = acceptable internal consistency, $.71-.80$ = good internal consistency, $.81-.90$ = very good internal consistency, $> .90$ = excellent internal consistency (Taber, 2018). Internal consistency of the short-form emotion coaching subscales combined (i.e., empathy, expressive encouragement, problem-solving) and emotion dismissing subscales combined (i.e., punitive reactions, minimization reactions, distress reactions) was also tested, since it is common practice to combine these subscales (Bertie et al., 2021). Test-retest reliability of the short-forms was examined by examining Pearson's r correlations between Time 1 and Time 2 response data, using response data from the validation sample. We used the following criterion values to assess test-retest reliability: $.40-.59$ = fair test-retest reliability, $.60-.74$ = good test-retest reliability, $> .75$ = excellent test-retest reliability (Cicchetti, 1994).

Attrition at Time Two (Validation Sample)

Response data for 167 participants was lost to attrition at Time 2 for the validation sample. Additionally, 67 participants did not receive vignette 6 at Time 2 due to a survey

error. We dropped all Time 2 response data for participants who did not receive vignette 6, overall resulting in 50% attrition of the validation sample at Time 2 ($n = 234$; 26 full-parent dyads missing). To examine the potential of bias due to missing data, a logistic regression examined whether there was a significant association between several demographic characteristics and a binary variable which indicated whether participants were missing at Time 2 or not (1 = Missing at Time 2, 0 = Included). There was no significant difference found for parent age, family income, parent education, parent gender, parent employment status (i.e., employed or not), or child gender (see Table S25 of the supplementary materials for model output). However, it was found that parents with missing data had a higher household income (Wald $\chi^2 [7] = 11.35, p = .12$; $OR = 1.98, p < .01$). It should be noted that the nonsignificant Wald χ^2 suggests this model was not better than a model with no predictors, indicating poor model fit.

Criterion Validity

Criterion validity, i.e., convergent validity, was examined by correlating the CCNES short-forms with theoretically similar constructs via structural equation modelling, using the validation sample. See measures listed under “Measures Used to Assess Convergent Validity of the Short-Forms.” Furthermore, criterion validity was examined by correlating the CCNES short-form subscales (excluding the brief short-form subscales) with the original CCNES subscales, using the validation sample. This aforementioned test of criterion validity used the following criterion values: .0-.10 = negligible correlation, .10-.29 = weak correlation, .40-.69 = moderate correlation, .70-.89 = strong correlation, .90-1.0 = very strong correlation (Schober et al., 2018). ***Measurement Invariance Testing***

We conducted measurement invariance testing of the final CCNES short-forms via Mplus to establish whether the CCNES short-form models are equivalent for the following groups: 1) mothers and fathers; 2) parents of children in early childhood (i.e., aged 4-6 years)

and mid-childhood (i.e., aged 7-10 years). We utilized our complete sample instead of the validation sample, since the sample size for each group within the validation sample did not meet Yuan and Bentler (2008) sample size recommendation, i.e., $N \geq 400$ (complete sample mothers: $n = 556$, validity sample mothers: $n = 277$; complete sample fathers: $n = 341$, validity sample fathers: $n = 169$; complete sample of parents of children in early childhood: $n = 429$, validity sample of parents of children in early childhood: $n = 217$, complete sample of parents of children in mid-childhood: $n = 455$, validity sample of parents of children in mid-childhood: $n = 220$); with the exception of fathers, all of these groups were >400 with the complete sample. For measurement invariance testing, 40 participants in total were missing response data for parent gender (i.e., 38 did not provide response data, and we excluded two participants who identify as non-binary/ transgender). We excluded data for two parents who identify as non-binary/ transgender, since this was not a sufficient number of parents to examine; further, we did not collect response data to ascertain whether or not these parents identify themselves as a mother or father within their family. There were 53 participants in total who were missing response data for child age, thus were not included in the analyses. We excluded all parents with missing data for measurement invariance testing, since Mplus is unable to apply a full information maximum likelihood approach to account for missing data for a grouping variable, i.e., predictor variable, that has data missing (e.g., gender); Mplus excludes all data for these subjects.

To establish measurement invariance, we tested the final CCNES short-form models in four separate models with solely mothers, fathers, parents of children in early childhood, and parents of children in mid-childhood, in order to examine whether there was adequate model fit for each group. Next, we conducted a multiple group confirmatory factor analysis, i.e., a series of nested models, with one model more constrained than the other. We used Mplus' command "MODEL: CONFIGURAL METRIC SCALAR" which simultaneously

estimates a configural, metric, and scalar model (Muthen & Muthen, 2013). In the configural model, factor means were fixed at 0 in groups, and factor loadings, intercepts, and residual variances were free to vary across groups. The factor variance of each subscale was fixed to one for each group, i.e., the loadings of items were freed. In the metric model, factor loadings were constrained to be equal across groups; factor means were fixed at 0 in groups; the intercepts and residual variances were free to vary across groups. The factor variance of each subscale was fixed to 1 for one of the groups; in the other group, the factor variance for each subscale was freed. In the scalar model, the most constrained model of measurement invariance testing, residual variances were free to vary across groups; factor loadings and intercepts were constrained to be equal across groups; factor means were fixed to 0 in one of the groups and freed in the other group. The factor variance of each subscale was fixed to 1 for one of the groups; in the other group, the factor variance for each subscale was freed.

To ascertain whether the models were equivalent across groups, we first examined whether there was a notable difference of the CFI, RMSEA, and SRMR values for the configural vs metric models, and metric vs scalar models, i.e., a difference in the CFI (ΔCFI) values >0.01 ; difference in RMSEA (ΔRMSEA) values >0.015 ; or difference in the SRMR (ΔSRMR) values of >0.03 . Next, we examined the χ^2 difference test ($\Delta\chi^2$) which compared the configural vs metric models, and metric vs scalar models; a nonsignificant $\Delta\chi^2$ ($p>.05$) indicates measurement invariance. However, it should be noted that a $\Delta\chi^2$ is sensitive to larger samples and complex models, thus researchers recommend to examine the former fit indices in addition to a $\Delta\chi^2$ (Sass, 2011). We calculated the $\Delta\chi^2$ by hand using a method developed by Satorra and Bentler, called the Sattora-Bentler Scaled Chi-Square Difference Test (TRd) (Satorra & Bentler, 2010). The robust $\Delta\chi^2$ for nested models estimated with MLR cannot be used to examine measurement equivalence, since it is not truly distributed as χ^2 (Satorra & Bentler, 2010).

Results

Theoretical Evaluation

Of the 72 CCNES items and 12 empathy items, 19 items were flagged as having poor content validity because they did not align with Gottman et al. (1996) conceptualization of meta-emotion theory (11 items from emotion-focused responses, 1 item from problem-focused responses, 1 item from emotion-focused responses, 1 item from minimization reactions, 5 items from distress reactions). Of these items, 8 items appear to not assess the construct of the subscale they originate from (1 item from problem-focused responses, 1 item from emotion-focused responses, 1 item from minimization reactions, 5 items from distress reactions). The summary I-CVIs and S-CVI/Aves derived from the theoretical evaluation of the CCNES and empathy subscale are summarized below (see Appendix B of the supplementary materials for all I-CVIs/Aves).

Empathy

The results of the theoretical evaluation demonstrated that for all items from empathy, which were not originally included in the CCNES, Step 3 of emotion coaching (listen empathetically/validate) appears to be highly relevant, with all I-CVIs 1, and an S-CVI/Ave of 1. Furthermore, for the majority of items, Step 4 of emotion coaching (label emotions) appears to be highly relevant, with I-CVIs ranging from .60-1 (item 6 was found to not assess Step 4), and an S-CVI of .77. For all items, Step 2 of emotion coaching (opportunity for intimacy & learning) appears to be somewhat relevant, with all I-CVIs .20, and an S-CVI/Ave of .20. All items received an I-CVI/S-CVI/Ave score of 0 for Steps 1 and 5 of emotion coaching (emotion awareness/regulation; problem-solving), and the five emotion dismissing behaviors assessed, demonstrating that these behaviors are not relevant to expressive encouragement items. These findings overall demonstrate that Steps 3 and 4 are highly relevant to the empathy subscale, thus empathy assesses behaviors relevant to

Gottman et al. (1996) emotion coaching parenting. This aligns with the construct that the subscale purports to assess, which is parents' empathic responses to children's negative emotions and their validation of children's negative emotions. No items were flagged as having poor content validity from expressive encouragement.

Expressive Encouragement

The results of the theoretical evaluation demonstrated that for all items from expressive encouragement, Step 3 of emotion coaching appears to be highly relevant, with I-CVIs ranging from .60-1, and with an S-CVI/Ave of .80. Furthermore, for the majority of items, Step 4 of emotion coaching appears to be highly relevant, with I-CVIs ranging from .60-1 (all items except item 2), with a S-CVI/Ave of .82. For all items, it was found that Step 2 of emotion coaching is somewhat relevant, (I-CVIs ranging from .20-.40; S-CVI/Ave = .22). All items received an I-CVI/S-CVI/Ave score of 0 for Steps 1 and 5 of emotion coaching, and the five emotion dismissing behaviors assessed, demonstrating that these behaviors are not relevant to expressive encouragement items. These findings overall demonstrate that Steps 3 and 4 are highly relevant to the expressive encouragement subscale, thus expressive encouragement assesses behaviors relevant to Gottman et al. (1996) emotion coaching parenting. This aligns with the construct that the subscale purports to assess, which is parents' acceptance of children's experience/expression of negative emotions. No items were flagged as having poor content validity from expressive encouragement.

Problem-Focused Responses

The results of the theoretical evaluation demonstrated that for all items from problem-focused responses, Step 5 of emotion coaching appears to be highly relevant, with I-CVIs ranging from .60-1, and with an S-CVI/Ave of .83. Furthermore, for several items, Step 2 appears to be somewhat relevant, with an I-CVI of .20 for all of these items, and S-CVI of .10. For several items, Step 3 of emotion coaching appears to be somewhat relevant (items 1,

SHORT-FORM CCNES

3, 4, 5, 7, 11, 12), with I-CVIs ranging from .20-.40, and an S-CVI/Ave.15. It was found that Step 4 appears to be somewhat relevant for one item (item 5) (I-CVI = .20, S-CVI = .02).

Furthermore, for the majority of items, the emotion dismissing behavior emotion distraction appears to be moderately relevant (all items except 4 and 9), with I-CVIs ranging from .20-1, and an S-CVI/Ave of .47. It was found that for two items, the emotion dismissing behavior emotion minimization/ignoring appears to be somewhat relevant (items 8, 9; I-CVI range of .40-.60, S-CVI of .08). We note that Gottman et al. (1996) meta-emotion theory suggests that these behaviors would be considered an emotion dismissing behavior if occurring before/without emotion coaching behaviors (Gottman, 2001). However, it is not possible to assess the temporal sequence of problem-focused responses via the CCNES. All items received an I-CVI/S-CVI/Ave score of 0 for Step 1 of emotion coaching, and the emotion dismissing behaviors distress reaction, punishment, and derogatory comments/insults, demonstrating that these behaviors are not relevant to problem-focuses responses items.

One item was flagged from problem-focused responses for poor content validity (item 8, “tell my child that the present can be exchanged for something the child wants”). This item received the lowest I-CVI for Step 5 of emotion coaching (.40) and the highest I-CVI for emotion distraction (1). We argue that this response does not teach children how to effectively problem-solve, and is also referred to as ‘wish-granting’ i.e., a parent gives in to what their children wants, and does not address their children’s emotions (Premo & Kiel, 2016).

These findings overall demonstrate that Step 5 is highly relevant to the problem-focused response subscale. While Lazarus and Folkman’s Transactional Model of Stress and Coping (Fabes et al., 2002; Lazarus & Folkman, 1984) originally underpinned the design of problem-focused responses, specifically assessing parents’ problem-focused coping (i.e., removing or modifying the stressor/situation that led to distress), it is clear that there is direct overlap between items from problem-focused response and Step 5 of emotion coaching, thus

problem-focused response assesses a behavior relevant to Gottman et al. (1996) emotion coaching parenting. We renamed the subscale as problem-solving to align the name with meta-emotion theory (Gottman et al., 1997), shifting away from the Transactional Model of Stress and Coping (Fabes et al., 2002; Lazarus & Folkman, 1984).

Emotion-Focused Responses

The results of the theoretical evaluation demonstrated that for all items from emotion-focused responses, the emotion dismissing behavior emotion distraction appears to be moderately relevant, with I-CVIs ranging from .40-1, and an S-CVI/Ave of .70. Furthermore, for several items, Step 2 of emotion coaching appears to be somewhat relevant (items 1, 2, 4, 6, 7, 9, 11), with an I-CVI ranging from .20-.40, and an S-CVI/Ave of .15. For several items, Step 3 of emotion coaching appears to be somewhat relevant (items 1, 2, 4, 6, 7, 10, 11), with I-CVIs ranging from .20-.80, and an S-CVI/Ave of .30. It was found that for one item (item 11), Step 4 of emotion coaching appears to be somewhat relevant, with an I-CVI of .20, and S-CVI/Ave of .02. For all items, Step 5 of emotion coaching appears to be somewhat relevant, with an I-CVI ranging from .20-1, and an S-CVI/Ave of .26. It was found that for three items (3, 5, 12), the emotion dismissing behavior emotion minimization/ignoring of emotions appears to be somewhat relevant, with I-CVIs ranging from .20-.40, and an S-CVI/Ave of .80. All items received an I-CVI/S-CVI/Ave score of 0 for Step 1 of emotion coaching, and the emotion dismissing behaviors distress reaction, punishment, and derogatory comments/insults, demonstrating that these behaviors are not relevant to emotion-focused responses items.

All items from emotion-focused responses were flagged as having poor content validity. Firstly, the subscale is conceptualized by Fabes et al. (2002) as assessing a supportive parenting response to children's emotions that directly reduces children's distress, i.e., emotion-focused coping, and more specifically, parents' comforting behaviors and

emotion distraction. (Altshuler & Ruble, 1989; Carroll, 2013; Fabes et al., 2002). Our theoretical evaluation supported that emotion-focused responses somewhat assesses supportive parenting behaviors that align with emotion coaching parenting. However, emotion distraction is considered by Gottman et al. (1996) to be an emotion dismissing behavior. Secondly, item 7 (“suggest that my child think about something relaxing so that his/her nervousness will go away”) was flagged because it received the highest I-CVI for Step 5 of emotion coaching (1), and appears to be more aligned with problem-solving.

These findings overall demonstrate that while the emotion-focused responses subscale appears to somewhat assess behaviors consistent with emotion coaching parenting, it also assesses the emotion dismissing behavior emotion distraction. We decided to retain the subscale in the short-form if it demonstrated alignment with emotion dismissing parenting, i.e., positive correlations with punitive, minimization, and distress reactions, and negative correlations with empathy, expressive encouragement, and problem-solving. We renamed the subscale as emotion distraction to align the name with meta-emotion theory (Gottman et al., 1997), shifting away from the Transactional Model of Stress and Coping (Fabes et al., 2002; Lazarus & Folkman, 1984)

Punitive Reactions

The results of the theoretical evaluation demonstrated that for all items from punitive reactions, the emotion dismissing behavior punishment of emotions appears to be highly relevant, with I-CVIs ranging from .20-1, and an S-CVI/Ave of .85. Furthermore, for the majority of items, the emotion dismissing behavior minimization/ignoring appears to be moderately relevant (all items except 10), with I-CVIs ranging from .20-1, and an S-CVI/Ave of .53. It was found that for three items, the emotion dismissing behavior derogatory comments/insults appears to be (items, 2, 3, 8), with I-CVIs ranging from .20-.80, and an S-

CVI/Ave of 13. All items received an I-CVI/S-CVI/Ave score of 0 for Steps 1, 2, 3, 4, and 5 of emotion coaching, and the emotion dismissing behavior parents' distress reaction.

These findings overall demonstrate that parents' punishment of emotions are highly relevant to the punitive reactions subscale, with parents' minimization/ignoring also moderately relevant. Therefore, punitive reactions assesses behaviors relevant to Gottman et al. (1996) emotion dismissing parenting. This aligns with the construct that the subscale purports to assess, which is parents' harsh and punitive responses to children's negative emotions. No items were flagged as having poor content validity from punitive reactions.

Minimization Reactions

The results of the theoretical evaluation demonstrated that for the majority of items from minimization reactions, the emotion dismissing behavior emotion minimization/ignoring appears to be moderately relevant (all items except 5, 9, 12), with I-CVIs ranging from .40-1, and an S-CVI/Ave of .53. Furthermore, for the majority of items(all except 10, 11) the emotion dismissing behavior derogatory comments/insults appears to be moderately relevant, with I-CVIs ranging from .20-1, and an S-CVI/Ave of .53. It was found that for several items (5, 6, 7, 9, 12), the emotion dismissing behavior punishment appears to be somewhat relevant, with I-CVIs ranging from .20-.80, and an S-CVI of .23. It was found that for one item (item 10), the emotion dismissing behavior emotion distraction, and Step 3 of emotion coaching appear to be somewhat relevant, with an I-CVI of .40/S-CVI/Ave of .03 for the former behavior, and for the latter behavior, a I-CVI = .20/S-CVI/Ave of .02. All items received an I-CVI/S-CVI/Ave score of 0 for Steps 1, 2, 4, and 5 of emotion coaching, and the emotion dismissing behavior parents' distress reaction.

Item 10 ("tell my child that he/she will feel better soon") from minimization reactions was flagged for poor content validity. Compared to other items, item 10 received low/weak I-CVIs for emotion dismissing behaviors; for instance, minimization/ignoring (.40). It was also

found that it somewhat assesses an emotion coaching behavior, i.e., Step 3 of emotion coaching (.20). These findings demonstrate that it does not assess the behaviors that the subscale purports to measure, i.e., parents' minimization and invalidation of children's negative emotions.

These findings overall demonstrate that several emotion dismissing behaviors relevant to the minimization reactions subscale, including emotion minimization/ignoring, derogatory comments/insults, and punishment, thus minimization reactions assesses behaviors relevant to Gottman et al. (1996) emotion dismissing parenting. However, Fabes et al. (2002) posited that minimization reactions assesses parents' minimization and invalidation of children's emotions which is less 'harsh'/punitive than punitive reactions. Therefore, the results of the theoretical evaluation suggest conceptual overlap between minimization reactions and punitive reactions.

Distress Reactions

Results of the theoretical evaluation demonstrated that for several items from distress reactions, the emotion dismissing behavior parents' distress reaction appears to be highly relevant (1, 3, 4, 5, 6, 9, 11, 12), with I-CVIs ranging from .60-1, and with an S-CVI/Ave of .63. It was found that for two items (items 4, 9), the emotion dismissing behavior punishment of emotions appears to be somewhat relevant, with all I-CVIs .20, and an S-CVI/Ave of .03. For item four, it was found that the emotion dismissing behaviors derogatory comments/insults of emotions, and punishment of emotions, appear to be somewhat relevant, with an I-CVI of .60/S-CVI/Ave of .05 for the former behavior, and I-CVI of .20/S-CVI of .03. It was found that for one item (item 8), Step 3 of emotion coaching appears to be somewhat relevant, with an I-CVI of .20, and an S-CVI/Ave of .02. For four items of distress reactions, Step 1 of emotion coaching was found to highly relevant (items 2, 7, 8, 10), with I-CVIs ranging from .80-1, and an S-CVI of .32. All items received an I-CVI/S-CVI/Ave score

SHORT-FORM CCNES

of 0 for Steps, 2, 4, and 5 of emotion coaching, and the emotion dismissing behavior emotion distraction.

Five items from distress reactions were flagged for poor content validity. Firstly, item 4 (“tell him/her not to embarrass us by crying”) had the lowest I-CVI score for parents’ distress reaction (.60), and derogatory comments/insults were found to be moderately relevant for this item (.60); this latter behavior conceptually overlaps with punitive reactions and minimization reactions. Further, Step 1 of emotion coaching was highly relevant for four items (items 2 “remain calm and not let myself get anxious”; 7 “remain calm and not get nervous myself”; 8 “NOT be annoyed with my child for being rude”; and 10 “NOT get upset myself”), which does not align with the construct that the scale purports to measure, which is parents’ distress reaction and emotion dysregulation in response to children’s negative emotions. Although these items are designed to be reverse coded, it is arguable that they reduce construct validity of the subscale, potentially leading to measurement problems (Weijters et al., 2013).

These findings overall demonstrate that parents’ distress reaction is highly relevant to a proportion of items within the distress reactions subscale, and thus these items align with behaviors relevant to Gottman et al. (1996) emotion coaching parenting. This aligns with the construct that the subscale purports to assess, which is parents’ distress and emotion dysregulation.

One-Factor Models

See Appendix C of the supplementary materials for a detailed overview of the one-factor models tested, as well tables S8-S22 for the factor loadings and goodness-of-fit indices for all one-factor models.

Complete Short-Form Models

After the iterative process of item reduction using data from the calibration sample ($n = 468$; detailed in Appendix C of the supplementary materials), a six-factor model with three items per factor (18 items in total, using six vignettes) was identified as the best-fitting model ($n = 468$; $\chi^2 [119] = 204.227$, $p = .00$; TLI = .95; CFI = .96; RMSEA = .04; SRMR = .04). This solution was confirmed with the validation sample ($n = 469$; $\chi^2 [119] = 208.903$, $p = .00$; TLI = .96; CFI = .97; RMSEA = .04; SRMR = .04). The factor loadings of items are described in Table 3. The factors underlying this model represented three emotion dismissing subscales (i.e., punitive reactions, minimization reactions, distress reactions) and three emotion coaching subscales (i.e., empathy, expressive encouragement, problem-solving). Emotion distraction, conceptualized as an emotion dismissing subscale, was not correlated with the CCNES and empathy subscales in the predicted directions (i.e., negative correlations with emotion coaching subscales, positive correlations with emotion dismissing subscales), thus was removed. There was one residual correlation added to the final models, between item 5 of empathy and item 5 of expressive encouragement, due to the modification indices demonstrating a correlation of .22 between these items. Justification for their correlation was that each item originated from the same vignette.

Six-Item Brief Short-Form Model

After selecting items from the 18-item short-form described above, we found that a two-factor model with three items per factor was identified as the best-fitting model tested with the calibration sample ($\chi^2 [8] 8.908$, $p = .35$; TLI = 1; CFI = 1; RMSEA = .02; SRMR = .02). This solution was confirmed with the validation sample While the TLI and RMSEA values did not strictly meet our criterion cut-off scores ($\geq .95$ for the former, $<.05$ for the latter), other researchers propose that values within this range for these fit indices is acceptable (Bentler & Bonett, 1980; Sass, 2011). The factor loadings of items are described in Table 4. The factors underlying the two-factor brief short-form model represented an emotion

SHORT-FORM CCNES

coaching scale (i.e., one item each from expressive encouragement, empathy, and problem-solving) and emotion dismissing scale (i.e., one item each from distress reactions, minimization reactions, and punitive reactions), using four vignettes in total.

Internal Consistency and Test-Retest Reliability

Table 2 presents Cronbach's alpha coefficients demonstrating internal consistency of the CCNES short-form subscales, the emotion coaching subscales combined (i.e., empathy, expressive encouragement, and problem-solving combines), emotion dismissing subscales combined (i.e., punitive reactions, minimization reactions, and distress reactions combined), and the brief short-form emotion coaching and emotion dismissing subscales, which range from acceptable to very good. Table 2 presents Pearson's r correlation coefficients, demonstrating test-retest reliability of the short-forms (i.e., correlations between Time 1 response data of the short-form and Time 2 response data), which range from fair to excellent (Cicchetti, 1994).

Criterion Validity

Table 4 presents standardized regression coefficients showing associations between the short-form/brief short-form subscales and other parent-report measures, assessing criterion validity. These measures assessed parenting warmth and irritability (Zubrick et al., 2014), beliefs about children's emotions (Halberstadt et al., 2013), parents' emotion regulation (Bjureberg et al., 2016), the family emotional climate (Halberstadt et al., 1995), and parents' positive affect (Watson et al., 1988). Table 2 presents Pearson's r correlation coefficients (i.e., correlations between the short-form CCNES subscales and the original CCNES subscales), which range from strong to very strong.

Emotion Coaching Subscales of the CCNES, and Brief Short-Form Emotion Coaching Scale. Convergent validity was evident in the positive associations found between parenting warmth and empathy (EM) (.39, $p < .001$), expressive encouragement (EE) (.40, $p < .001$),

problem-solving (P-S) (.40, $p < .001$), and the brief short-form emotion coaching scale (EC) (.41, $p < .001$); positive associations between the value of anger belief and all emotion coaching subscales (EM = .19, $p < .001$; .23, $p < .001$; .13; P-S = $p < .001$; EC = .21, $p < .01$); positive associations between positive emotion expression within the family and all emotion coaching subscales (EM = .50, $p < .001$; EE = .46, $p < .001$; P-S = .57, $p < .001$; EC = .54, $p < .001$); and positive associations between positive affect and all emotion coaching subscales (EM = .39, $p < .001$; EE = .15, $p < .05$; P-S = .24, $p < .001$; EC = .24, $p < .001$).

Further, it was evident in the negative associations found between all emotion coaching subscales and parenting irritability (EM = -.20, $p < .001$; EE = -.33, $p < .001$; P-S = -.14, $p < .001$; EC = -.44, $p < .001$); negative associations between the emotion dismissing belief control and all emotion coaching subscales (EM = -.21, $p < .001$; EE = -.17, $p < .001$; EC = -.24, $p < .001$); negative associations between the emotion dismissing belief autonomy and all emotion coaching subscales (EM = -.27, $p < .001$; EE = -.23, $p < .001$; P-S = -.16, $p < .001$; EC = -.30, $p < .001$); negative associations between the emotion dismissing belief manipulation and empathy, expressive encouragement, and emotion coaching (EM = -.28, $p < .001$; EE = -.22, $p < .001$; P-S = -.09, $p > .05$; EC = -.27, $p < .001$); negative associations between negative emotion expression within the family and all emotion coaching subscales (EM = -.17, $p < .001$; EE = -.25, $p < .001$; P-S = -.17, $p > .05$; EC = -.24); and finally, the negative associations between parent emotion regulation (lower scores indicate improved emotion regulation, higher scores indicate emotion dysregulation) and empathy, and expressive encouragement (EM = -.06, $p > .05$; EE = -.15, $p < .001$; P-S = -.15, $p < .001$; EC = -.11, $p > .05$).

A positive association was found between empathy and the emotion dismissing belief stability (.13, $p < .001$), which was unexpected, i.e., we expected a negative association.

Emotion Dismissing Subscales of the CCNES, and Brief Short-Form Emotion

Dismissing Scale. Convergent validity was evident in the positive associations found

between parenting irritability and punitive reactions (PR) (.34, $p < .001$), minimization reactions (MR) (.42, $p < .001$), distress reactions (DR) (.39, $p < .001$), and the brief short-form emotion dismissing scale (ED) (.41, $p < .001$). Further, it was evident in the positive associations found between the emotion dismissing belief control and punitive reactions, minimization reactions, and the emotion dismissing scale, and (PR = .27, $p < .001$; MR = .24, $p < .001$; DR = .06, $p > .05$; ED = .24, $p < .001$); positive associations between the emotion dismissing belief autonomy and punitive reactions, minimization reactions, and the emotion dismissing scale, and (PR = .23, $p < .001$; MR = .26, $p < .001$; DR = .07, $p > .05$; ED = .22, $p < .001$); positive associations between the emotion dismissing belief manipulation and all emotion dismissing subscales (PR = .31, $p < .001$; MR = .39, $p < .001$; DR = .18, $p < .001$; ED = .33, $p < .001$); positive associations between negative emotion expression within the family and all emotion dismissing subscales (PR = .33, $p < .001$; MR = .39, $p < .001$; DR = .38, $p < .001$; ED = .41, $p < .001$); and positive associations between emotion regulation and all emotion dismissing subscales (PR = .18, $p < .001$; MR = .32, $p < .001$; DR = .33, $p < .001$; ED = .23, $p < .001$).

Convergent validity was evident in the negative associations found between emotion dismissing parenting and all emotion dismissing subscales (PR = -.34, $p < .001$; MR = -.40, $p < .001$; DR = -.29, $p < .001$; ED = -.41, $p < .001$); negative associations between positive emotion expression within the family and all emotion dismissing subscales (PR = -.29, $p < .001$; MR = -.34, $p < .001$; DR = -.24, $p < .001$; ED = -.33, $p < .001$); negative associations between positive affect and distress reactions (PR = -.05, $p > .05$; MR = -.09, $p > .05$; DR = -.19, $p < .001$; ED = -.09, $p > .05$).

Measurement Invariance Testing

Results of the measurement invariance testing provided support that the CCNES six-factor short-form and two-factor brief short-form are equivalent for mothers and fathers, and

parents of children in early childhood and mid-childhood (see Tables 5 and 6). We first tested the final CCNES short-form and brief short-form models for each group separately; fit indices demonstrated that there was adequate model fit for each group (see Table 5). However, it should be noted that one item for the short-form when tested with fathers fell below .40, to .38 (item 1, minimization reactions). Next, multiple-group CFAs were tested. The configural, metric, and scalar models were found to be equivalent across groups, based on the following fit indices: $\Delta CFI < 0.01$, $\Delta RMSEA < 0.015$, $\Delta SRMR < 0.03$, TRd (i.e., $p > .05$) (see Table 6). For both short-forms, it was found that the TRd was significant for the configural vs metric model for mothers vs fathers, and for the 18-item short-form, it was additionally significant for the metric vs scalar model for mothers and fathers. However, we concluded that there was ample support for measurement invariance based on the results for the other fit indices. Further, as noted previously, the χ^2 (and TRd) are sensitive to larger samples and more complex models (Sass, 2011).

Discussion

The objective of the current study was to refine the Coping with Children's Negative Emotions Scale (CCNES) into two short-forms. Aim one was to evaluate content validity of the CCNES, i.e., the alignment of items from the CCNES and an additional empathy subscale with Gottman et al. (1996) meta-emotion theory. Aim two was to test the CCNES subscales via confirmatory factor analysis and then refine the CCNES into two short-forms, which would be a set of parsimonious items that are robust indicators of the constructs of interest. Aim three was to examine psychometric properties of the short-forms. Construct validity and reliability of an 18-item short-form and 6-item brief short-form was demonstrated via cross-validation of the short-form's factor structure, internal consistency, test-retest reliability, criterion validity, and measurement invariance testing. The current study is the only known study to theoretically evaluate the CCNES. Our findings demonstrated that the majority of

original CCNES items are well-aligned with meta-emotion theory, which provides confidence in findings of existing research using the full scale as an indicator of the emotion socialization construct. Nonetheless, our findings also suggested instances where items lacked measurement precision, such as the reverse coded items of distress reactions.

While the short-form is conceptualized as six distinct subscales, punitive reactions and minimization reactions were found to have a very strong correlation when tested via a confirmatory factor analysis (CFA), suggesting that these subscales assess the same underlying construct. Previous research has also found strong overlap between minimization reactions and punitive reactions (Fabes et al., 2002; Pintar Breen, 2018), as well as these subscales and distress reactions (Davidov & Grusec, 2006). According to meta-emotion theory, parent's emotion regulation contributes to their emotion socialization parenting behaviors in important ways (Gottman et al., 1997; Hajal & Paley, 2020; Katz et al., 2012). Some researchers propose that distress reactions assesses parent's emotion dysregulation, rather than parenting behaviors (Hajal & Paley, 2020; Yagmurlu & Altan, 2009). Findings of the current study suggest that the original distress reactions subscale has poor content validity. In future, we recommend that researchers reconsider using the original distress reactions subscale, since the construct validity of this subscale is questionable.

Although Lazarus and Folkman's Transactional Model of Stress and Coping (Fabes et al., 2002; Lazarus & Folkman, 1984) originally underpinned the problem-focused responses subscale, our theoretical evaluation supported retaining this subscale. Problem-focused responses were described as a key behavior of emotion coaching parenting by Gottman et al. (Gottman & DeClaire, 1997; 1996). Problem-solving addresses children's emotions indirectly, by dealing with situations rather than directly responding to the emotions themselves. However, we did not retain the emotion-focused responses subscales. We anticipated that this subscale would perform as an emotion dismissing subscale when tested

in a CFA with the other short-form subscales. During the theoretical evaluation, expert raters conceptualised these items as describing parent's attempt to distract children from their negative emotions, which is an emotion dismissing response (Björk et al., 2020; Denham & Burton, 2003; Halberstadt et al., 2008). Ultimately, we removed the subscale, since it was not in the expected directions when tested via a CFA. Items from emotion distraction also assess parent's comforting behaviors, which align with emotion coaching (Gottman & DeClaire, 1997). If items assessed distraction alone, the results may have been different (Compas et al., 2014).

Parent's use of emotion distraction to reduce children's negative emotions is not a well understood emotion socialization behavior. Some studies suggest children's use of distraction as an emotion regulation strategy is adaptive and prevents rumination of negative emotions (Davis et al., 2010; Davis et al., 2016). However, some argue it may not always be an effective strategy, depending on several factors, such as the intensity of the emotion, and the situation that led to the negative emotion (Davis et al., 2016; Masuda et al., 2010). Within the context of emotion socialization, it is typically argued that parents should avoid using emotion distraction as a strategy to help reduce their children's negative emotions, as it does not provide children the opportunity to discuss or understand their emotions, or become 'comfortable' experiencing them (Björk et al., 2020; Denham & Burton, 2003; Gottman et al., 1997; Halberstadt et al., 2008). Our results suggest value in retaining this scale in future research to provide further clarification of how these items might best be conceptualized theoretically, and in turn, provide greater clarification of the role of supportive distraction in parent emotion socialization processes. Further, we recommend that in future, researchers develop a measure/scale that solely assesses parent's emotion distraction from children's negative emotions.

Support for internal consistency, test-retest reliability, criterion validity, and measurement invariance (parents of children in early vs mid-childhood; mothers vs fathers) was found for the short-forms. The majority of associations between the short-forms and measures that tested theoretically similar constructs were consistent with expected directions. However, the stability belief subscale from the Parents' Beliefs about Emotions Questionnaire had a weak, positive association with the short-form empathy subscale, which was unexpected (Halberstadt et al., 2013). Halberstadt and colleagues (2013) theorize that parents who believe children's emotions remain stable over time would see little utility in emotion coaching due to pessimism about effecting change in children's emotions. However, they also propose that the stability belief may function as a moderator, dampening associations of other emotion-related beliefs with emotion socialization behaviors. The stability belief has received little empirical examination, and future research will be needed to explore these possibilities. Furthermore, no emotion dismissing subscales, as well the emotion dismissing subscale of the brief short-form, were associated with the value of anger belief. This is possibly because the majority of vignettes in the CCNES describe children's internalizing emotions, not their anger. Finally, it is notable that there was only one significant association found between distress reactions and an emotion dismissing belief (i.e., manipulation), which was weak in strength. This was unexpected, since it is theorized that parents' beliefs about emotions shape their emotion regulation (Ford & Gross, 2018).

Limitations

There are several limitations of the current study that need to be considered. Firstly, although an objective of the current study was to align the short-forms with meta-emotion theory (Gottman et al., 1996; Katz et al., 2012), the short-forms do not comprehensively measure meta-emotion theory. The emotion coaching subscales do not assess Step 2 of emotion coaching, i.e., recognition of child emotion as an opportunity for intimacy & learning

(Gottman et al., 1997). Gottman et al. (1996; 1997) highlighted that this step is an important ‘attitude’ step that may lead to a more supportive emotion coaching response. Furthermore, the short-forms were tested with English-speaking participants predominantly residing in Western countries. As such, it is unknown whether the short-forms are generalizable to culturally diverse families. Recruiting participants via Prolific may have biased response data, since these participants were paid for their participation. Attrition of participants may have biased findings of test-retest reliability of the short-forms. Participants who did not complete the survey at Time 2 due to attrition and a survey error were found to have higher household income. The CCNES was originally developed with parents of children aged 3-6 years; we did not include parents in the current study who were parents of children aged 3. While there is now a version of the CCNES available for children who are toddlers (Coping with Toddlers’ Negative Emotions Scale; CTNES) (Spinrad et al., 2004), in some instances it may be recommended to use the CCNES, as there is less known about the CTNES. We recommend that future research assesses psychometric properties of the CTNES.

Strengths

There are several strengths of the current study. Firstly, the theoretical evaluation of the CCNES provided evidence that the short-forms reflect current emotion socialization theory. Items that assess parent empathy were added to the short-forms, thus the CCNES short-forms provide a more accurate assessment of emotion coaching (Gottman et al., 1997; Katz et al., 2012). The short-forms were validated with a sample of mothers and fathers of children within a wide age range (4-10 years), with participants from several English-speaking countries, thus the short-forms are generalizable to Western, English-speaking countries. Finally, the creation of the brief short-form will be useful for researchers who wish to measure emotion coaching and emotion dismissing parenting with even fewer items, and could be useful as a screening tool. Due to time constraints, shorter measures are typically

prioritized in settings outside of research, such as parenting interventions and social services (McEachern et al., 2012).

Conclusion

The current study created two short-form versions of the Coping with Children's Negative Emotions Scale (CCNES; Fabes et al., 2002) that are aligned with Gottman et al. (1996) meta-emotion theory, as well as emotion socialization theory more broadly (see the supplementary materials for access to the short-forms). The short-forms have strong psychometric properties and offer a number of advantages compared to the original CCNES, thus are viable alternatives. For instance, they will decrease participant burden due to their shorter length. The current study has advanced our understanding of emotion socialization theory; for example, it has provided evidence that the punitive reactions and minimization reactions subscales measure one underlying construct. Improving the alignment between emotion socialization theory and measurement advances research with children and families by increasing the reliability with which this construct can be measured when exploring these aspects of parenting and when evaluating interventions of parents' emotion socialization.

Figure 1

Conceptual Model of Emotion Coaching and Emotion Dismissing Parenting Behaviors

Table 1*Demographic Characteristics of Samples, Time 1*

Characteristic	Sample		
	Complete	Calibration	Validation
Parent age <i>M, SD</i> (range)	37.37, 6.80 (20.7-63.5)	37.33, 6.39 (20.7-63.5)	37.40, 7.21 (23.6-62)
Child age <i>M, SD</i> (range)	6.97, 1.78 (4-10.6)	6.99, 1.75 (4-10.5)	6.95, 1.82 (4-10.6)
Parent sex <i>n</i>			
Female	556	279	277
Male	341	172	169
Non-binary/trans-gender	2	2	
Child sex <i>n</i>			
Female	442	218	224
Male	446	228	218
Non-binary/trans-gender	2	2	
Total household income per year before tax (\$AU) <i>n</i>			
Up to \$36,400	202	100	102
\$36,400-\$52,000	221	99	122
\$52,000-\$90,000	191	96	95
\$90,000-\$140,000	108	67	41
Above \$140,000	175	89	86
Parent highest level of education <i>n</i>			
Did not complete high school	17	8	9
High school	146	77	69
Trade certificate/diploma/ apprenticeship	215	103	112
Bachelor degree (with or without honors)	306	147	159
Postgraduate qualification	218	118	100
Country of residence <i>n</i>			
Australia/NZ	440	223	217
United Kingdom/Ireland	245	121	124

SHORT-FORM CCNES

US/Canada	247	120	127
Other*	5	4	1

Note. A small number of participants residing in countries not specified as eligible for participation in (name of study) completed the study. We decided to keep their response data so that we had a larger dataset.

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Table 2

Standardized Factor Loadings, Internal Consistency, and Test-Retest Reliability, and Criterion Validity of the Short-Form

Item	Sample						
	Calibration		Validation				
	FL	FL	α	ω	CR	r^1	r^2
Empathy			.67	.69	.68	.60***	.91***
1. acknowledge that it can be disappointing to miss out on something you want to do.	.63	.56					
5. acknowledge that it can feel worrying being separated from you.	.76	.65					
11. acknowledge that getting called names can be upsetting.	.69	.72					
Expressive Encouragement			.87	.87	.87	.71***	.90***
5. encourage my child to talk about his/her nervous feelings.	.88	.81					
6. encourage my child to talk about his/her nervous feelings of embarrassment.	.81	.80					
7. encourage my child to talk about his/her nervous feelings.	.86	.88					
Problem-Solving			.71	.71	.71	.57***	.87***
5. help my child think of things that he/she could do so that being at the friend's house without me wasn't scary (e.g., take a favorite book or toy with him/her).	.73	.65					
7. help my child think of things that he/she could do to get ready for his/her turn (e.g., to do some warm-ups and not to look at the audience).	.71	.64					
11. help my child think of constructive things to do when other children tease him/her (e.g., find other things to do).	.68	.71					
Punitive Reactions			.85	.85	.85	.60***	.84***
6. tell my child to straighten up or we'll go home right away.	.79	.81					
7. tell him/her tell my child that if he/she doesn't calm down, we'll have to leave and go home right away.	.80	.79					
11. tell my child to behave or we'll have to go home right away.	.73	.82					
Minimization Reactions			.70	.70	.70	.66***	.87***

SHORT-FORM CCNES

1. <i>tell my child not to make a big deal out of missing the party.</i>	.46	.43					
5. <i>tell my child to quit over-reacting and being a baby.</i>	.81	.78					
12. <i>tell my child that he/she is being a baby.</i>	.78	.75					
Distress Reactions			.71	.71	.72	.62***	.73***
5. <i>feel upset and uncomfortable because of my child's reactions.</i>	.48	.60					
6. <i>feel uncomfortable and embarrassed myself.</i>	.74	.75					
12. <i>feel upset and uncomfortable because of my child's reactions.</i>	.55	.64					
Empathy, Expressive Encouragement, and Problem-Solving Combined			.87	.87			
Punitive Reactions, Minimization Reactions, and Distress reactions combined			.83	.85			

Note. FL = standardized factor loading, α = Cronbach's alpha, ω = omega, CR = Raykov's composite reliability, r^1 = test-retest reliability (i.e., Pearson's r ; Time 2 responses were collected approximately 12 months after Time 1), r^2 = criterion validity (i.e., Pearson's r ; short-form subscales were correlated with the original CCNES subscales).

*** = $p < .001$.

Table 3*Standardized Factor Loadings, Internal Consistency, and Test-Retest Reliability of the Brief Short-Form*

Item	Sample					
	Calibration		Validation			
	FL	FL	α	ω	CR	r
Emotion Coaching			.66	.67	.71	.64***
5. <i>acknowledge that it can feel worrying being separated from you</i> (empathy).	.76	.67				
6. <i>encourage my child to talk about his/her nervous feelings of embarrassment</i> (expressive encouragement).	.71	.65				
11. <i>help my child think of constructive things to do when other children tease</i> <i>him/her (e.g., find other things to do)</i> (problem-focused responses/problem- solving).	.55	.59				
Emotion Dismissing			.68	.71	.67	.60***
5. <i>tell them to quit over-reacting and being a baby</i> (minimization reactions).	.76	.70				
6. <i>feel uncomfortable and embarrassed myself</i> (distress reactions).	.45	.52				
7. <i>tell them that if they don't calm down, we'll have to leave</i> (punitive reactions).	.71	.76				

Note. FL = standardized factor loading, α = Cronbach's alpha, ω = omega, CR = Raykov's composite reliability, r = test-retest reliability (i.e., Pearson's r correlation coefficient; Time 2 responses collected approximately 12 months after Time 1).

*** = $p < .001$.

Table 4*Standardized Correlations between Short-Form and Brief Short-Form Subscales with Criterion**Measures*

Criterion Constructs	Short-Form						Brief Short-Form	
	E	EE	PS	PR	MR	DR	EC	ED
Parenting								
Warmth	.39***	.40***	.40***	-.34***	-.40***	-.29***	.41***	-.41***
Irritability	-.20***	-.33***	-.14*	.34***	.42***	.39***	-.44***	.24***
Parents' beliefs about children's emotions								
Control	-.21***	-.17***	-.19***	.27***	.24**	.06	-.24***	.24***
Autonomy	-.27***	-.23***	-.16**	.23***	.26***	.07	-.30***	.22***
Stability	.09	.13**	.04	.06	.02	.05	.09	.05
Value of anger	.19**	.23***	.13*	-.01	-.06	-.09	.21**	-.03
Manipulation	-.28***	-.22***	-.09	.31***	.39***	.18***	-.27***	.33***
Family emotional climate								
Positive emotion expression	.50***	.46***	.57***	-.29***	-.34***	-.24***	.54***	-.33***
Negative emotion expression	-.17***	-.25***	-.17***	.33***	.39***	.38***	-.24***	.41***
Parent emotion regulation	-.06	-.15***	-.15***	.18***	.20***	.33***	-.11	.23***
Parent affect (positive affect)	.15*	.24***	.24***	-.05	-.09	-.19***	.24***	-.08

Note. E = Empathy, EE = expressive encouragement, PS = problem-solving, PR = punitive reactions, MR = minimization reactions, EC = emotion coaching (brief short-form), ED = emotion dismissing (brief short-form).

Correlations ($p < .05$) in the expected direction are in bold.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 5*Goodness-of-Fit Indices for Short-Form Models Tested via CFA, Separated by*

<i>Groups</i>								
Group	<i>n</i>	χ^2	<i>df</i>	<i>p</i>	TLI	CFI	RMSEA	SRMR
<i>Short-Form</i>								
Parents of Children in Early Childhood	429	192.652	119	<.001	.96	.97	.04	.04
Parents of Children in Mid-Childhood	455	199.315	119	<.001	.95	.96	.04	.04
Mothers	556	237.336	119	<.001	.94	.96	.04	.04
Fathers	341	146.499	119	.04	.98	.98	.03	.04
<i>Brief Short-Form</i>								
Parents of Children in Early Childhood	429	12.410	8	.13	.96	.99	.04	.03
Parents of Children in Mid-Childhood	455	16.163	8	.04	.96	.98	.05	.03
Mothers	556	23.156	8	.06	.93	.96	.05	.04
Fathers	341	16.875	8	.05	.95	.97	.05	.06

Note. CFA = confirmatory factor analysis, χ^2 = chi-square, *df* = degrees of freedom, *p* = p-value, TLI

= Tucker Lewis index, CFI = comparative fit index, RMSEA = root mean square error of approximation, SRMR = standardized root mean square residual.

Table 6*Configural Model of Measurement Invariance Testing*

Groups Compared	TRd(df) <i>p</i>	$\chi^2(df)$ <i>p</i>	TLI	CFI	RMSEA	SRMR
<i>Parents of Children in Early Childhood</i>						
<i>vs Parents of Children in Mid-Childhood</i>						
<i>Short-Form</i>						
Configural Model		392.320(238) <i>p</i> < .001	.954	.964	.038	.041
Metric Model		401.726(250) <i>p</i> < .001	.957	.965	.037	.045
Scalar Model		419.279(262) <i>p</i> < .001	.957	.963	.037	.046
Configural vs Metric Model	12.4399(12) <i>p</i> = .41					
Configural vs Scalar Model	18.4007(12) <i>p</i> = .10					
<i>Brief Short-Form</i>						
Configural Model		14.850(16) <i>p</i> = .54	1	1	.000	.024
Metric Model		16.785(20) <i>p</i> = .67	1	1	.000	.030
Scalar Model		22.531(24) <i>p</i> = .55	1	1	.000	.030
Configural vs Metric Model	2.1398(4) <i>p</i> = .71					
Metric vs Scalar Model	5.2012(4) <i>p</i> = .27					
<i>Mothers vs Fathers</i>						
<i>Short-Form</i>						
Configural Model		384.342(238) <i>p</i> < .001	.956	.966	.037	.038
Metric Model		409.611(250) <i>p</i> < .001	.955	.963	.038	.045
Scalar Model		438.724(262) <i>p</i> < .001	.952	.959	.039	.049
Configural vs Metric Model	23.3862(12) <i>p</i> = .02					
Metric vs Scalar Model	24.6347(12) <i>p</i> = .02					
<i>Brief Short-Form</i>						
Configural Model		26.322 (16) <i>p</i> = .04	.969	.983	.038	.026
Metric Model		39.163(20) <i>p</i> = .01	.953	.969	.046	.051
Scalar Model		48.746(24) <i>p</i> < .01	.950	.960	.048	.059
Configural vs Metric Model	12.2259(4) <i>p</i> = .02					
Metric vs Scalar Model	9.1874(4) <i>p</i> = .06					

SHORT-FORM CCNES

Note. TRd = Sattora-Bentler Scaled Chi-Square Difference Test, χ^2 = chi-square, df = degrees of freedom, p = p value, TLI = Tucker Lewis index, CLI = comparative fit index, RMSEA = root mean square error of approximation, SRMR = standardized root mean square residual.

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