UNIVERSITÀ DEGLI STUDI FIRENZE

PhD in
EDUCATION SCIENCES AND PSYCHOLOGY

CYCLE XXXIV

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Parenting and Parental Emotional Styles:

Which relations with parental affects towards children and children's callous-

unemotional behaviors?

Academic Discipline (SSD) M-PSI/04

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Years 2018/2021

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BROAD AIM OF THE RESEARCH PROJECT

The purpose of this research project is to examine the role of parenting, and the parental emotional styles on children's callous-unemotional traits (CU traits). Particularly, the study aims to investigate the association between parenting and children's behavioral and emotional difficulties, considering the co-occurring role of parental feelings and emotional styles in early childhood. In so doing, the current research takes into account not only variables strictly connected to parenting practices but also focused specifically on affective dimensions of parenting.

L'obiettivo di questo progetto di ricerca è quello di esaminare il ruolo del *parenting* e dello stile emotivo del genitore con bambini con *callous-unemotional* traits (CU traits). In particolare, il presente lavoro di ricerca vuole indagare l'associazione tra *parenting* e difficoltà comportamentali ed emotive del figlio, considerando il ruolo di interazione delle emozioni e degli stili emotivi genitoriali durante la prima infanzia. Per fare questo, il presente lavoro prende in considerazione non solo dimensioni strettamente legate alle pratiche di *parenting* ma incentrate su dimensioni affettive connesse con l'esperienza di genitorialità.

CHAPTER 1: Overview of the three main constructs: Parenting, Parental Emotional Styles, and Callous-Unemotional Traits.

The focus of this thesis is primarily on parenting practices, parental emotional styles, and their role in children's Callous-Unemotional (CU) traits, specifically among parents of children in preschool years. The main aim is to explore whether and how parental emotional styles can influence the level of CU traits, that operate as a specifier for serious forms of conduct problems. This chapter contains a review of key literature regarding aspects and processes in parenting practices and their role as risk or protective factors of behavioral problems and CU behaviors.

1.1 Parenting practices, styles, and dimensions

Parenting refers to a large and not easy to define construct. According to Bornstein (1995) parents, particularly in the infant period, protect, nurture, and teach their children. These parental practices are meaningful considering children's developmental changes in cognitive and physical abilities, such as perceiving, thinking, acquiring language, expressing emotions, and socially interacting. In this respect, most parental behaviors consist in biologically requisite such as feeding, grooming, protection (Bard Kim, 2002) and caregiving. Four superordinate categories of parent-child interaction have been identified (Bornstein,1995):

- nurturant: behaviors parents use for promoting infants' wellness and preventing their illness from the moment of conception - or even earlier;

- social: behaviors parents use in engaging children interpersonal exchanges (comforting, smiling, vocalizing, and face-to-face contact) and displays of warmth and physical expressions of affection;

- didactic: strategies of the parents in stimulating the children to engage and understand the environment; introducing, describing, and interpreting the external world;

- material: behaviors parents use in managing and organizing their children's physical world; the level of ambient stimulation, the limits on physical freedom, and the overall physical dimensions of babies' experiences.

Considering the developmental perspective, parenting implies practices that share three major goals: ensuring children's health and safety, preparing children for life as productive adults, and transmitting cultural values (Kazdin, 2000). Besides these goals, in the mid-1960s Diana Baumrind (1967) focused her work on styles of parenting behaviors. The author (1967) identified three different parenting styles, then elaborated on by Maccoby and Martin (1983) in four: the authoritative style (characterized by high levels of both responsiveness and demandingness) was associated with assertive, self-reliant child behavior; the authoritarian style (low responsiveness and high demandingness) was associated with discontented, withdrawn child behavior; and the permissive style (characterized by high responsiveness and low demandingness) was associated with child behavior characterized by low self-control and low self-reliance (Baumrind, 1991, Maccoby & Martin, 1983). These identified parenting styles are still the only parenting styles with a strong empirical basis.

Although most researchers focused on identifying parenting styles, other studies of the 1930s to the 1960s began to investigate a wider range of parenting characteristics, which lead to identified different factors to describe parenting: the quality of parent-child interactions (i.e., warmth), the nature of parental discipline (i.e., control) and the structure (i.e., the degree to which parents provide their child with a predictable, organized, and consistent environment). Each factor can be traced in various forms across decades of research examining how parents relate to their children from preschool age to late adolescence (see Power, 2013 for a review). In a study involving over 1200 parents, Skinner, Johnson, and Snyder (2005), based on these three factors, studied a subset of six parenting dimensions: warmth, rejection, autonomy support, coercion, structure, and chaos. Particularly, in this work, these six dimensions have been studied and organized as bipolar

dimensions with a negative and positive extreme, suggesting that three dimensions can be considered as a set of core features of parenting style: warmth versus rejection, structure versus chaos, and autonomy support versus coercion (Skinner et al., 2005).

While parenting can be conceptualized in a variety of ways and recognized as a multidimensional construct, according to a recent cultural perspective, parenting can be organized on only two independent dimensions: warmth and control (Deater-Deckard, Lansford, Malone, Alampay, Sorbring et al., 2011). Moreover, in recent years these two dimensions have been integrated by most researchers of the field considering parenting in terms of two broad domains: positive and negative. *positive parenting* is used to refer to dimensions of parenting such as warmth, sensitivity, involvement, appropriate scaffolding, and reinforcement (Corwyn & Bradley, 1999; Waller Gardner, Shaw, Dishion, Wilson, & Hyde, 2015a). *Negative parenting*, in turn, refers to parenting behaviors that are inconsistent, over-reactive, controlling, and especially, harsh (Chang, Schwartz, Dodge, & McBride-Chang, 2003; Trentacosta et al., 2019).

Both positive parenting and negative parenting form the family emotional climate in fostering children's socio-emotional development. In their conceptual model of parental and familial processes underlying socio-emotional development of the children, Morris, Silk, Steinberg, Myers & Robinson (2007) proposed a tripartite model highlighting the general parenting styles and behaviors that influence children's socio-emotional abilities. The model suggests that parents influence children's emotion regulation through three mechanisms: children's observation of parents' emotion regulation, emotion-related parenting practices, and the emotional climate of the family. In this model has been stressed the importance of parental characteristics (e.g., parental reactivity and emotion regulation), child characteristics (e.g., negative emotionality) and emotional climate of the family (e.g., partner interactions) in the child emotional development. Specifically, parents' beliefs regarding own emotions, the relationship with their children, and the ability to control their own emotions, affect children's emotion socialization and the ways in which they interact with children and other family members (Gottman, Katz, & Hooven, 1996; Morris et al.,

2007). Additionally, when parents face stressors or relationship difficulties, their own emotions can overwhelm them, making it difficult to respond to their children in emotionally supportive ways, and this can be particularly challenging when children have behavioral problems (Havighurst & Kehoe; 2017; Mence, Hawes, Wedgwood, Morgan, Barnett et al., 2014). Research on parent-child relations emphasize on another characteristic, the mutuality, describe as the bidirectional reciprocal responsive quality of interaction that influences the well-functioning of parent-child relationships (Kochanska, 1997; Deater-Deckard, & O'Connor; 2000). Research have been broadening to try to understand the trajectories of children's adaptive or maladaptive socio-emotional developmental outcomes considering the role of parental characteristics (Dadds &Salomon, 2003), as well as the role of child temperament (Hawes, Dadds, Frost , Hasking , 2011; Kiff, Lengua, & Zalewski, 2011) in a bidirectional association (Waller, Gardner, Viding, Shaw, Dishion et al., 2014).

In recent years, studies on early children development have examined the developmental impact of parental styles on children's emotional adjustment (Johnson, Hawes, Eisenberg, Kohlhoff, & Dudeney, 2017; Kochanska, Boldt, & Goffin, 2019). The clear parental role in the understanding, expression, and regulation of emotion of their children emerged and how emotion is central to parenting (Dix, 1991; Eisenberg, Cumberland, & Spinrad, 1998; Morris et al., 2007; Johnson et al., 2017). Particularly, responsive parenting is associated with positive outcomes in children's development such as higher child self-regulation, lower externalizing behaviors and better social competence (Bates, Schermerhorn, & Petersen, 2012; Eiden, Edwards, & Leonard, 2007; Khaleque, Rohner, & Riaz, 2007). A detached parenting style or with negative emotion expressiveness have been found to correlate with internalizing and externalizing problems, lower prosocial behaviors, and negative reactivity (Braungart-Rieker, Hill-Soderlund, & Karrass, 2010; Duncombe, Havighurst, Holland & Frankling, 2012; Knafo & Plomin, 2006). It has been also suggested that early parent-child relationships with positive responsiveness and socialization of emotion reduce the risks of negative outcomes (Kochanska et al., 2019). Since parenting styles and practices predict

children's developmental outcomes (Alegre, 2011, Morris et al., 2007), it could be important to further explore the specific role of parental emotional styles, also considering the need for parents to manage their own emotions while at the same time teaching their children to understand and regulate their emotions (Halberstadt & Eaton, 2003; Havighurst & Kehoe, 2017).

1.2 Parental Emotional Styles

Parents-child interactions offer a rich base of opportunities for children to experience and learn socio-emotional contents. Eisenberg, Cumberland, and Spinrad (1998) described three key processes through which parents socialize their children's emotions: a) reactions to their child's emotional displays; b) discussion of emotion; and c) emotional expressiveness within the family. These parental Emotion Socialization Behaviors (ESBs) have generally been identified as either *supportive* (e.g., discussion of the causes and meaning of emotions or reactions that are emotion-focused and problem-focused) or *non-supportive* (e.g., avoidance of emotional discussion, minimizing or punitive reactions). Other set of key behaviors that parents utilize in order to socialize emotions are *responsive* behaviors, that focused on encouraging or discouraging the expressions of child's emotions (Dunsmore & Halberstadt, 1997). In line with this approach, Gottman, Katz, and Hooven (1996) claimed that parents who are responsive and warm typically display specific types of parenting behaviors and have certain beliefs associated with emotion that affect their children. They suggested the Parental Meta-Emotion Philosophy (PMEP) theory, which hypothesizes that emotion socialization behaviors are guided by "an organized set of feelings and thoughts about one's own emotions and one's child's emotions" (Gottman, Katz, & Hooven, 1996, p. 243). In their work, Gottman and colleagues (1996) explored the parents' awareness of their children's emotional lives and their efforts to make emotional connections with them. Moreover, they presented a model that connect aware of the emotions in their lives, particularly the negative emotions (i.e., parental meta-emotion philosophy) to parenting and to children socio-emotional development in middle childhood.

Parents' meta-emotion philosophy can result in two main emotional styles. Parents characterize by an *emotion-coaching style* are aware of the child's emotions; they see the child's emotions as an opportunity for closeness or teaching; they help the child to verbally label his/her own emotions; they empathize with or confirm the child's emotions, and they help the child to problem-solve dilemma about emotional experiences. In contrast, parents characterize by an *emotion-dismissing style* are unpleasant with the expression of emotion; they tend to reject or dismiss the child's emotional expressions, they seek to reduce the child's emotions quickly, and teach that emotions are undesirable or unimportant (Gottman et al., 1996; Katz, Maliken, & Stettler, 2012). According to the meta-emotion framework, parents who serve as emotions coaches, guiding or coaching children through the process of regulating emotions, perform behaviors such as emotional scaffolding, praising, validation, and self-disclosure, whereas parents who engage in a dismissing style, viewing emotions as problematic or dangerous, perform behaviors such as denying, ignoring, or minimizing children's emotions (Cleary & Katz, 2008; Gottman et al., 1996).

Both emotion coaching and emotion dismissing styles were distinguished from more global parenting variables such as warmth, detachment, and hostility, which describe the general interaction style and emotional tone within the parent-child relationship (Eisenberg et al., 1998; Gottman et al., 1996; Katz et al., 2012), suggesting that PMEP reflects a unique parenting dimension that had been previously unnamed (Katz, Gottman, & Hooven, 1996). This philosophy shape parents' perception of their child's emotional experiences and their thoughts about how to teach emotions to their children. According to an update model of Katz and colleague (2012) parents differ on components of PMEP, such as their *awareness* of low intensity emotions in their children, their *acceptance* of their child's emotion, and their *coaching* and problem-solving with their child. The PMEP is conceptualized as "an organized set of beliefs, thoughts, and feelings about their own and their children's emotions" that guide their emotion socialization behaviors (Katz et al., 2012, p. 417). Of importance is to clarify that parent's beliefs consist in their parental ideas, knowledge, values, goals, and attitudes about the relation with their children and their

development. Parental beliefs hold a reliably extensive role in the study of parent-–child relationships and may regulate and shape parental behaviors or help to organize it (Darling & Steinberg, 1993; Rodrigo & Triana, 1996; Stelter & Halberstadt, 2011). The belief that emotions are valuable suggests some awareness and acceptance of emotions, as a developmental benefits and opportunities for children to learn (Parker, Halberstadt, Dunsmore, Townley, Bryant, et al., 2012; Stelter & Halberstadt, 2011). In contrast, the belief that emotions can be dangerous lead to try to shield children from observing and experiencing emotional situations (Dunsmore, Her, Halberstadt, & Perez-Rivera, 2009; Halberstadt,& Eton, 2003). Research shows how parents used less teaching for positive than negative emotions, and greater encouragement for positive than negative emotions based on their beliefs and awareness (Lozada, Halberstadt, Craig, Dennis, & Dunsmore,2016; Stelter & Halberstadt, 2011). Parents with stronger beliefs about the value of positive emotions engaged in less labeling of positive emotions, less teaching of all emotions, and less encouragement of negative emotions. Moreover, parents with stronger beliefs about the value of negative emotions engaged in more encouragement of negative emotions. Contrary, parents with stronger beliefs that all emotions are dangerous engaged in less labeling of negative emotions (Lozada et al., 2016). Findings suggested that parents' MEP are linked with features of children's psychosocial adjustment, such as adaptive emotion regulation and knowledge, and the child's internalizing and externalizing behavior (Dunsmore, Booker, & Ollendick, 2013; Havighurst & Kehoe; 2017; Katz et al., 2012). As parents gain experience in their parenting, they may accumulate skills and learn from previous encounters, which could lead to changes in the ways they think about their children's emotions. Additionally, PMEP explains the variance in child adjustment also over and above parenting qualities such as warmth or harshness (Sheeber, Shortt, Low, & Katz, 2010) and change over the course of children's developmental stage (Stettler, Fainsilber & Katz, 2014). The conceptual model at the center of these research suggests that PMEP leads to improvements in three keys aspects of children's emotional competence: emotional awareness, expression, and regulation (Figure 1).

Figure 1 Theoretical Model of Katz et al. 2012
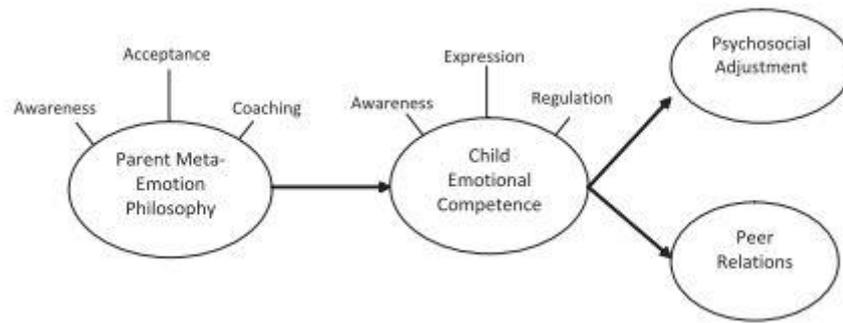
Research conducted on parental meta-emotion philosophy and children's behavioral outcomes highlighted that children who receive less support from their parents to manage their emotions may experience behavioral problems and be unable to regulate their behavior in social context (Dunsmore et al., 2013; Johnson et al., 2017; Morris et al., 2007). Parents who are supportive of their children's expression of negative emotions and adopt an emotion coaching parenting style typically have children with stronger emotion regulation and social skills (Gottman et al., 1997; Katz & Windecker-Nelson, 2004). Regarding the negative aspects of parental emotional styles, a positive association has been found between non-supportive children's expression of negative emotion and externalizing behavior problems in 5-year-olds children, but not in 6-year-olds (Nelson & Boyer, 2018). Moreover, higher level of parental emotion rejecting have been associated with important children's behavioral problems (Lunkenheimer et al., 2007). Mothers of children with conduct problems were less aware of their own emotions and less coaching of their children's emotions than mothers with children with no behavioral problems (Katz & Windecker-Nelson, 2004). Furthermore, intervention programs based on parental emotion coaching practices and self-efficacy beliefs seem to be good candidates for increasing effective behavioral changes in children (Loop et al. 2017).

1.3 Callous-Unemotional Traits

Callous-Unemotional Traits (CU) describe low empathic, uncaring and remorseless behaviors that are reinforced by insensitivity to the distress of others and reduced sensitivity towards others'

need (Frick & Ray; 2015). At the beginning, CU traits were proposed to capture symptoms of the deficient affect dimension of psychopathy among youth (Frick, 2009), but decades of research support that from a developmental perspective these key characteristics can be expressed in children showing distinct socioemotional deficits (Frick, Ray, Thornton, & Kahn, 2014b). When these traits occur in the presence of antisocial behaviors, they predict a severe and persistent form of conduct problems (Frick, Ray, Thornton, & Kahn, 2014a). In fact, CU traits have been increasingly used in research on children and adolescents with behavior problems because they appear to designate a subgroup that show a particularly severe and aggressive pattern of conduct problems and unique emotional and cognitive correlates (e.g., insensitivity to punishment and fearlessness temperament; Frick & White, 2008; Frick, Ray, Thornton, & Kahn, 2014b). Moreover, CU traits predict risk for aggression, rule-breaking and indifference for own performance, but also deficits in socio-emotional functioning and interpersonal sensitivity (Ciucci, Baroncelli, Golmaryami, & Frick., 2015; Frick, Ray, Thornton, & Kahn, 2014b, Longman, Hawes, & Kohlhoff, 2016). As a result of their clinical and etiological significance for understanding behavior problems in children and adolescents, they have been combined into the major classifications for making conduct problem diagnoses as a specifier to the diagnosis of Conduct Disorder (CD) in the 5th Edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013) and as a specifier to the diagnoses of Conduct-Dissocial Disorder and Oppositional Defiant Disorder (ODD) in the 11th Edition of the International Classification of Disease (ICD-11; World Health Organization, 2018).

The construct of CU traits is reflective of a self-centered lack of concern or consideration for others (i.e., low prosocial behavior) and research have been focusing on low empathy and prosociality to explain how the development of prosocial behaviors can be substituted by conduct problems and antisocial behaviors (Waller, Wagner, Barstead, Subar, Petersen, et al., 2020). Current models of antisocial behavior stress on the heterogeneous risk pathways among individuals showing childhood-onset conduct problems, with emphasis on different child temperamental profiles

interacting with parenting processes (Frick &Viding, 2009; Pardini & Frick, 2013; Waller, Shaw, Forbes, & Hyde, 2015b). In fact, among young children with conduct problems, one of the most studied areas is based on the distinction between children with elevated versus normative levels of CU traits (Frick, Ray, Thornton, & Kahn, 2014a).

1.3.1 CU Traits and CU Behaviors in childhood

Given the negative outcomes linked to CU traits, research has started to consider the presence of these features in younger age (Barry, Frick, DeShazo, McCoy, Ellis & Loney, 2000). The study of the development and inheritance of these traits has only been explored more recently and it is expanding with the aim of identifying the behavioral and contextual precursors of the traits (Kimonis & Prasad, 2019). Starting from the theoretical background that has established that children's prosocial actions and empathic concern for others emerge by the second year of life (Kochanska, 1997), developmental research has focused both on the possibility to assess CU traits during the childhood period and on the ways in which the presence of CU traits can lead to childhood antisocial behaviors (Kimonis et al., 2016; Willoughby et al., 2014; Waller et al., 2016) Some studies suggested to refer to CU traits measured in samples of children in early childhood (2-6 years) as callous-unemotional behaviors (CU behaviors; those modes of interaction of children with low emotional involvement and little interest in each other, Waller & Hyde, 2017). The research that focused on CU behaviors in early childhood shows that they are moderately to highly stable, typically predict a maladaptive developmental trajectory (e.g. behavioral problems, Waller et al., 2016a) and with a poor development normative socioemotional processes, such as empathy, prosociality, and guilt (Waller & Hyde, 2018). Cross-sectional and longitudinal childhood studies consistently find associations between higher levels of CU behaviors and lower levels of prosocial behavior even though implying some degree of nonshared variance (Barker, Oliver, Viding, Salekin, & Maughan, 2011; Meehan et al., 2019).

Research shows that CU behaviors are significantly related to disruptive behaviors among 4 years old children; moreover, they predict concurrent and future behavior problems and teacher-reported proactive aggression in 2 to 5 years old children (Ezpeleta et al., 2013; Kimonis et al., 2006, Waller et al., 2017a). Additionally, parent-reported CU behaviors at age 3 are associated to teacher-reported aggression at age 9 (Waller et al., 2016a; Willogbhy et al., 2014). Besides the association with greater severity in behavior problems, CU behaviors show a unique range of socio emotional correlates (e.g., lower empathy and sense of guilt; Georgiou et al., 2019; Waller et al., 2016a). For instance, CU behaviors at age 3 were uniquely related to lower empathy and guilt (Waller et al., 2015a) and to less correct recognition of emotions among 3- to 6-year-olds (Kimonis et al., 2016). Similarly, children rated with high CU behaviors paid less attention to distress cues and were less able to recognize fear (Kimonis et al., 2015; White et al., 2016). Thus, by early childhood, CU behaviors predict later antisocial behavior, and identify children with specific deficits in socio-emotional processing, intercepting deficits in empathy and prosociality.

1.3.2 Vulnerabilities and risk pathways towards CU Behaviors

Evidence regarding the developmental and clinical correlates of CU behaviors in children stresses the role of both genetic and environmental components (Viding, Blair, Moffitt, & Plomin, 2005; Hyde et al., 2016). Particularly, research about variability of the expression of childhood conduct problems and CU behaviors suggests that there are vulnerabilities, such as genetic or contextual factors that can affect their expression. A growing literature considers negative parenting practices as one of the strongest risk factors for childhood conduct problems (Hawes & Dadds, 2005) and dimensions of parenting predict the development of CU traits (Waller et al., 2013) and even CU behaviors at early ages (Waller et al., 2012).

Parental warmth and involvement are theorized to contrast the development of conduct problems and CU behaviors by promoting empathy and prosociality, particularly for future socialization processes within the parent-child dyad (Kochanska & Kim, 2012; Waller et al., 2015b). During

early and late childhood specific aspects of parenting are associated with CU behaviors and are particularly important for protecting against their development (Hyde et al., 2013). Parental warmth predicts decreases in CU behaviors across the preschool period (Pasalich et al., 2011; Waller et al., 2014). In another study, higher levels of parental warmth predicted decreases in CU behaviors from ages 2 to 3 years, even when accounting for the severity of general behavior problems (Waller et al., 2014). In a longitudinal perspective, parental harshness at age 2 predicted increases in CU behaviors at ages 4 (Waller et al., 2012) and both parental harshness and low parental warmth at 6, 15, 24, and 36 months predicted increases in CU behaviors at 6 years (Mills-Koonce et al., 2016). Also, considering broader social context, both maternal traits (aggressiveness and low empathy) and socioeconomic status or community poverty predicted CU behaviors in late childhood (Barker et al., 2011; Waller et al., 2015).

In sum, on one hand harsh parenting can interfere with children's ability to internalize rules and develop conscience, on the other hand responsive and warmth parenting could facilitate children's ability to internalize messages of socialization (Kochanska et al., 2015). Parenting can encourage emotional expression and sensitivity and, in turn, protect against the development of CU behaviors and support the development of empathy and prosociality (Eisenberg, 1990).

These studies suggest that relational and community contexts (e.g., parenting, peer relations) can undermine child socioemotional development and are important for understanding the appearing of CU behaviors (Waller at., 2107). Besides contextual factors, CU behaviors appear to be highly heritable, at least in early and late childhood (Flom et al., 2017; Hyde et al., 2016). Thus, another important aspect to consider is whether parenting influences are causal (i.e., lower warmth directly increases children's CU behaviors) or reflect gene x environment correlations (i.e., parents low on warmth pass on genes that increase children's risk for CU behaviors); to explore this area and separate genetic and environmental confounds, recent studies used a twin or adoption design (Henry et al 2018, Hyde et al., 2016, Trentacosta et al., 2019). CU behaviors were highly heritable, but the effect of heritability was attenuated when children received high warm/rewarding parenting than

when they were exposed to low warm/rewarding parenting (Henry et al., 2018). Moreover, biological mothers' antisocial behavior predicted adopted children's CU behaviors at 3 years old but only when they were showing low positive parenting (Hyde et al., 2016).

At the same time, aspects of parenting (heritable and non-heritable) can interact with specific factors in the children (e.g., low affiliative behavior, fearlessness) with a role in the etiology of CU behaviors (Waller & Hyde, 2017). Indeed, CU behaviors are correlated with emotion-processing and interpersonal deficits that could directly influence the affective quality of the parent–child relationship. Reduced face preference at 5 weeks and low affection from child to parent at 18 months (Waller et al., 2016b) predicted increases in CU behaviors in early childhood. Moreover, children with CU behaviors showed less affectionate and had less eye contact with parents among 4 years old (Dadds et al., 2012) and were related to poorer recognition of interpersonal emotions (White et al., 2016). Together these findings suggest that parenting is critical to the development of early CU behaviors, highlighting that CU behaviors develop through a complex interplay between genetic and environmental factors.

1.4 The current Project

As examined above, CU traits show strong links and associations with behavioral problems and with scarce empathy, guilt and prosociality (Frick et al., 2014a, Waller & Hyde,2018). Moreover, in early childhood, CU behaviors appear to be important considering their role as precursors of behavioral problems, as well as their variability and risk pathways, particularly when associated with poor parenting (Waller et al., 2015b). Considering the socio-emotional and affective characteristics of children with CU behaviors, affective dimensions of parenting appear to be an important target of investigation; it is proposed that when children with high CU behaviors are exposed to harsh parenting, they may be particularly susceptible to experiencing negative affect; on the contrary, when they are exposed to warmth relation, they may be more supported in prosocial action. Considering this pattern of behavioral development and the role of parenting, we want to

highlight the role of encouraging and supporting the emotional expression on to the process of internalization the ability to care for others and show empathy.

As theorized by Gottman et al. (1996) and review by Katz and colleagues (2012), parents who mentalize and talk about their children's emotions are more likely to promote a greater awareness and understanding of emotions in their children, which is considered a building block for the development of empathy. Moreover, parents characterized by a dismissing emotional style, who are less accepting child's emotions, are less likely to socialize children to recognizing and respecting other's emotions. Considering MEP theoretical framework, there are reasons to suggest a potential link between parental emotional style and levels of CU behaviors. It can be argued that parental emotional styles play an important role in shaping levels of CU behaviors in children. In brief, parental cognitions and beliefs are thought to direct parenting practices and, ultimately, children's development. Nevertheless, this process is still in want of robust confirmation, particularly controlling for other variabilities (i.e., both contextual and individual).

Despite growing evidence regarding the importance of parenting associated with children's behaviors, little attention has been given to the role of parental emotional styles. There is now much evidence that the presence of CU behaviors is a risk factor when the parent-child relationship is poor, unresponsive, and lacking in positive affects (Kochanksa et al., 2013; Waller et al., 2015a). Parental emotional styles could be supportive for the emotional deficits describe by CU behaviors (e.g., lack of empathy and low guilt). To our knowledge, little attention has been paid to this area of research. It has been demonstrated that unsupportive emotion socialization is associated with higher CU levels, independent of the severity of co-occurring conduct problems (Pasalich et al., 2012) and that the mothers of children with higher levels of CU behaviors are more likely to be less accepting and more dismissing about their children's emotion (Pasalich et al., 2014).

1.4.1 Aims of the Current project

Building on these findings, we were interested in examining which dimensions of parenting are specifically associated with CU behaviors. The first specific aim was to investigate how the parenting construct is operationalized in relation to CU traits…and behavior problems, considering the most recent research on positive and negative parenting using a systematic review of evidence. This comprehensive review could further justify empirical investigation into early childhood CU behaviors.

Moreover, considering the importance of the family emotional climate in the cild development (Johnson et al., 2017; Waller et al., 2015b), the second aim is to explore different aspects of parenting, distinguishing between affective dimension of parenting (i.e., feelings and emotional style) and parenting practices (i.e., positive, inconsistent and punitive parenting). In so doing, the psychometric properties of two questionnaires used for the assessment of affective dimensions of parenting is presented: the Maternal Emotional Styles Questionnaire - MESQ, a self-report questionnaire designed to measure parental emotional styles (Legacé Séguin and Coplan; 2005) and the Parent Feelings Questionnaire – PFQ, a self-report scale that assesses parental feelings toward the children (Deater-Deckard, 1996, 2000). Additionally, in order to explore the role of the emotional styles, we will examine whether parents may change their parenting practices in association with parental feelings at different levels of emotional awareness and beliefs (i.e. coaching and dismissing style).

Finally, research suggests that the association between parenting and children's behavioral problems may depend on aspects related to positive and negative parenting dimensions, as well as on the aspects related to children's behavioral characteristics leading to different pathways (Waller et al., 2015a; Waller et al., 2014). The final aim is to test the association among parenting practices, affective dimensions of parenting (i.e., parental feelings and emotional styles) and children's CU behaviors, controlling for the level of behavioral problems and to test the potential moderating role of CU behaviors in the association between parenting and behavioral problems.

CHAPTER 2: A systematic review of evidence: Parenting dimensions and children's callous-unemotional traits.

This chapter presents a systematic review of evidence that was conducted to address the aim of examining which dimensions of parenting are specifically associated with CU traits. This systematic review of evidence is currently under update to better evaluate the search in line with the purpose of the project that have been changed during the years of PhD research. The purpose is to narrow the research focusing on the early developmental period.

2.1 Introduction

Over the past three decades, research has studied callous-unemotional (CU) to identify a group of antisocial youth with high risks of aggressive and violent behavior (Frick & White, 2008). In fact, the CU traits have been conceptualized in terms of a lack of empathy and sense of guilt, a manipulative use of others and lack of interest in one's own performance and other's the feelings describing a specific affective and interpersonal style (Frick & Ray, 2015). Moreover, CU traits have been studied in clinical and community samples and have been found to be particularly related to antisocial behavior disorders in adolescents (13-18 years) and late childhood (7-12 years) (Frick , Ray, Thornton & Kahn, 2014). Recent research suggests that CU traits are also descriptive of children with conduct disorder who are at risk of developing a severe antisocial disorder (Frick et al., 2014) and have been focused on earlier years (4-6 years) to follow the developmental trajectories (Kimonis et al., 2016; Waller &Hyde 2017). Although evidence regarding CU traits in early childhood remains limited compared to that available for later developmental periods, such evidence is now sufficient to critically evaluate fundamental notions related the early development of children with CU traits, particularly focusing on the extent to which these traits are clinically informative in very young children, defining callous-unemotional behaviors the interaction patters of children with low emotional involvement and low interest in the other (Waller & Hyde, 2017) Since at this age individual differences emerge for the development of empathy and consciousness

(Eisenberg & Fabes, 1999; Kochanska, 1997), distinctive features of CU behaviors and aspects of behavioral disorders could emerge between 2-4 years old and then later predict stable aggressive behaviors (Campbell, 1995; Shaw, Gilliom, Ingoldsby, & Naigin, 2003).

One aspect considered critical by many developmental theories of behavior problems in children is the presence of some parenting practices that can influence the emotional and relational growth of children (Hawes & Dadds, 2005; Pardini & Lober., 2007). Thus, the link between parenting behaviors and changes in CU behaviors has been investigated (Hawes et al. 2011; Pasalich et al. 2011) and research has begun to consider bidirectional effects, as studies have indicated that child-level characteristics predict changes in parenting behaviors over time (Childs et al. 2014; Hawes et al. 2011). We have also recently begun to expand the insights on this topic considering the role of oppositional behavior of children and the hereditary risk of some individual traits (Brown et al., 2017; Trentacosta et al., 2019).

2.1.1 Parenting, Conduct Disorder and CU traits

A growing field of research is the study of parent-child relationship, especially connected to the influence it can have on the development of the child's behavioral disorders. Parenting practices are described as an established risk factor for children's antisocial behavior; coercive or refusing parenting (Patterson, DeBaryshe, & Ramsey, 1989; Shaw et al., 2003) as well as little parental involvement (Duncombe et al., 2012; Gardner, Ward, Burton, & Wilson, 2003) have been associated with behavioral problems of children over time. However, it has been highlighted that research relating to the role of parent-child relationship, parenting practices or parenting style and child outcome, fits into the complexity of the definition of the parenting construct (Bornstein et al., 2018). Particularly, the parenting style describes the variations of parental interaction in the socialization and control of the child and therefore refers to general patterns of parental behavior, which can be described as authoritative, authoritarian, indulgent and negligent (Baumrind, 1991; Maccoby & Martin, 1983); parenting practices constitute more specific forms of parent-child

interaction, such as a constellation of attitudes, goals, and child-rearing patterns that shape the emotional climate of the parent-child relationship (Darling & Steinberg, 1993). Moreover, for the assessment of parenting, recurrent themes are identified such as the warmth of parents and care for the development of children, providing structures and support for children's autonomy and socio-emotional competence (Skinner et al., 2005; Kochanska et al., 2019). The dimensions that refer to the importance of the care relationship and affective interaction could be describe in terms of recognizing the child's emotions as well as to work on the regulation, especially in terms of internalizing the rules and developing self-efficacy, and finally to supporting the child's emotions. autonomous and freedom of expression (Skinner et al. 2005; Johnson et al.,2017). Considering a recent cultural perspective, parenting could be considered in terms of affection and acceptance (i.e. warmth and positive parenting), and includes both areas of discipline and coercion and restriction that does not allow autonomy (i.e, discipline and control) (Deater-Deckard, Lansford, Malone, Alampay, Sorbring et al., 2011). Particularly, parenting practice and style based on control are recognized as effective for conduct problems in early and middle childhood (Akcinar & Baydar, 2014; Eyberg, Nelson, & Boggs, 2008). However, seems that not all childrens with conduct problems appear to benefit from these practices (McCart, Priester, Hobart Davies, & Azen, 2006) and their impact is different on child externalizing behavior (Loop et al. 2017). Thus, research started to focus on the role that parenting processes, such as those implicated in the socialization of children's emotional development (Kochanska et al., 2019; Johanson et al. 2017) may play in child conduct problems.

Conduct problems in middle to late childhood are associated with CU behaviors (Frick et al., 2014) and children with CU behaviors are clinically informative for their unique treatment needs and for poor response to current parenting interventions for their behavioral problems (Hawes et al., 2014). Particularly, research suggests that both support-oriented parenting with emotional interaction and discipline-oriented with punitive practice, as well as the family climate are

significant for understanding the development of callous-unemotional behavior (Waller, Shaw, Neiderhiser, Ganiban, Natsuaki, Reiss, Trentacosta, Leve, Hyde; 2017; Khan et al., 2016).

One of the most recent systematic reviews on this issue by Waller, Gardner, and Hyde (2013) examined 30 studies evaluating that during late childhood and adolescence, parenting is related to callous-unemotional traits. In particular, the "negative" dimensions of parenting, including parental severity with preschool children (Waller et al., 2012), corporal punishment (Pardini et al., 2007) and inconsistent discipline (Viding et al., 2009) in middle childhood predict higher levels of CU traits up to five years later. Furthermore, coercive parenting style appears to have an association with behavioral disorders but in samples with low levels of CU traits, while parental warmth was negatively associated with conduct problems in boys with higher levels of CU traits (Pasalich Dadds, Hawes, and Brennan, 2011). Some studies have found that "positive" dimensions, such as increased parental warmth, are negatively associated with antisocial behaviors in children with high levels of CU traits compared to those with low levels of CU traits (Hawes et al. 2011) and predict decreased levels of behavioral disorder (Kroneman, Hipwell, Loeber, Koot, & Pardini, 2011). This systematic review establishes that parenting practices affect emotional callous traits at multiple developmental levels and that parenting interventions can be effective in reducing callous-unemotional traits and behaviors. However, research has recently begun to focus on the role of support and emotional-oriented parenting and warmth in its associations with conduct problems and CU traits. Studies examining positive parenting show that support and affection-oriented parenting, cooperation and communication show a negative association with behavior problems for young people with elevated CU traits (Kochanska et al., 2013; Pasalich et al. al., 2011; Pasalich et al., 2014; Waller et al., 2013). Longitudinal studies have found evidence that positive parenting is associated with a decrease in externalizing problems for young people with high levels of CU traits (Kochanska et al., 2013; Waller et al., 2015a). Clark and Frick (2018) in a sample of parents and teachers found that parents who reported positive parenting were associated with behavioral problems of their children reported by teachers, but as positive reinforcement increased, the

behavior problems of children with high levels of CU traits decreased while as cooperation increased also conduct problems increased only in children with low levels of CU traits. As, consequence, it has been added that the existing literature focusing on the role of CU traits in the association between parenting and behavioral disorders is limited by the broad definition of the positively or negatively valued dimensions of parenting used in most work on the topic (Clark & Frick , 2018), considering dimensions as positive reinforcement, positive affect and parental involvement for the positive extent that seems associated with behavioral problems and high CU traits (Pasalich et al., 2011; Yeh, Chen, Raine, Baker, & Jacobson, 2011; Barker, Oliver, Viding, Salekin, & Maughan, 2011; Kochanska et al., 2013; Hyde et al., 2013); on the negative side, harsh, inconsistent parenting and punishment are used and found associated with behavioral problems in those with low levels of CU traits (Edens, Skopp & Chill, 2008; Pasalich et al., 2011). According to this perspective, most of the studies have focused on parenting discipline-oriented, rather than investigating the affective and emotion-oriented style. Given the socio-emotional and affective characteristics of children with high levels of CU behavior (lack of empathy and sense of guilt, a superficial or disguised emotionality), the affective dimensions of the parents seem to be a significant target to be investigated.

Most of the research investigated the relationship between parenting and CU behaviors in samples of large age and especially in late childhood, using parent-report measures relating to parenting strategies (Crum et al., 2015; Pardini et al., 2007). Also, focusing on preschool samples the methodology changes and in recent years we have started to use observational methods (Pasalich et al., 2011; Waller et al. 2015; Bedford et al., 20117). In any case, it remains to be clarified which dimensions of parenting affect CU behaviors, especially in preschool age.

2.1.2 Aim of the Systematic Review

In light of the above literature, appear relevant clarify which dimensions of parenting are most related to CU behavior and behavioral problems. In particular, this review focuses on the

dimensions considered significant for this line of research (harshness and warmth; Waller et al., 2015) defined through the Alabama Parenting Questionnaire (APQ - Shelton, Frick and Wootton; 1996) which identifies five dimensions: the *parental involvement* in the child's daily activities; positive reinforcement which includes expressions of affection and the reinforcement of appropriate behaviors; poor monitoring of the child's activities outside the family context; *inconsistent discipline* and *corporal punishment*. This measure is extensively investigated by international research (Barry, Frick & Grafeman, 2008; Essau, Sasagawa & Frick, 2006; Locke & Prinz, 2002) and recent research has defined a version that is more appropriate for the childhood and preschool age. (APQ-PR; Clerkin, Halperin, Marks, & Policaro; 2007) which identifies the dimension of *positive parenting,* which includes positive involvement and reinforcement, and the dimension *inconsistent discipline* and *corporal punishment*. The dimension of *poor monitoring* is considered more suitable for adolescent samples (Muñoz, Pakalniskiene, & Frick; 2011).

The goal of the present review is to consider what current research suggests about the contribution of parenting variables in relation to children CU traits and behavior problems, with a specific focus on teasing apart the contribution that parent aspects, like positive and negative dimensions, make to the development of CU and behavioral problems. In order to evaluate n order to evaluate parenting we consider the two dimensions defined as significant for the research topics: positive parenting (parental warmth), which refers to measures of care, involvement and support and negative parenting (parental harshness) understood as rigidity, inconsistent discipline, coercion and punishment. We also considered the dimension of supervision, which appears less in the literature but seems to have significant roles for school-aged or adolescent groups. In line with Waller et al. (2013) we further examined the parenting variables. The following research questions will be addressed:

- How is operationalized in the current literature the constructs of parenting in relation to CU traits and behavior problems?

- What does the recent research evidence suggest about the relationship between parenting variables and the CU traits and behavior problems, considering the role of positive and negative dimensions?

2.2 Method

The systematic review was conducted in accordance with the PRISMA guidelines (Preferred Reporting Items for Systematic revies and Meta-Analyzes; Moher, Liberati, Tetzlaff, Altman; 2009)

2.2.1 Selection of Study

The research was conducted on three databases: Scopus, PsycINFO and Web of Science. Title, abstract and keywords for the Scopus database have been combined. PsycINFO search was conducted investigating the abstract and for the Web of Science database combining topic and title. The initial search strategy combined various terms to identify studies investigating parenting and callous-unemotional traits in children and / or adolescents.: ("parent*" OR "famil*" OR "father*" OR "maternal" OR "mother*" OR "paternal") AND ("callous-unemotional traits" OR "callous*" OR "unemotional" OR "CU traits" OR "callous-unemotional" OR "psychopath") AND ("child*" OR "infant*" OR "juvenile*" OR "preadolescen*" OR "pre-adolescen*" OR "pre-school*" OR "toddler*" OR "teen*" OR "youth"). The initial search was conducted with the restriction on typology of articles but no restriction on language and data were imposed.

2.2.2 Inclusion/exclusion Criteria

Using these search terms, title and abstract were initially identified and relevant studies extracted, in line with the aim of the systematic review. In this regard, an attempt was therefore also made to follow a systematic two-phase screening process to identify studies relevant to the aim. In the first phase the followig inclusion/exclusion criteria were applied: a) articles written in English; b) community, school and clinical samples of children and/or adolescents and their parent(s) characterized by either clinically significant conduct problems or identified as 'at risk' for conduct

problems; c) sample younger than 18 years and/or their parents d) empirical studies of the present family context, including presentation of data testing cross-sectional or longitudinal associations. Review, intervention program or retrospective studies will be excluded. In the second phase the study design of each work was considered according to the following factors: a) measurement of CU traits via parent, teacher, or youth self-report using measures that are supported by psychometric investigation; b) inclusion of well validated measures to assess parenting predictor variables and consideration of multiple parent variables as predictors of child outcome; c) study must include both parent predictor variables and at least one child outcome variable, considering the variability in child outcome (i.e. externalizing and internalizing comorbidities) beyond callous-unemotional behavior and conduct disorder. These criteria were selected to narrow the focus of the review to studies that investigate the link between parenting variables with callous-unemotional behavior. It was considered important to look at multiple parent predictors, since the developmental psychopathology perspective indicates that multiple risk and protective factors should be considered with respect to children's developmental outcomes. Finally, only studies that used standard assessment procedures to measure CU traits and parenting variables were accepted for inclusion in the current review to improve the generalizability of findings.

2.2.3 Study Sample

The electronic database search identified 1238 articles. Within these articles there were 583 duplicates, which were excluded (see figure 2). Accordingly, we screened the title and abstracts of 655 records following the criteria of the first phase: a few studies were removed for the design of the analyses and for the language.

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┌─────────────────┐     ┌──────────────────────────────┐
│                 │     │  Records identified through  │
│                 │     │    database searching        │
│ Identification  │     │       (n = 1238)             │
│                 │     └──────────────────────────────┘
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│                 │     ┌──────────────────────────┐│  Duplicates deleted  │
│                 │     │ Records after duplicates ││     (n = 583)        │
│                 │     │      deleted             │└──────────────────────┘
│                 │     │     (n = 655)            │
│                 │     └──────────────────────────┘
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Records identified through database searching
(n = 1238)

Duplicates deleted
(n = 583)

Records after duplicates deleted
(n = 655)

Records screened by title and abstract first step (n = 655)

Records excluded at first step
(n = 571)
4% non scritti in inglese
58% no campioni di bambini /adolescenti e genitori
38% No cross-sectional or longitudinal

Records screened by title and abstract second step (n = 84)

Records excluded at second step
(n = 24)
35% no parenting
50% no tratti CU

Full-text articles assessed for eligibility
(n = 60)

Full-text articles excluded, with reasons
(n = 34)

Studies retained for the systematic review
(n = 26)

Figura 2. .Flow diagram degli articoli selezionati

Identification

Screening

Eligibility

Included

The 84 articles were evaluated following our second phase criteria: some studies investigated the role of parental characteristic instead of parenting practices, others did not use measures for CU traits. At this point, the remaining 63 articles were thoroughly evaluated by reading the full text and a further selection was made. It was decided not to consider the works already included in the most recent systematic review on these topics (Waller et al. 2013), therefore 19 articles were excluded. Waller and colleagues answered different research questions from the present search, but the data will be summarized to answer the present review questions and to do this they will be resumed in the discussion. A further 15 articles were then excluded: 4 articles, which focused on retrospective parenting reports from incarcerated adolescents, were deleted due to the difficulty of obtaining reliable reports from this sample (Bisby, Kimonis & Goulter, 2017; Kimonis, Cross, Howard and Donoghue, 2013; Ray, Frick, Thornton, Wall Myers, Steinberg and Cauffman, 2017; Waller, Baskin-Sommers and Hyde, 2018); 5 other studies were removed as they considered measure of CU traits but the parenting variables referred to attachment construct or communicative expressions (Kohlhoff, Mahmood, Kimonis, Hawes, Morgan et al., 2020; Pasalich, Dadds, Hawes and Brennan, 2012; Pasalich, Dadds, Vincent, Cooper, Hawes and Brennan, 2012; Rehder, Mills-Koonce, Wagner, Zvara and Willoughby, 2020; Kochanska and Kim, 2012). It was decided not to consider 6 other articles as they assessed the parenting variable as a moderator or mediator (Buck, 2015; Kim & Chang, 2019; Waller, Shaw, & Hyde, 2017; Henry, Dionne, Viding, Vitaro, Brendgen et al ., 2018; Kahn, Deater-Deckard, King-Casas, and Kim-Spoon, 2016; Mills-Koonce, Willoughby, Garrett-Peters, Wagner and Vernon-Feagans, 2016; Waller, Trentacosta, Shaw, Neiderhiser, Ganiban, et al ., 2016). The final number of works considered is 26 articles (see table 1).

Table 1 Characteristics of included studies (N26)

Study	(n)	Age	Measure of parenting	Measure of CU traits/behaviros
1. Bedford, R., et al. (2017)	206	6 month, CU at 7 years	Free-play task	ICU (P)
2. Brown, C. et al. (2017).	419	3; 6 anni	APQ	ICU
3. Centifanti, L. C. M., et al. (2015).	614	11-18 years	Freedom	ICU
4. Childs, A. et al. (2014).	120	10, 11, 12, 13	APQ	APSD
5. Clark, J. E., & Frick, P. J (2018).	92	6.2 age	APQ PFQ PCCC	ICU (T)
6. Crum, K. I., et al. (2015).	851	5-12 years	APQ	NSIC
7. Flom, M., et al. (2020).	314	2- 3 years	PFQ	CBCL
8. Goulter, N., et al. (2019).	753	5,6,7 - 11 years	LCI - PCIT	APSD
9. Graziano, P. et al. (2017).	172	16 years	APQ; IBC	ICU
10. Hyde, L. et al. (2016).	562		Free Play Task	CBCL
11. Kochanska, G., et al. (2015).	82	25, 38, 52, 67, 80 month CU at 10 years	MRO	ICU (P)
12. Kochanska, G., et al. (2013).	102	MRO at 38, 52 months. CU at 67 months	MRO	ICU
13. Kokkinos, C. M., & Voulgaridou, I. (2017).	261	12-15 years	PSQ	YPI
14. Muratori, P., et al. (2016).	126	9-10, 11-12	APQ	ICU
15. Salihovic, S. et al. (2014).	1,068	13.41	Items vari	YPI
16. Sng, K. I., et al. (2018).	282	7–16 years	CTS	APSD
17. Trentacosta, C. J., et al. (2019).	561	2,5-4,5 years	PS	CBCL
18. Wagner, N. J., et al. (2019).	1234	6 -15 months	Mother–child interactions	ICU
19. Wagner, N. J., et al. (2015).	1239	2-4 years	Mother-child interactions	ICU (P)
20. Waller, R., et al. (2015a).	364	2 – 4 years	PS - Overreacting subscale, 5-min speech, ACRS Warmth/openness subscale	CBCL+ ECBI+ACRS
21. Waller, R., et al. (2014).	731	2 – 3 years	FAARS; IT-HOME	CBC + ECBI + ACS
22. Waller, R., et al. (2018).	454	6-11 years	PEQ, PCS	ICU
23. Waller, R., et al. (2015b).	257	2 to 20	IT-HOME	APSD
24. Willoughby, M. T., et al. (2013).	171	6-36 months	Parent–infant interactions.	ASEBA
25. Wright, N., et al. (2018).	272	2.5, 3.5, and 5.0 years	Free play task	APSD, CBCL, BIT, SDQ
26. Zheng, Y., et al. (2017).	753	From kindergarten to grade 7	Parent-Child Interaction - LCI	APSD

Notes: ACRS, Adult Child Relationship Scale, APSD, Antisocial Process Screening Device; APQ, Alabama Parenting Questionnaire; BIT, Brief Infant Toddler Assessment ; CBC, Child Behavior Checklist ;CPS, Child Psychopathy Scale; ECBI, Eyberg; CBI Child Behavior Inventory; FAARS, Family Affective Attitudes Rating Scale; ICU, Inventory of Callous– Unemotional Traits; MRO, Mutually Responsive Orientation PCL-YV, Psychopathy Checklist-Youth Version; PSD, Psychopathy Screening Device; PCCC, Parent–Child Communication and Cooperation NSIC, Nova Scotia Modified IOWA Connors; SDQ, Strengths and Difficulties Questionnaire;

2.3 Results

2.3.1 Descriptive characteristics of the studies

The studies considered were published from 2013 onwards. More than half of the studies were published between 2015 and 2017 (n = 13; see table). Overall, the reviewed studies were conducted in the US (n = 17) while the others in the UK, Greece, Italy, Spain and Singapore. Of the 26 studies considered in this review, 16 are longitudinal and 10 are cross-sectional. 4 studies consider a sample of adolescents (12-18 years) while the remaining studies promote their analyzes in an age range from 6 months to 18 years. Furthermore, 3 studies considered samples of adoptive parents and 2 studies considered samples of homozygous and heterozygous twins.

The assessment of the three categories of parenting dimensions considered in this review has been conducted with different tools and methodologies within the 26 studies considered. Specifically, positive parenting was assessed using the Alabama Parenting Questionnaire (APQ; Shelton et al., 1996); the Parenting Style Questionnaire (PSQ; Lamborn, Mounts, Steinberg, & dornbusch, 1991); the Five Minute Speech (Magana et al., 1986) and the Family Affective Attitudes Rating Scale (FAARS; Bullock et al., 2005) and other related measures. Negative parenting was also measured with the APQ, but also with the Conflict Tactics Scale (CTS; Straus, 1979), the Life Changes Interview (Dodge et al., 1990) and the Parenting Scale (Arnold et al. 1993). Parental supervision was assessed both with ad hoc measures and with measures such as the Parenting Style Questionaire (PSQ). However, the three dimensions were also investigated through numerous observational methodologies, in line with the growing literature on preschool and early childhood. Many studies have observed moments of free play to evaluate maternal sensitivity (5 studies) but also parental warmth and involvement, harshness and punishment. Some studies also used interaction tasks evaluated according different interpretation coding systems: the Home Observation for Measurement of the Environment (HOME, Bradley, 2012), or Parent-Child Interaction Task (PCIT) was used, evaluated through the 'Interaction Rating Scale (IRS; Crnic & Greenberg, 1990),

the Interaction Behavior Code (IBC) or according to the manual of the National Institute of Child Health and Human Development - Early Childcare and Youth Development NICHD - ECCRN (Owens, 1992). Mutually Responsive Orientation (MRO; Kochanska, 1997) was also used to assess positive and mutually responsive parenting.

Along with parenting strategies, this review investigates the role of CU traits. The Inventory of Callous-Unemotional Traits (ICU; Frick, 2004) is the most used tool in parent and self-report version (12 studies), together with the Antisocial Processes Screening Device (Frick & Hare; 2001) and the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2000) also in its version for children. Studies have investigated CU traits through a combination of items from multiple tools such as the APSD along with the CBCL, Brief Infant Toddler Assessment (BITSEA; Briggs - Gowan, Carter, Irwin, Wachtel, & Cicchetti, 2004) and Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) (Wright et al., 2017).

2.3.2 Parenting Dimensions
All the studies considered the predictive role of different dimensions of parenting practices in relation to behavioral problems and CU traits and behaviors.

Negative Parenting

Regarding negative parenting, Goulter and colleagues (2019) identified how harsh discipline, investigated by asking the parent how he would manage various situations of child misbehavior during early childhood, is predictive of conduct disorder but not of CU traits. Through bivariate correlations it appears that the harsh discipline and the CU traits are positively associated but the structural model shows an association only with the conduct disorder and not with the CU traits. Similarly, in another longitudinal research design and in a sample of adoptive mothers, Muratori and colleagues (2016) found no significant associations between negative parenting (anaffective and rigid parenting) and CU traits. Through an observational measure of parent-child interactions, in a sample of children aged 2 to 3 years, Waller and colleagues (2015) found that a

higher level of harsh discipline is associated with behavioral problems with both highs and low levels of CU traits. Conversely, in a later work, Waller, Hyde, Klump, & Burt, (2018) found that in a sample of monozygotic twins, the twin who received severe discipline exhibited higher levels of aggression and CU traits. In a longitudinal study by Childs and colleagues (2014) a group of children (mean age 10.6) was followed for 4 years, harsh discipline with corporal punishment and little parental involvement was seen as predictors of an increase of CU traits.

A few studies investigated how CU traits affect the relationship between negative parenting and conduct disorder. For example, Crum at al. (2015) in exploring how CU traits moderate the association between parenting and behavior problems in a sample of children (mean age 8.13), they note that this association differs according to the characteristics of parenting. In particular, at high levels of CU traits, harsh and detached discipline is associated with an increase in oppositional disorder. In a sample of 10.6 mean age, Sng and colleagues (2018) investigated the dimension of parental aggression using a child-report scale in association with the child's proactive or reactive aggression. Severe parenting has been seen to be associated with conduct disorders and parental aggression associated with proactive aggression in children with low levels of CU traits compared to those with high CU traits. In a longitudinal study, the developmental trajectories of parenting were investigated on three stages: kindergarten, first and second grade of primary school. Zheng and colleagues (2016) examined harsh discipline by classifying it according to a two-class evolutionary model, high levels remaining stable and low levels decreasing. In relation to externalizing behaviors and CU behaviors it has been seen that only the trajectory of hard discipline at low levels that decreases over time shows high levels of CU traits at the age of 12.

Two other longitudinal studies considered the biological and hereditable risks factors in the developmental pattern of children's behavior. Willoghby et al. (2018) observed mother-infant interaction at 6 months and 12 months during free play and at 24 months and 36 months when completing a puzzle. Through observation, a severe and intrusive parenting style was investigated.

This type of parenting is much more associated with oppositional behaviors and CU for children with a genetic susceptibility linked to the functional connectivity of the neural networks involved in emotional processing (single nucleotide polymorphism (SNP) of the brain-derived neurotrophic factor (BDNF). Trentacosta et al. (2019) in a sample of adoptive mothers, identified a reciprocal association between rigid parenting and CU traits in the transition from early childhood (27 months) to preschool (54 months). Particularly, multigroup analysis have shown that hereditary risk moderates this association, in fact there are statistically reliable associations on CU behaviors at 27 months and severe adoptive parents (at 27 months and 54 months) and CU behaviors at 54 months among children at risk. higher hereditary, but not among those at lower hereditary risk, investigated using the Behavioral Inhibition System (BIS) Scale (Carver & Withe, 1994).

Only one paper investigated negative parenting in older age. Graziano et al. (2018) in 16 mean age group of adolescents, through moderation analysis does not identify effects related to negative parenting even though there is positively associated with the conduct disorder regardless of the CU traits.

Negative parenting was also considered as negative affective interaction with children. Flom and colleagues (2020) found, in a sample of monozygotic and heterozogotic twins, at the age of 2 and 3 years, significant correlations between CU traits and negative parenting at both ages. Through cross-lagged analyses reveled a predictive effect of CU traits at 2 years on negative parenting at 3 years. Clark and Frick (2018) in a cross-sectional study found negative emotions towards children significantly associated with CU traits but this association did not remain significant when controlling for behavior disorder.

Positive Parenting

Regarding positive parenting, there are several aspects associated with warmth and parental involvement investigated during various age period. For example, Waller and colleagues (2014) coded both expressed (FAARS) and observed (IT-HOME) parental warmth. This dimension predicts

CU behavior in addition to behavior problems. Cross-lagged associations have been identified between observed parental warmth and the infant's CU behavior, suggesting that these behaviors show some malleability in childhood and that the parents seem to adapt to the child's behavior. In a subsequent study, Waller et al. (2015 b) using same observational methodology investigated the association between parental warmth and CU traits in an evolutionary perspective. Parenting was observed at the age of 2 and the CU (Limited Prosocial Emotions - LPE) traits at the ages of 10-12 and 20 years. Low parental warmth was significantly associated with LPE at the age of 10-12 but not at the age of 20. Again, through observational measures Goulter et al. (2019) directly observed that parental warmth in middle childhood (ages 6-7-8) is predictive of lower CU trait levels in pre-adolescence (age 12 years). In the longitudinal study by Childs et al (2014) it was seen that poor parental involvement is predictive of elevated CU traits.

The CU behaviors of children in early childhood moderate the association between the positive interaction of parent and child and future externalizing behaviors. In a cross-sectional study Clark and Frick (2018) saw how positive parenting using positive reinforcement was negatively associated with conduct disorder in children with high levels of CU traits while in children with low levels of CU traits parent-child cooperation was positively associated with the conduct disorder. Parental warmth, on the other hand, is negatively associated with CU traits by controlling for levels of behavioral problems. Similarly, Crum et al. (2015) in a larger sample (n = 851) of children with high levels of CU traits found that positive parenting with high parental involvement is associated with lower levels of conduct disorder. Waller et al. (2015) in a younger sample (age 2-3 years) found that CU behavior moderates the association between observed parental warmth and children's behavior problems. In a sample of similar age (3-6 years) but from a longitudinal perspective Brown et al. (2017) aimed to investigate the relationships between CU traits, oppositional disorder, and parenting in a bidirectional relationship. High levels of CU traits at the age of 3 are predictive of oppositional disorder and positive parenting at the age of 6. On the contrary, positive parenting at

the age of 3 does not predict a reduction in CU traits at the age of 6. In the evolutionary perspective investigated by Zheng and colleagues, parental warmth was also distinguished according to a two-class model, high parental warmth that increases over time and low levels that increase over time. With respect to externalizing behaviors and levels of CU traits, it is noted that the evolutionary trajectory of parental warmth that starts low but increases over time is linked to higher levels of CU traits at the age of 12.

As mentioned above, a lot of studies used observational methods to assess parenting dimensions. Wright et al. (2018) in their longitudinal study observed the dimensions of parenting through free and semi-structured play with 7-month-old children (n = 272) evaluating, according to the NICHD manual, sensitivity to distress, sensitivity to non-distress, positive reinforcement towards the child (or warmth) and intrusiveness. All these aspects were predictive of CU traits. Particularly, low sensitivity and few positive reinforcers create a high risk for CU behaviors. Other 3 studies assessed the aspect of parental sensitivity considered as a positive variable in the parent-child relationship. Bedford et al. (2017), in a longitudinal study with a similar sample to Wright et al. (n = 206), observed maternal sensitivity at 6 months and CU traits at 7 years. However, they identified only a marginal significance in the prediction of CU behaviors. In a much larger sample of subjects from the Family Life Project (FLP), a large longitudinal study of children and low-income families in the United States (see Willoughby et al ; 2013), similar surveys were conducted. Wagner et al. (2015) found that low maternal sensitivity at 24, 36 and 58 months were predictive of high levels of conduct disorder and CU behaviors at the age of 6-7. Wagner et al. (2019) found that maternal intrusiveness predicted a lower empathic and prosocial capacity, while maternal sensitivity at 6 months predicted a level of conduct disorder at 6-7 years. Kochanska et al. (2013) used another observational methodology that investigates positive and responsive parenting (MRO). The capacity for affective sharing was investigated at the age of 38 and 52 months, the CU behaviors at the age of 67 months. For children with high CU values and high shared emotion, there is a decrease in

behavioral problems reported by the mother at 67, 80 and 100 months. No significant association emerged for children with low CU levels.

A few studies explored the role of biological and hereditable risk factors. Particularly, Willoghby and colleagues (2013), in their observational study did not see maternal sensitivity in association with CU behaviors, even with the mediation of genetic susceptibility (SNP-BDNF). Instead, Kochanska and colleagues (2015) investigated parental responsiveness in association with CU behaviors considering an evolutionary risk factor given by genetic markers for negative emotionality and a propensity to anger (5-HTTLPR polymorphism; Canli & Lesch, 2009). Developmental risk affects and moderates the relationship between assertive parenting, observed at 25 and 80 months, and CU traits at 10 years. In samples of adoptive mothers, positive parenting was observed in early childhood to also evaluate the hereditary influence on CU traits. Hyde and colleagues (2016) found that adoptive mothers who are involved and positively reinforce their child protect them from developing CU behaviors. Positive reinforcement also protects against the hereditary risk of biological mothers (measured through the Diagnostic Interview Schedule at the age of 3-6 months of the child; Blouin et al. 1998). Muratori at al. (2017) found a reciprocal effect between positive parenting and CU traits: high levels of positive parenting predict lower levels of CU traits. Two studies, in samples of monozygotic and heterozygous twins, investigated how the positive parenthood appears to be genetically mediated. Waller and colleagues (200) found the differences in parental warmth were uniquely related to differences in CU traits, such that the twin who received more parental warmth exhibited lower CU traits. Flom et al. (2020) found CU and positive parenting to be unrelated. Two studies investigate the extent of positive parenting in adolescent samples. Graziano and colleagues (2017) in a modest sample (n = 172; mean age = 16.9 years), using self-report methods and observational data, found that parents who implement positive strategies report that their children have a lower level of CU traits. Through moderation analyzes they also indicate that positive parenting is associated with conduct disorder only in the presence of

elevated CU traits. Kokkinos et al. (2017) in a slightly larger sample (n = 261, mean age = 13.4) investigate the moderating role of CU traits in association to relational aggression but found no moderating effect on parental involvement.

Control and Supervision

Considering parental supervision, Childs and colleagues (2014) in a sample of children with aggressive behaviors (n = 120, mean age = 10.5 years) found an increase in CU traits that is predicted by low parental control. Similarly, in a sample of 851 primary school children, Crum at al. (2018) found a moderating effect of CU traits: poor control is associated with an increase in aggressive behavior in children with high levels of CU traits. Brown et al. (2017) focused on the bidirectional effect of CU traits and parenting practices with respect to oppositional behaviors in a longitudinal study. Poor monitoring at age 3 predicted CU traits at the age of 6.

Moreover, the dimension of supervision and control was investigated in 3 studies with adolescents' samples. Significant data are found regarding the dimension of autonomy from the parents. Kokkonos et al. (2017) in a mixed gender group of adolescents found that low parental autonomy is more significative for aggressive behavior with moderation of CU traits. Centifanti et al. (2015) in a sample of females (n = 614, age = 11-18 years) identified three profiles of aggression: low, reactive and mixed. In the proactive and reactive aggression group there is a higher level of CU traits and a higher perception of parental control. Saliovich et al. (2014) in a longitudinal study identified 4 groups of development of psychotic traits in a period of 4 years (n = 1068; mean age = 13.4 at baseline): low-decreasing, moderate-decreasing, moderately stable and high- decrising trajectory. A very low level of negative parenting behavior and the highest level of positive parenting are also reported in the profile of adolescents with low and declining psychopathic traits. In contrast, in the declining high-level profile, adolescents report the highest level of negative parenting behaviors and a low level of positive behavior.

2.4 Discussion

The general aim of this systematic review of evidence was to consider recent research and investigate the evidence relating to the contribution of parenting dimensions to children's callous-unemotional traits. As demonstrated by Waller and colleagues (2013), there is a strong association between the dimensions of parenting and the increase of CU traits at all levels of development; in particular, the positive dimensions of parenting seem to be protective factors for the development of CU traits while the negative ones do not seem to be a risk factor. In the last decade there has been a growing interest in this topic, despite the extensive literature on adolescence and late childhood (Frick et al. 2014), an attempt has also been made to investigate the evolutionary backgrounds of CU traits. The present work fitted into the background of these theoretical bases. Early childhood seems to be a significant period for understanding the influence of parenting practices on CU behavior (Waller et al., 2015; Brown et al., 2017; Trentacosta et al., 2019). Similarly, the literature on the inheritance of CU traits has expanded in recent years, considering parental influences and gene-environment interaction as causal factors of CU behavior (Hyde et al., 2016; Willoghby et al., 2013). Most of the studies analyzed had a longitudinal research design that explores the relationship between parenting variables and behavioral outcomes over time, also evaluating the moderating or mediating role of other variables such as parental depression (Childs et al., 20014), effects of child characteristics within a twin sample (Waller et al., 2018; Flom et al. 2020) and genetic and hormonal variables (Kochanska et al. 2015; Willoghby et al. 2013; Wagner et al. 2019).

Negative parenting, particularly harsh discipline, have been linked to behavioral problems (Hipwell et al., 2008; Wang & Kenny, 2014). Compared to what emerged from the work analyzed, CU traits seem to be less associated with experiences of coercive parenting (Goulter et al., 2019; Muratori et al. 2019). Moreover, some studies underline the moderating role of CU traits and reinforce the research that found the link to behavioral disorders (Crum et al. 2015; Sng et al., 2018). Studies that focused on the importance of biological and hereditary aspects through samples

of twins have identified an influence of negative parenting (Waller et al. 2018) considering child-driven effects (Childs et al. 2014; Flom et al. 2020). Furthermore, a predictive effect of harsh discipline on CU behaviors is identified in samples of preschool-aged children (Waller et al. 2015). These results seem to support the knowledge that the association between negative parenting and CU traits hide complexity and need further investigation.

This evidence needs to be carefully evaluated since the CU traits are associated with a lower responsiveness to punishment and therefore less influenced by the coercive interaction between parent and child (Dadds & Salomon, 2003). However, it has to be considered that in the early childhood the value of interactions based on harsh discipline must still be assimilated and therefore this aspect of parenting does not affect CU behavior, while at school age children can show problems with behavior because in association with CU traits, they may already have become insensitive to parenting and punishment.

The broader literature documents an association between positive aspects of parenting, such as parental warmth, and CU traits in relation to behavioral disorder (Hawes et al., 2011; Waller et al. 2012; Kroneman et al., 2011). Positive parenting seems to confirm the protective role considering the development of conduct disorders and CU behaviors. Positive parenting as protective factor is found from preschool up to late childhood (Waller et al., 2014; Goulter et al., 2019), but also in adolescence (Graziano et al, 2017). What seems to emerge from the most recent literature is the importance given to parent-child interaction in early childhood (eg. Wagner et al. 2015; Wright et al., 2018). Particularly, the data found that at low levels of maternal sensitivity is associated higher behavioral problems and high CU traits (Bedford et al., 2017; Kochanska et al., 2013). Maternal sensitivity and responsiveness in the first months of life could play a significant role in the development of the child's empathic abilities (Eisenberg & Fabes, 1990, Kochanska et al., 2002) However, the research also appears to be moving in the direction of considering multifactorial effects. Therefore, the influence of parental dimensions in terms of gene-environment correlation it

is considered, focusing on the parental warmth and harshness in association with genetic or hereditary variables that increase the risk of children with CU behaviors. Following this line of research, the studies used samples from adoptive mothers evaluating the hereditary risk of biological mothers (Hyde et al. 2016, Trentacosta et al, 2019) or biological risk of some genetic traits (Khochanska et al., 2015; Willoghby et al. al., 2013). In fact, it appears that CU behavior is likely to emerge also linked to a hereditary risk but with the influence of parenting practices.

CHAPTER 3: Research Study

3.1 Introduction

Given the significance of parents' positive and negative practices, a focal issue in developmental psychology it has been the influences of the parent's responsiveness and behaviors utilize during the socialization of the emotions to their children (Johnson et al., 2017; Parker et al., 2012; Stelter & Halberstadt, 2011). Parents have long been considered to be the first and most important socializers of emotional and social competence in the life of their children (Denham et al., 2009; Dix, 1991). Parent's discussion and expression of emotions or reactions to their child's emotions could outline the emotional climate of the family (Eisenberg et al., 1998; Morris et al., 2007). Parental beliefs, awareness, and feelings about emotions drive their emotion socialization behaviors towards the children (Gottman et al., 1997; Katz et al., 2012). The parental emotional styles (i.e. coaching and dismissing), based on beliefs, awareness and feelings, in responses to children's negative emotions have been identified as a key feature for children's socio-emotional development, because of their relations with children's developing socio-emotional skills and difficulties (Katz. et al., 2012; Stelter & Halberstadt, 2011). Parent-child relationships model the process of children's emotion socialization both directly and indirectly (Eisenberg et al.,1998; Morris et al., 2017) and impact on children's social and emotional competence as well as on maladaptive behaviors (e.g., conduct problems and CU behaviors; Akcinar & Baydar, 2014; Duncombe et al., 2012; Kochanska et al., 2019; Waller et al., 2017).

The family emotional climate could be a driving force for specific parent-child interactions (Darling & Steinberg, 1993, Morris et al., 2007). Moreover, parent-child dyadic mutuality (i.e. shared positive affect, responsiveness, and cooperation) is an important component of family socialization processes (Kochanska, 1997; Deater-Deckard & O'Connor, 2000) and research suggested that children's socio-emotional development involves bidirectional influences that can include both children's (e.g., behaviors problems) and parental (e.g., feelings, emotional styles, and

parenting practices) characteristics. The emotional competence of the parents, which we define as the multifaceted ability to be aware of one's own and others' emotions, is predictive of parent-child relationship quality and child's behavioral outcomes (Denham et al., 2009). A parent's own emotions are an important dimension to consider because these emotions form the affective environment in which the child is being raised and are related to children's emotional and behavioral adjustment (Halberstadt & Eaton 2003; Meyer, Raikes, Virmani, Waters, & Thompson, 2014). That is, parents with problems in emotional competence acceptance may have difficulties to engage in supportive emotion socialization practices. When parents experience high levels of negative emotions, they may feel overwhelmed or 'flooded,' increasing their likelihood of withdrawal or suppression of negative emotions, resulting in dismissing, or punitive discipline (Lorber, Mitnick, & Slep, 2015; Mence et al., 2014). Parental problems in emotion competence tends to increase lower use of emotion expressiveness and engaging in unsupportive parenting (Meyer et al., 2014; Mence et. al., 2014). When parents have deficits in awareness of their own or other's emotions and are less accepting of their own emotions may be less likely to talk overall about feelings (Halberstadt & Eaton, 2003). Gottman, Katz and Hooven (1997) have proposed that parents hold a meta-emotion philosophy that involves their thoughts and feelings about their own emotions and the emotions of their children, and this is related to the process of how they socialize emotions to their children. Moreover, Katz and colleagues (2012), showed and updated met-emotion philosophy framework that sustain the importance of parental beliefs and awareness about emotions in the children's socio-emotion development. The beliefs that emotions are valuable suggests some awareness and acceptance of emotions, as a developmental benefits and opportunities for children to learn; the beliefs that emotions are dangerous may suggest less awareness and acceptance of emotions as occasion to be supportive (Gottman et al., 1996; Lozada et al., 2016; Parker et al., 2012; Stelter & Halberstadt, 2011). Parents' beliefs and awareness about emotion shape parents' perception of their child's emotional experiences and their thoughts about how to teach emotions to their children), that mainly results in two emotional styles: coaching and

dismissing. (Eisenberg et al., 1998; Gottman et al., 1996; Katz et al., 2012). Parents who dismiss or disapprove the expression of sadness and anger teach their children that these emotions are problematic or dangerous, and perform behaviors such as denying, ignoring, or minimizing children's emotions. Further, parents who coach the expression of negative emotions are supportive towards their children's expressions of these emotions and adopt behaviors such as emotional scaffolding, praising, validation, and self-disclosure (Cleary & Katz, 2008; Gottman et al., 1997; Katz & Windecker-Nelson, 2004). Although emotion coaching and emotion dismissing may seem to be opposite emotional styles, observational studies with children in middle childhood suggest that parents who engaged in both coaching and dismissing of children's negative emotions had children with the lowest emotional dysregulation (Lunkenheimer et al., 2007).

According to the update meta-emotion framework of Katz and colleague (2012), parental meta-emotion philosophy, that is expressed by means of coaching and/or dismissing styles toward their children's emotions could have an impact on parenting practices and be influence by both parent and child emotional experiences (Morris et al., 2007). In a recent study it has been suggested that parental emotions influence their parenting behaviors, but they do not necessarily determine them (Hajal & Paley, 2020); parents could be guided by their beliefs to engage consistent parenting practices (Lozada et al., 2016). Parental emotional styles may be particularly sensitive to parents' emotions experiences because these styles reflect parents' awareness of emotions within parent–child interactions (Gottman et al. 1996), and, consequently, these styles reflect parents' intentions to emphasize or avoid emotional expression and exploration. Gottman et al. (1996, 1997) already argued that parental emotional coaching style affects parents' inhibition of negative affect toward their children and facilitate positive parenting.

The research on parents' meta-emotion philosophy has been generative and the assessment of this construct has been improved (Meyers et al., 2014; Paterson et al., 2012). This construct incorporates different aspect of parent-child interaction (e.g., emotion beliefs, parenting strategies, and children emotion experiences) that requires to be distinguished in order to better understand the

process of socialization of emotion. Thus, in-depth understanding the role and relevance of parental meta-emotion philosophy (i.e., beliefs, awareness and feelings), operationalized as parental coaching and dismissing styles, and distinguishing between different parental aspects (i.e. parental feelings, emotional style and practices) is important considering research on emotion socialization process of children.

3.1.1 The current Study

Based on the above-reported literature, the main aim of the present chapter is to explore different aspects of parenting, distinguishing between affective dimension of parenting (i.e. feelings and emotional style) and parenting practices (i.e. positive, inconsistent and punitive parenting) in a sample of mothers of preschool children. In so doing, the investigation of the psychometric properties of two questionnaires used for the assessment of affective dimensions of parenting is presented: the Maternal Emotional Styles Questionnaire - MESQ, a self-report questionnaire designed to measure parental emotional styles and the Parent Feelings Questionnaire – PFQ, a self-report scale that assesses parental feelings toward the children; the aims are to start the validation process of the two above rating scales. The factor structure of the MESQ and PFQ were examined and the associations between both MESQ and PFQ subscales and parenting practices were also explored as a measure of convergent validity. It was expected that the Italian translations of the MESQ and PFQ would demonstrate psychometric properties similar to those of the original English-language versions: the original Legacé Séguin and Coplan (2005) two-factor structure for the MESQ, with 7 item measuring Emotion Coaching style and 7 items measuring Emotion-Dismissing style; the original Deater-Deckard(1996, 2000) two-factor structure for the PFQ, with 11 items measuring Parental Warmth feelings and with 13 items measuring the Negative feelings. Moreover, we expected to find association between the two emotional style and the parents' own emotional experiences (Katz et al., 2012).

An additional aim of the present chapter is to present the exploration of the associations between emotion coaching and emotion dismissing styles and parental feelings in acting positive, inconsistent, and punitive parenting. Particularly, the aim was to examine whether parents may change their parenting practices in association with parental feelings at different levels of emotional styles. In so doing, the moderation role of the parental emotional style in the relation between parental feelings and behaviors has been investigated. As for the parental feelings, we considered the measure of warmth and negative feelings (derived from *The Parent Feelings Questionnaire -* PFQ; Deater-Deckard, 1996) and as for the parenting behaviors, we considered a measure of three practices: lack of discipline, harsh discipline, positive reinforcement and involvement of the parent (derived from *The Alabama Parenting Questionnaire –* APQ Pr; Clerkin, Halperin, Marks, & Policaro, 2007). A moderated model was tested to examine the unique and interactive effects between emotional styles and feelings in their association to parenting practices. We hypothesized that parents experiencing negative emotions toward their children will be more likely to engage in negative parenting practices at higher levels of beliefs that emotions can be problematic or dangerous (i.e. high level of dismissing style; Lorber, Mitnick, & Slep, 2015; Mence et al., 2014). We further hypothesized that parental use of coaching (i.e., emotional awareness and acceptance of children's negative emotions considering them as an opportunity for closeness) will moderate the relationships between negative feelings and engaging in positive parenting practices (Halberstadt & Eaton, 2003; Cleary & Katz, 2008) We had no hypotheses about how emotional styles would impact on the association between positive feelings and parenting practices.

3.2 Method

3.2.1 Participants and Procedure

Participants were recruited from kindergartens (N = 163) from Central Italy. The sample was constituted by all mothers of the children attending kindergartens, 56 children attending the class of the "oldest" (5 years old), 35 the class of the "medium" (4 years old), 68 the class of the "youngest" (3 years old) and 4 attending a mixed class. Children ranged in age from 3 to 5 years

and their mothers ranged in age from 26 to 49 years (M age = 38.09, DS=4.51, 48.5% high school degree), however, three mothers did not report on their age. Across samples, most mothers were Italian (91.87%). Local scholastic institutions approved and collaborated with all procedures. Participants were presented with a description of the study that was develop in collaboration with scholastic institutions and teachers, followed by a request to an informed consent to participate. Mothers provided informed consent and then completed an internet survey about their child, with demographic information and details about the parents (e.g., school degree, family composition). A series of scales were presented in a Google Form survey session, including the scales used in this study, with no time restriction to fill the survey.

3.2.2 Measures

Emotional Style

The *Maternal Emotional Styles Questionnaire* – MESQ was developed by Legacé Séguin and Coplan (2005) to assess maternal Emotional Coaching (ED) and Emotional Dismissing (ED) styles. This instrument assesses the maternal emotional behaviors produced in response to children's emotion displays. The 14 items represented a combination of fear, anger, and sadness emotions across the two emotional styles. Mothers are asked to express their level of agreement with each of the 14 items, on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). 7 items describe Emotion Coaching behaviors (score range: 7–35; sample item: "*When my child is angry, I take some time to experience this feeling with him/her*") and 7 items describe Emotion-Dismissing behaviors (score range: 7–35; sample item: "*When my child is angry, my goal is to make him/her stop*"). The MESQ was translated in Italian language by Ciucci & Menesini (2008), who considered a two-factor model emerged by an exploratory factor analysis: 4 items describing coaching and 4 items describing dismissing (see Table 1).

Parent's feelings

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The *Parent Feelings Questionnaire* (PFQ; Deater-Deckard, 1996) is a 24-item measure that assesses both positive and negative parental feelings toward their children and it is widely used as a measure of parental warmth in preschool samples (Denham, Wyatt, Bassett, Echeverria, & Knox, 2009). The measure includes statements about feelings that are rated on a 5-point Likert-type scale ranging from 1 (completely agree) to 5 (completely disagree). The measure includes two subscales: the Parental Warmth subscale comprises 15 items assessing positive parental feelings (e.g., "*When I think about this child, it usually gives me warm feelings*") and the Negativity subscale comprises 16 items assessing negative parental feelings (e.g., "*Sometimes I am not happy about my relationship with this child*").

   Parenting Practices

The *Alabama Parenting Questionnaire* (APQ; Shelton et al., 1996) preschool version (APQ-PR; Clerkin, Halperin, Marks, & Policaro, 2007) is a 32-item measure developed by taking the subset of items from the full version. The measure considers three dimensions of parenting: the 7-item *Inconsistent Parenting subscale*, which measures a lack of follow-through with discipline (e.g., "*You threaten to punish your child and then do not actually punish him/her*"), the 5-item *Punitive Parenting* subscale, which assesses how often a parent engages in corporal or harsh discipline (e.g., "*You spank your child with your hand when he/she has done something wrong*") and the 12 *Positive Parenting* subscale comprises items from the original APQ subscales of positive reinforcement and parental involvement (e.g., "*You let your child know when he/she is doing a good job with something*"). In the present study, we used the Italian version of the APQ-Pr (Benedetto & Ingrassia, 2014). The internal consistencies for the current sample were acceptable for the Positive Parenting scale ($\alpha = 0.76$) and modest for the Inconsistent Parenting scale ($\alpha = .67$) and Punitive Parenting scale ($\alpha = .60$).

3.2.3 Data Analyses

The data analysis strategy used in the current study refers on two different steps that will be described in the paragraphs below: the first step refers to the investigation of the factor structure of the maternal emotional style questionnaire (MESQ) and the parent feelings questionnaire (PFQ) with analyses of correlations with parenting practices (APQ) and the emerging factors; the second step discusses a moderated model that examine the unique and interactive effects between emotional styles and feelings in their association to parenting practices.

3.3 Investigation of the factor structure of the maternal emotional style questionnaire (MESQ), the parent feelings questionnaire (PFQ) and their convergent validity

The first step of analyses refers to two investigations: the structure of the Maternal Emotional Style Questionnaire (MESQ) and the structure of the Parent feeling Questionnaire (PFQ).

All analyses were conducted using IBM SPSS version 27, with the exception of exploratory factor analysis conducted using Lavaan Package of R Software version 4.0.4; (Rosseel, 2012). First, missing data were inspected, and the scale score was prorated using the mean item score for any missing item. Then the skewness and kurtosis scores for each items were evaluated for the adequacy of our data, and scores ranging between −2.00 and +2.00 were considered to indicate a normal distribution (George & Mallery, 2010). Descriptive statistics of emerged factors of the MESQ and the PFQ and other study variables were calculated (i.e., mean, standard deviation, skewness and kurtosis), along with zero-order correlations (i.e., Pearson's *r*) in order to determine the significance of the association and analyze bivariate associations between variables.

Factor structure of the Maternal Emotional Style Questionnaire (MESQ)

Table 2. The maternal Emotional Style Questionnaire – Version of Lagacè-Seguin & Coplan (2005)

1. When my child is sad, it's time to solve his/her problem.

2. Anger is an emotion worth exploring.

3. When my child is sad, I am expected to fix the world and make it perfect.

4. When my child is sad, it's time to get close.

5. Sadness is something that one has to get over with, to ride out, and not to dwell on.

6. I prefer my child to be happy rather than overly emotional.

7. I help my child get over sadness quickly so that he/she can move on.

8. When my child is angry, it's an opportunity for getting close.

9. When my child is angry, I take some time to experience this feeling with him/her

10. I try to change my child's angry mood into a cheerful one.

11. Childhood is a happy-go-lucky time, not a time to feel sad or angry.

12. When my child is angry, my goal is to make him/her stop.

13. When my child is angry, I want to know what he/she is thinking.

14. When my child is angry, it's time to solve his/her problem

Notes. Italian Version from Ciucci & Menesini, 2008.

The first attempt was to confirm the factor analysis emerged in prior works (Lagacé-Séguin and Coplan, 2005; Ciucci and Menesini, 2008). The factor structure of the MESQ was examined with confirmatory factor analysis (CFA) on the 14 items of the scale. To test factor structure, we ran and compared two models: (a) Lagacé-Séguin and Coplan (2005), the theory-driven model of two factors (7 items and 7 items); (b) Ciucci and Menesini (2008) two factor model (4 items and 4 items) from an Italian sample.

The weighted least squares means and variance adjusted estimator (WLSMV) was used to avoid distortions due to data distribution. Model fit was evaluated using the χ^2 fit index, as well as the robust version of the comparative fit index (CFI), the Tucker-Lewis index (TLI) and the root mean square error of approximation (RMSEA). A good fit was determined by values of CFI and TLI $\geq$ .95 and RMSEA < .05 (< .08 is considered acceptable; Hooper, Coughlan, & Mullen, 2008; Hu & Bentler, 1999). Factor reliabilities were calculated using Cronbach's alphas (i.e., α).

Since the results of the CFA for both models were not sufficient, an exploratory factor analysis (EFA) was performed. The EFA approach was applied to the 14 observed items using the IBM SPSS Statistics 27 program (IBM Corp., 2019), verifying whether there was a significant number of factors in the data using the Kaiser-Meyer-Olkin's sampling adequacy criteria (i.e., KMO; values lower than .50 are considered unacceptable – Kaiser, 1974), and testing the hypothesis that correlations between variables were greater than expected by chance by the mean of the Bartlett's sphericity test (in this, the *p*-value must be significant – Bartlett, 1950). As suggested by Osborne (2014), to determine the number of factors to extract, we combined the theory-driven approach (that consists in extracting a number of factor equal to what is expected following the theory that has driven the development of the questionnaire), the examination of the scree diagram (i.e., obtained computing the diagram of the eigenvalues, that represents how much of the variance of the observed variables each factor explains, and observing the number of points that are above the point of inflexion in the diagram), and the Kaiser criterion (that suggests to retain all factors that have an eigenvalue higher than 1.00).

The EFA was performed using the principal axis method to avoid distortions due to data distributions (Costello & Osborne, 2005), and a promax rotation to allow for correlations between latent factors. Only items with a factor loading greater than |.40| were retained, and ambiguous items (i.e., with factor loadings >|.40| on more than one factor) were deleted. Internal consistency of each emerged factor was inspected using Cronbach's alpha.

Factor structure of the Parental Feeling Questionnaire (PFQ)

Table 2. Parent Feeling Questionnaire – Version by Deater-Deckard, 2000

1. I usually make an effort to praise my child for good behavior.

2. Sometimes I am not happy about my relationship with my child

3. Every once in a while my child 's behavior can bring out the worst in me.

4. Every once in a while I avoid talking or playing with my child, such as when I am angry with her/him.

5. I enjoy hugging and cuddling with my child

6. Sometimes I find it difficult to be around my child

7. My child and I do not get along as I had hoped we would.

8. Most of the time, my child brings out the best in me.

9. Sometimes I do not enjoy being with my child

10. My child and I fight or argue more than I would like to.

11. I enjoy being my child 's parent.

12. Every once in a while I wish that my child would just go away for a few minutes.

13. Sometimes my child 's behavior makes me so angry I can barely stand it.

14. Being around my child is more enjoyable than I ever thought it would be.

15. Every once in a while I feel some resentment toward my child

16. Sometimes I do not get along well with my child.

17. I am usually affectionate with my child

18. I find it easy to praise and compliment my child, especially for good behavior.

19. Sometimes I do not enjoy spending time alone with my child

20. Sometimes I find it difficult to communicate with my child.

21. When I think about my child, it usually gives me warm feelings.

22. Sometimes I raise my voice with my child, especially after I've had a bad day.

23. Sometimes my child can really test my patience.

24. I usually feel quite happy about my relationship with my child.

Prior to conducting the factor analyses, the English version of the PFQ was translated in Italian and then back translated. To examine whether the structure of the Italian version was similar to the one which previously emerged, a confirmatory factor analyses were performed. We applied CFA on the 24 items of the scale. To test the structure more closely we ran the theory-driven model of the structure from Deater-Deckard scale (2000): two factor model of 15 items and 16 items.

The weighted least squares means and variance adjusted estimator (WLSMV) was used to avoid distortions due to data distribution. In addition to the χ^2 fit index < 3.0 and >1.0, the same range of standard fit indices used previously were employed to assess adequate fit (i.e., RMSEA < .08, CFI and TLI > .95). Factor reliabilities were calculated using Cronbach's alphas (i.e., α).

Considering the results of the CFA, an exploratory factor analysis (EFA) was performed. The EFA approach was applied to the 24 observed items using the IBM SPSS Statistics 26 program (IBM Corp., 2019), verifying whether there was a significant number of factors in the data using the Kaiser-Meyer-Olkin's sampling adequacy criteria (i.e., KMO; values lower than .50 are considered unacceptable – Kaiser, 1974), and testing the hypothesis that correlations between variables were greater than expected by chance by the mean of the Bartlett's sphericity test (in this, the *p*-value must be significant – Bartlett, 1950).

As suggested by Osborne (2014), to determine the number of factors to extract, we combined the theory-driven approach (that consists in extracting a number of factor equal to what is expected following the theory that has driven the development of the questionnaire), the examination of the scree diagram (i.e., obtained computing the diagram of the eigenvalues, that represents how much of the variance of the observed variables each factor explains, and observing the number of points that are above the point of inflexion in the diagram), and the Kaiser criterion (that suggests to retain all factors that have an eigenvalue higher than 1.00).

The EFA was performed using the principal axis method in order to avoid distortions due to data distributions (Costello & Osborne, 2005), and a promax rotation allowed for correlations between latent factors. Only items with a factor loading greater than |.40| were retained, and ambiguous items (i.e., with factor loadings >|.40| on more than one factor or with a gap <|.10| between the primary target loading and each of the cross-loadings) were deleted. Internal consistency of each emerged factor was inspected using Cronbach's alpha.

Descriptive statistics of emerged factors of the MESQ and other study variables were calculated (i.e., mean, standard deviation, skewness and kurtosis), along with zero-order correlations (i.e., Pearson's *r*) in order to analyze bivariate associations between variables.

3.3.1 Results

An exploratory factor analysis, and a confirmatory factor analysis for the MESQ

Considering the 14 items of the MESQ, the distribution was examined and three items (1, 2, 4) presented skewness and kurtosis scores strongly out of a normal range −2.00 to +2.00. Results of CFAs were reported in **Table 4**. The results revealed that both models do not provide an optimal fit for the MESQ factor structure in a preschooler's sample.

Table 4. Comparison of different factor models for CFA.

Model	χ^2	*df*	*p*	CFI	TLI	RMSEA [95% CI]
Model Lagacé-Séguin and Coplan (two-factor model)	721.133	76	< .001	.763	.716	.210 [.196;.224]
Model Ciucci and Menesini (two-factor model)	233.139	19	< .001	.847	.775	.228 [.202;.254]

Notes. CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation, TLI = Tucker Lewis Index.

Results of the EFA were reported in **Table 5.** The results from our dataset indicated that the KMO index was middling (.80). The result of Bartlett's sphericity test was $\chi^2 = 612.04$, *df* = 91, *p* < .001. The scree-diagram suggested to extract two factors (that corresponded to those with eigenvalues greater than 1.00; 45.33% of explained variance), in line with the two-factor theory-driven model. Item 13 failed to reach the retention criteria and it was excluded from subsequent analyses. Item 14 reached the retention criteria and it was considered in the subsequent analyses. It was also considered that the item resulted with a factor loading higher in a factor inconsistent with the theory, probably due to the Italian translation. To summarize, factor 1 included 7 items reflecting the lack of awareness and a low ability to deal with children's emotions, "*dismissing style*". It accounted for 27.50% of variance and its factor loadings ranged from |.42| to |.69|; the Cronbach's alpha for this subscale was .81. Factor 2, labeled "*coaching style*", comprised 5 items

indicating the awareness and the ability to handle children's emotions. It accounted for 17.83% of variance and its factor loadings ranged from |.47| to |.61|; the Cronbach's alpha was .66.

Table 4. Factor loadings of the exploratory factor analysis.

Item	Content	Factor loadings from EFA	
		Factor 1:	Factor 2:
1	When my child is sad, it's time to solve his/her problem.	.29	**.46**
2	Anger is an emotion worth exploring.	-.26	**.48**
3	When my child is sad, I am expected to fix the world and make it perfect.	**.43**	.04
4	When my child is sad, it's time to get close.	.04	**.60**
5	Sadness is something that one has to get over with, to ride out, and not to dwell on.	**.70**	-.17
6	I prefer my child to be happy rather than overly emotional.	**.59**	-.13
7	I help my child get over sadness quickly so that he/she can move on.	**.69**	-.16
8	When my child is angry, it's an opportunity for getting close.	-.13	**.58**
9	When my child is angry, I take some time to experience this feeling with him/her	-.02	**.61**
10	I try to change my child's angry mood into a cheerful one.	**.62**	.06
11	Childhood is a happy-go-lucky time, not a time to feel sad or angry.	**.66**	-.17
12	When my child is angry, my goal is to make him/her stop.	**.43**	.19
13	When my child is angry, I want to know what he/she is thinking.	.38	.32
14	When my child is angry, it's time to solve his/her problem	.67	.31
	Cronbach's alpha	*.81*	*.66*
	Factor Correlations		
	Factor 1	-	.03
	Factor 2	.03	-

Notes. Factor loadings in bold indicate to which factor each item was attributed. Items 13 did not meet any EFA retention criteria..

Adequacy of the observed items and a confirmatory factor analysis for the PFQ

Considering the 24 items of the PFQ, the distribution was examined and several items (5, 7, 8, 11, 17, 18, 19, 21) presented skewness and kurtosis scores strongly out of a normal range −2.00 to +2.00. The results revealed that the model did not provide an optimal fit for the PFQ factor

structure in a preschooler's sample. The fit indices for the model were were χ^2 =921.092, p < .001; RMSEA =.104 [.097;111], CFI =.940, TLI = .934.

Results of the EFA were reported in **table 6**. The results from our dataset indicated that the KMO index was middling (.84). The result of Bartlett's sphericity test was $\chi^2 = 1403.01$, $df = 276$, $p < .001$. The scree-diagram suggested to extract two factors (that corresponded to those with eigenvalues greater than 1.00; 37.84% of explained variance), in line with the two-factor theory-driven model. Few items failed to reach the retention criteria. Particularly, 1, 5, 14 and 17 resulted with factor loadings lower than |.40| and were excluded from subsequent analyses. To summarize, factor 1 included 14 items reflecting the negative feelings *"negativity"*. It accounted for 28.10% of variance and its factor loadings ranged from |.44| to |.74|; the Cronbach's alpha for this subscale was .90. Factor 2, labeled *"warmth feelings"*, comprised 6 items indicating the positive feelings towards the child. It accounted for 9.73% of variance and its factor loadings ranged from |.42| to |.63|; the Cronbach's alpha was .60.

Table 6. Factor loadings of the exploratory factor analysis for the PFQ

Item	Content	Factor loadings from EFA	
		Factor 1:	Factor 2:
1	I usually make an effort to praise my child for good behavior.	.01	.31
2	Sometimes I am not happy about my relationship with my child	**.46**	-.17
3	Every once in a while my child 's behavior can bring out the worst in me.	**.72**	-.02
4	Every once in a while I avoid talking or playing with my child, such as when I am angry with her/him.	**.52**	-.03
5	I enjoy hugging and cuddling with my child	.10	.38
6	Sometimes I find it difficult to be around my child	**.51**	-.12
7	My child and I do not get along as I had hoped we would.	-.18	**.41**
8	Most of the time, my child brings out the best in me.	.09	**.42**
9	Sometimes I do not enjoy being with my child	**.57**	.17
10	My child and I fight or argue more than I would like to.	**.67**	-.09
11	I enjoy being my child 's parent.	-.01	**.54**
12	Every once in a while I wish that my child would just go away for a few minutes.	**.74**	.15
13	Sometimes my child 's behavior makes me so	**.69**	-.15

	angry I can barely stand it.		
14	Being around my child is more enjoyable than I ever thought it would be.	-.29	.27
15	Every once in a while I feel some resentment toward my child	**.44**	.02
16	Sometimes I do not get along well with my child.	**.79**	.12
17	I am usually affectionate with my child	.11	.26
18	I find it easy to praise and compliment my child, especially for good behavior.	-.01	**.42**
19	Sometimes I do not enjoy spending time alone with my child	**.63**	.24
20	Sometimes I find it difficult to communicate with my child.	**.61**	-.04
21	When I think about my child, it usually gives me warm feelings.	.09	**.52**
22	Sometimes I raise my voice with my child, especially after I've had a bad day.	**.65**	-.02
23	Sometimes my child can really test my patience.	**.73**	.05
24	I usually feel quite happy about my relationship with my child.	-.07	**.64**
	Cronbach's alpha	***.90***	***.60***
	Factor Correlations		
	Factor 1	-	-.41
	Factor 2	-.41	-

Notes. Factor loadings in bold indicate to which factor each item was attributed. Items 1, 5, 14, 17 did not meet any EFA retention criteria.

The final scale for both measures contain two factors each. The MESQ factors reflect the coaching and the dismissing parent's emotional style and the PFQ the negativity and the warmth of the parent's feelings. Descriptive statistics showing the distribution of the study variables with the correlations between the scale (Pearson's r) are provided in **Table 7**. In this community sample, the distribution of the scales did not deviate significantly from normality.

Table 7. Descriptive statistics and zero-order correlations (Pearson's *r*) for study variables

Variable	M (DS)	Skewness	Kurtosis	1	2	3	4	5	6	7
1 MESQ – Coaching	4.44 (.59)	-1.20	1.50	/						
2 MESQ – Dismissing	3.30 (.83)	.04	-.67	-.06	/					
3 PFQ – Warmth feelings	4.68 (.39)	-1.90	4.02	.28***	-.10	/				
4 PFQ – Negativity	2.31 (.80)	.40	.38	-.02	-.18*	-.34***	/			
5 APQ – Positive Parenting	4.53 (.35)	-.92	.57	.16*	.20*	.33***	-.35***	/		
6 APQ – Inconsistent Parenting	2.55 (.71)	.11	-.31	-.10	.39***	-.20**	.22**	-.01	/	
7 APQ – Punitive Parenting	2.17 (.63)	.60	.52	-.11	.16*	-.43***	.34***	-.04	.16*	/

Notes: MESQ: Maternal Emotional Style Questionnarie; PFQ: Parent Feeling Questionnaire; APQ: Alabama parenting Questionnaire * *p* < .05, ** *p* < .01, *** *p* < .001.

3.4 A moderated model to examine the unique and interactive effects between emotional styles and feelings in their association to parenting practices.

The second step of analyses explore the contributions of parental feelings about children (i.e., each subscale of the PFQ) along with the potential moderating role of maternal emotional styles (i.e., both the emerged factors of the MESQ) to specific parenting practices (i.e., positive, inconsistent, and punitive parenting), hierarchical regression analyses were performed. Although the directionality of the associations between the variables cannot be established in a cross-sectional study, the application of a regression approach requires assumptions about which variables to consider as independent and which to consider as criterion variables. The present analyses assumed that parental feelings can influence parental practices, and this is moderated by parental emotional styles.

Consequently, measures of parental feelings and parenting practices were entered along with all scales of MESQ in Step 1, followed by the interaction terms between the two scales of MESQ and the two scales of parental feelings in Step 2. The form of results indicating significant interactions was explored using post-hoc probing procedures indicated by Holmbeck (2002).

3.4.1 Results

The results of the multiple regression analyses, testing the unique and interactive effects between emotional styles and feelings in their association to parenting practices are reported in Table 8. Multiple regression analyses showed that Warmth ($\beta = .30$, p <.01) and Negative Feelings ($\beta = -.32$, p <.01) are associated with Positive Parenting; however, the moderation effect of Dismissing Style on Warmth Feelings ($\beta = -.25$, p <.01) and on Negative Feelings ($\beta = -.17$, p <.05) emerged.

Table 8. Regression analyses testing the main and interactive effects of emotion socialization style and feelings on the parenting practices.

|	APQ - positive	APQ – Inconsistent	APQ - Punitive	PFQ- Warmth	PFQ - Negativity	Coaching	Dismissing	F	R^2
APQ – Positive Parenting	-	.02	.16*	.30** (a)	-.32** (b)	.11	.17*	(10,162) = 6.788***	.26
APQ – Inconsistent Parenting	.02	-	-.05	-.10	.29***	-.07	.44***	(10,162) = 5.256***	.21
APQ – Punitive Parenting	.16*	-.04	-	-.34***	.32***	-.04	.18*	(10,162) = 6.334***	.25

Notes. APQ: Alabama Parenting Questionnarie. PFQ: Parent Feelings Questionnarie. * $p < .05$, ** $p < .01$, *** $p < .001$.

(a) There was a significant two-way interaction effect with dismissing in the association between warmth feelings and positive parenting (β =-.25, p < .01; F(10,162 = 6.788 p < .001; ΔR² = .05, p < .01, R² = .26) indicating that higher levels of positive feelings were related to higher positive parenting with low dismissing style (β = .59, p < .001) but not with high dismissing style (β =- .02, p > .05).

(b) There was a significant two-way interaction effect with dismissing in the association between negativity and positive parenting (β =-.17; p< .05; F(10,162 = 6.788 p < .001; ΔR² = .05, p < .01, R² = .26), indicating that higher levels of negative feelings were related to lower positive parenting with high dismissing style (β = - .50, p < .001) but not with low dismissing style (β = -.14, p > .05).

The form of the interaction is provided in **figure 2**, indicating that higher levels of negative feelings were related to lower positive parenting with high dismissing style (β = -.50, p < .001) but not with low dismissing style (β = -.14, p > .05).

Figure 2. The moderating role of dismissing in the association between negativity and positive parenting.
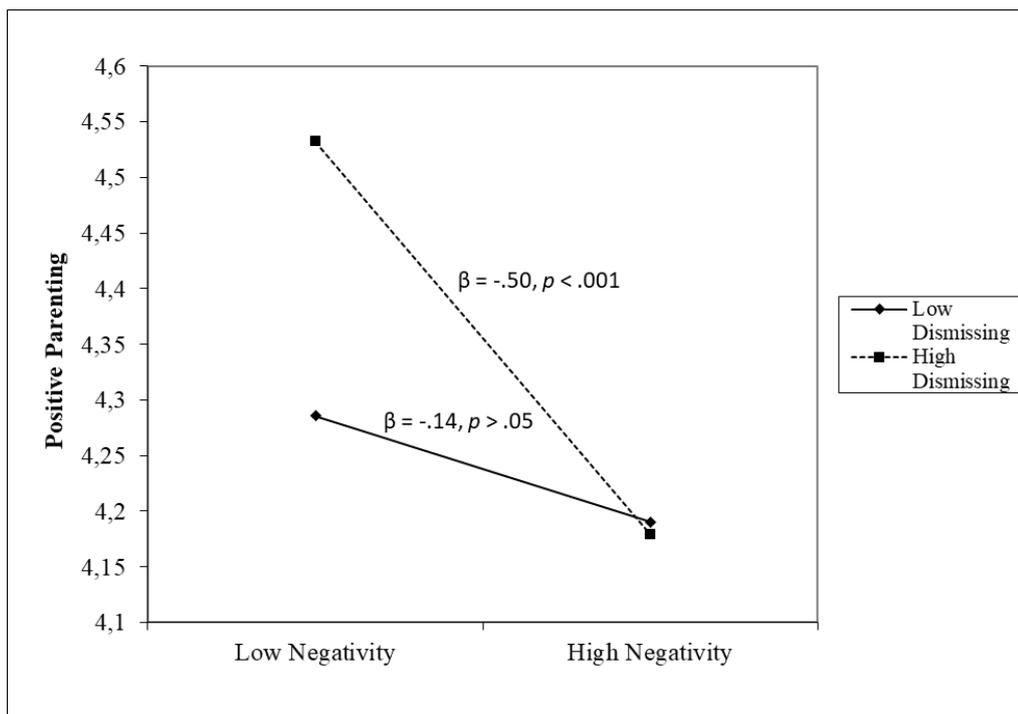
The form of the interaction is provided in **figure 3**, indicating that higher levels of positive feelings were related to higher positive parenting with low dismissing style ($\beta = .59$, $p < .001$) but not with high dismissing style ($\beta = -.02$, $p > .05$).

Figure 3. The moderating role of dismissing in the association between warmth and positive parenting
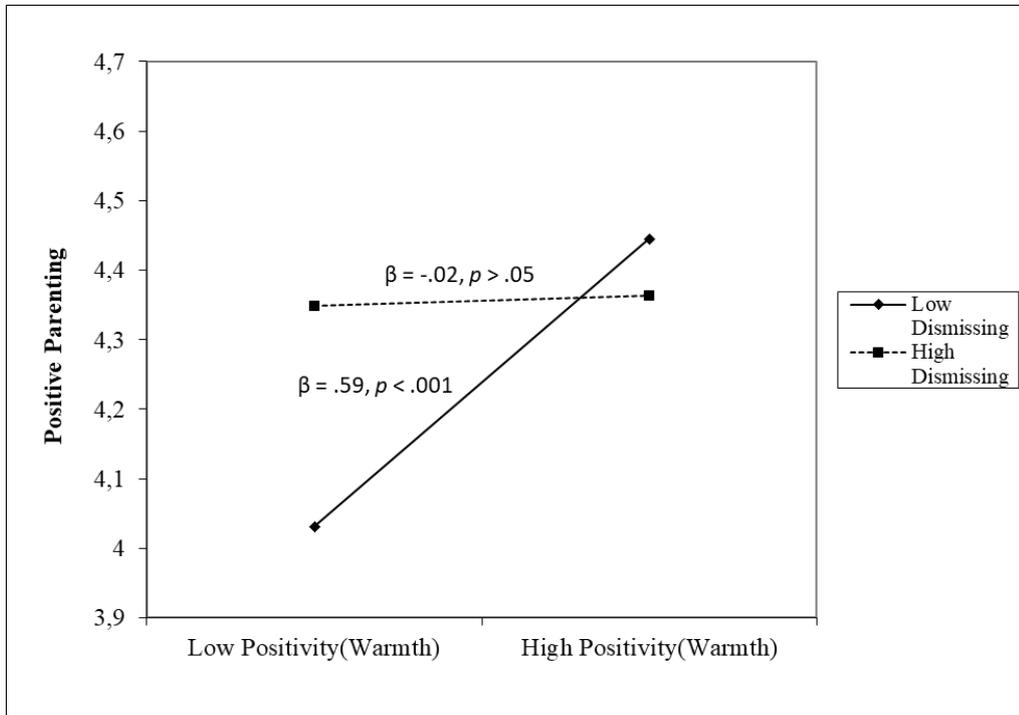
Multiple regression analyzes show that negative feelings ($\beta = .29$, $p <.05$) and dismissing style ($\beta =.44$, $p <.001$) are associated with inconsistent parenting. The dismissing style emerged positively associated with inconsistent parenting ($\beta = .44$, $p <.001$). No moderation effect emerged between feelings and maternal emotional styles (F $(10,162) = 5.256$; $p < .001$; $\Delta R^2 = .01$, $p = .88$, $R^2 = .21$) Moderate multiple regression analyzes show that positive ($\beta = -.34$, $p <.01$) and negative feelings ($\beta=.33$, $p <.001$) are associated with punitive parenting. The dismissing style emerged positively, even moderately, associated with punitive parenting ($\beta = .18$, $p <.05$). No moderation effect emerged (F $(10,162) = 6.334$; $p < .001$; $\Delta R^2 = .005$, $p = .56$, $R^2 = .25$).

3.5 Discussion

The present chapter presented a research study realized in order to explore the associations between maternal emotional styles (e.g., coaching and dismissing parenting styles) and parental feelings in acting parenting practices.

The first aim was to present the investigation of the psychometric properties of two questionnaires develop for the assessment of the affective dimensions of parenting: the Maternal Emotional Styles Questionnaire - MESQ, a self-report questionnaire designed to measure parental emotional styles and the Parent Feelings Questionnaire – PFQ, a self-report scale that assesses parental feelings toward the children. As expected, the results from both exploratory factor analyses produced a two-factor solution for the MESQ and the PFQ, quite similar to the theory – driven model but slightly different in the scales composition. The MESQ measure consists in two factors. The first factor includes 7 items describing the dismissing scale and it is theoretically consistent with Lagacè-Seguin & Coplan (2005) model. The second factor includes only 5 items describing the coaching scale. The PFQ measure consists in two factors. The first factor includes 14 items explaining the Negative feelings for the parent-child relations and the other factor of 6 items describing positive and Warmth feelings. This latter, unexpectedly, is slightly different from the theory-driven structure of Deater-Deckard (1996, 2000): particularly, 4 items did not reach the retention factor loadings (e.g., "I enjoy hugging and cuddling with my child"; "Being around my child is more enjoyable than I ever thought it would be"). We could argue that the latent structure differences observed in the Italian sample could be due to a cultural peculiarity of the emotion-related parenting representation.

As expected, we found association between the maternal emotional styles and the other parenting variables. Particularly, we found positive associations with the warmth feelings, positive parenting scale and coaching style. A negative association emerged between dismissing and negative maternal feelings. We also found a positive association between the dismissing scale and all the parenting practices (i.e., positive, inconsistent and punitive parenting). The warmth scale is strongly

associated with the parenting practices: positively with positive parenting but negatively with inconsistent and punitive parenting. The negativity is positively associated with inconsistent and punitive parenting but negatively associated with positive parenting.

The result that maternal emotional style interacts with parenting behaviors and feelings is in line with the Parental Meta-Emotion Philosophy (PMEP) theory (Katz et al., 2012), which hypothesized that emotion socialization practices are guided by parents' own emotion-related beliefs, awareness, and feelings. Particularly, parents with a coaching style are both aware of the child's emotions and support the child to problem-solve and are aware of the positive feelings about the relationship with the children. Surprisingly, a parent with a dismissing style who tends to reject or dismiss children's emotions expresses fewer negative feelings and also performs both positive and negative parenting practices. We know that differences in children emotionality can differently drive the parental behaviors: parents may feel distressed and change their beliefs about what they want to teach to their child about emotions (Eisenberg et al., 1998; Gottman et al., 1996; Katz et al., 2012) and how they can relate to the child. Negative emotions of the child may make harder for parents to engage in supportive emotion socialization practices. A parent who engages in dismissing style is a parent being unpleasant with the expression of emotions, above all the negative ones. It may be speculated that mothers higher in dismissing style consider the child's negative emotions as interpersonal challenges that put them out of their control and not as situations during which perform their supportive parental role with their child. However, it has been shown that dismissing and coaching may not be opposite style (Lunkenheimer et al. 2007) and parents can adopt the dismissing style on the specific situation, engaging in both positive and negative parenting practices.

There is evidence, even mixed, that parents' emotions influence parenting practices (Johnson et al., 2017; Morris et al., 2007). It is suggested that more parents aware of their emotions are better able to apply supportive parenting practices (Meyer et al., 2014; Mence et. al., 2014); different feelings may make it harder for parents to engage in positive parenting and in supportive emotional style

(Havighurst & Kehoe 2017). Moreover, awareness and acceptance of negative feelings could be a protective factor from engaging in negative parenting practices.

As for our second aim, a moderated model was tested to examine the unique and interactive effects between emotional styles and feelings in their association to parenting practices. We combined parent's feelings and parent's emotional styles into a regression model that highlighted their role on parenting practices. The tested moderation model led us to make an in-depth exploration of the connection between the emotion-related parental dimensions. We expected to find the moderating role of both emotional styles on the association between negative feelings and parenting practices. Particularly, the dismissing style moderating the association between negative feelings and negative parenting and coaching the association between warmth and positive parenting practices. Contrary to our hypotheses, we found the moderating role of parental emotional styles only on positive parenting practices but not on negative one. Both coaching and dismissing styles are associated with positive, inconsistent, and punitive parenting: our results suggested only the moderating role of parental emotion dismissing style on the relation between both warmth and negative feelings on positive parenting. Higher levels of warmth were related to higher positive parenting with low dismissing style; warmth feelings could increase the probability to implement positive parenting in parents with low emotion dismissing approach to child's emotions. Higher levels of negative feelings were related to lower positive parenting with high dismissing style; negative feelings seem to reduce the probability to implement positive parenting in parents with high emotion dismissing style. It appears that warmth feelings are a protective factor for parents with a low emotion dismissing style and negative feelings are a risk factor for parents with high dismissing style. Parents who believe that emotions can be problematic or dangerous for children (i.e., high emotional dismissing style) may hide or mask their own emotions in attempts to shield children from observing their emotional experiences, but the effort to dismiss emotions creates difficulties in engaging in positive parenting. At the same time, parents who do not value emotions as challenging or risky (low dismissing style) may thus be more supportive and emotionally accepting toward the

child's emotions and experiencing positive feelings toward the child. We may suppose that emotion dismissing parents are not less affectively involved than emotion coaching parents; they may simply base their behaviors on an attitude that minimizes the role of feelings. Furthermore, parents may react positively or negatively to certain emotions depending on the nature of the emotion (e.g., sadness vs. anger). Thus, rather than simple stick to a set of beliefs around emotions, parents may choose to behave with involvement and responsiveness in ways that are situationally and personally relevant to them and to their children.

Our results should be read in line with the literature that stresses the fact that parents who are responsive and warm typically display specific types of parenting behaviors and have certain beliefs associated with emotions, that lead to coaching and dismissing style (Gottman et al., 1996; Halberstadt et al., 2003; Morris et al., 2007). The parents' meta-emotion philosophy in association with the parent's own feelings shape the affective environment and the family climate in which the children are being raised. Moreover, it has to be considered the emotionally evocative nature of parenting, which influences awareness and acceptance of the emotion experienced by both parents and children (Katz et al., 2012), and could make it tougher for parents to engage in supportive emotion socialization practices (Meyer et al.,2014). To conclude, these findings provide some initial support for the psychometric properties and reliability of the MESQ and PFQ. It is important that research continues to explore the differential associations of the total score and subscales with theoretically and practically important variables. Further, research needs to examine how different parenting practices and parental feelings relate and how both parenting and parental emotional styles act together to shape different aspects of children's development. Despite the limitations of this exploratory study which certainly requires in-depth analyses, the results suggest the importance of considering the emotional dynamics of the parents towards their children, both in terms of feelings and emotional styles, as they would seem to influence the parenting practices

CHAPTER 4: Research Study

4.1 Introduction

Research established that parents' behaviors, particularly their emotion socialization behaviors, drive children's emotion socialization in adaptive or maladaptive outcomes (e.g., behavioral problems or prosocial behaviors) (Eisenberg et al., 1998; Lunkeneimer et al. 2007; Duncombe et al., 2012; Kochanska et al., 2012; Pastorelli et al., 2015). Particularly, research suggests that the association between parenting and children's socio-emotional problems may depending both on aspects related to positive and negative parenting dimensions or to child's characteristics (Kiff et al., 2011; Waller et al., 2014). Moreover, research supports the idea that children's behavioral problems (e.g., antisocial behaviors, low prosociality) have its developmental roots in the preschool years (Knafo & Plomin, 2006; Shaw et al., 2003;) and patterns of parenting appear to play an important role during early childhood (Kochanska et al. ,2019).

Considering the approach that focus on children's CU behaviors in childhood age as a predictor of low prosociality (Waller & Hyde, 2018) and a precursor of socio-emotional difficulties (Frick et al., 2014), it is not clear if certain aspects of parenting would be associated to CU behaviors, independently of conduct problems or low prosocial behaviors. Research shows that CU behaviors are a display of socio-emotional dimensions, such as empathy, prosociality, and guilt, which shape the cooperative and moral behaviors (Waller et al. 2015b; Waller et al. 2020).

Cross-sectional and longitudinal childhood studies consistently find associations between higher levels of callousness and lower levels of prosocial behavior even implying some degree of nonshared variance (Barker et al., 2011; Meehan et al., 2019).

Studies have examined dimensions of parenting practices (e.g., involvement, harsh parenting) and CU behaviors (see review Waller et al., 2013) but it is noteworthy that these studies focused on behavior problems in children and have assessed specific parenting behaviors including control or discipline (Chang et al., 2003; Pasalich et al., 2011; Trentacosta et al.,2019; Sng et al. 2018) rather

than affective dimensions of parenting, such as emotional style and feelings. Studies have reported results that ineffective or harsh parenting practices are associated with conduct problems when youth have low levels of CU behavior, across different types of samples (Edens et al., 2008; Pasalich et al.,2011; Clark & Frick, 2018; Waller et al., 2015). Research have begun to focus on the role of supportive and warmth parenting behaviors on CU behaviors (Kochanska et al., 2013; Pasalich et al., 2014), even with heritability perspective (Henry et al.,2018).

Relevant to this field could be to ponder on the direct association between positive parenting and CU behaviors considering that certain aspects of parenting may relate differentially to the development of behavioral problems versus the manifestation of limited prosocial emotion and behaviors. The increased levels of parental warmth may help children develop their emotional competence and learn to recognize others' distress (Dadds et al., 2013) or support their impairments in understanding what others are thinking or feeling (Georgiou et al., 2019). Controlling for the level of behavioral problems, parental warmth was negatively correlated with CU traits (Clark &Frick, 2018). For our knowledge, few studies considered and assessed parents' emotional style of responding to child emotions, and CU behaviors. For example, Pasalich and colleague (2014) found that the mothers of children with higher levels of CU behaviors are more likely to have affective attitudes that are less accepting of emotion and perform emotion socialization practices that are more dismissing of child emotions.

Additionally, the role of parenting practices may differ contingent on the level of CU behaviors. Particularly, few studies have investigated the potential moderation by CU behaviors on parenting practices and conduct problems (Clark & Frick, 2018; Waller et al., 2015a). In cross-sectional studies, higher levels of parental warmth were associated with fewer behavior problems for children with high levels of CU behavior (Waller et al., 2015) and parental use of positive reinforcement was related with less conduct problems for youth with high levels of CU behaviors (Clark & Frick, 2018).

Considering the socio-emotional characteristics of children with CU behaviors, affective dimensions of parenting (i.e., parental feelings and amotional style) seem to be a salient target of investigation. It is important to determine whether a warmth and supportive parent-child relationship increase the child's learning and internalization of prosocial values (Kochanska et al., 2013).

4.1.1 The current study

The present chapter, in the same sample of mothers (N=163) of kindergarten children described before, present the association among parenting dimensions and CU behaviors themselves, controlling for the level of behavioral problems and prosocial behaviors to test the potential moderating role of CU behaviors in the association between parenting dimensions and behavioral problems. In so doing, we pursued to replicate the findings reported on by Clark and Frick (2018) in relation to positive and negative parenting dimensions and widen this focus in different ways. First, the affective dimensions of parenting (i.e., parental feelings and parental emotional styles) have not been so studied in previous work, specifically examining their role in association with CU behaviors at very young ages. Particularly, in the present study, as for the parenting dimension practices, we used the Alabama Parenting Questionnaire (Positive Parenting, Inconsistent Parenting and Punitive Parenting) and we considered the warmth and negative feelings of the parents (Parent feeling questionnaire - PFQ) and the emotional coaching and dismissing style (Maternal Emotional Style Questionnaire - MESQ) for the affective dimensions. Second, in the current study the inclusion of both negative and positive affective aspects of parenting allows to examine unique associations with behavior problems (i.e., the effect of parental warmth, controlling for negativity, and vice versa). In conclusion, considering the overlap of CU behaviors and prosociality, another specific aim is to test the association between parenting dimensions and CU behaviors, controlling for the child's level of low prosocial behaviors.

We assumed that there would be a significant relationship between the parenting variables and CU behaviors, particularly a more negative pattern with positive dimensions of parenting. Moreover, we predicted that after controlling for level of conduct problems, negative parenting would no longer be associated with CU traits and that warmth parenting and coaching style would remain significantly associated.

It was hypothesized that CU behaviors would moderate the associations with both positive and negative dimensions of parenting. Particularly, affective dimensions of parenting (i.e., warmth parenting, coaching and dismissing styles) and positive parenting would be more strongly negatively associated with behavior problems in children with high levels of CU behaviors and negative parenting (i.e., inconsistent and punitive parenting) would be more strongly associated with conduct problems at low levels of CU traits.

In the end, considering the overlap between CU behaviors and low prosociality, we did not make specific hypotheses but, after controlling for level of prosociality, we expected to find no significant associations between parenting practices and CU behaviors.

4.2 Method

4.2.1 Participants and procedures

The sample (N=163), the procedures and the measures for the emotion related variables (i.e. the MESQ and the PFQ) and for the parenting practice (i.e. Alabama Parenting Questionnaire) are common with the prior study.

4.2.2 Measure

Callous-Unemotional behaviors

To measure the level of lack of emotion and indifference for others we used The Inventory of Callous Unemotional (ICU, Frick & Ray, 2015; Italian version by Ciucci and colleagues, 2014), a 24-item scale that is widely used as a continuous measure of CU traits. We administered the Parent Report - preschool version that is currently under consideration due to the factor analyses that

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uncover several dimensions of CU traits (Willoughby et al., 2015; Houghton et al., 2013; Bansal et al.; 2020; Hawes et al.; 2014). We followed the recommendation to use the total scale score in analyses, given concerns over the reliability and validity of the subscales (Ray, Frick, Thornton, Steinberg, & Cauffman, 2016). Mothers rated children on a four-point Likert scale ranging from 0 = Not at all true, 1 = Somewhat true, 2 = Very true to 3 = Definitely true (e.g., ''my child is concerned about the feelings of others''- reversed, "My child shows no remorse when he/she has done something wrong"). The Cronbach's alpha in the present study was 0.80 for the ICU total score.

Behavior Problems and Prosocial behaviors

Strengths and Difficulties Questionnaire (SDQ, Goodman et al., 1998, Italian version Tobia, & Marzocchi; 2018) is a 25-item questionnaire investigating the emotional and behavioral state of children and young people. The SDQ – Parent Version is composed of 5 subscales each measuring different aspects of mental health; in particular, they measure conduct problems, hyperactivity-inattention, emotional symptoms, peer problems, and prosocial behaviors, and each comprising five items.

For the present study, we used only 2 scales: the scale of Conduct Problems (CP) assesses the externalizing behaviors (e.g., "Often lies or cheats"); the scale of Prosocial Behavior assesses engagement in prosocial acts describing as concern for others (e.g., "helpful if someone is hurt, upset or feeling ill"). Each item is rated on a three-point Likert scale ranging from 0 = "not true" to 2 = "certainly true". The subscales are all with an acceptable internal consistency: Conduct problems 0.60 Cronbach's alpha, and Prosocial Behaviors 0.68 Cronbach's alpha.

4.2.3 Data Analyses

The data analysis strategy used in the current study refers on three different actions that will be described in the paragraphs below: the first action refers to the association among parenting

dimensions and cu behaviors, controlling for conduct problems, the second action discusses a moderated model that examine the prediction of the potential moderating role of CU behaviors on the association between parenting and conduct problems, exploring the contributions of the maternal emotional styles in the association among parenting and variance in levels of CU behaviors; the last action exploring aim to explore the association among parenting dimensions and CU behaviors, controlling for the prosocial behaviors.

4.3 The association among parenting dimensions and CU behaviors, controlling for conduct problems

All the analyses were conducted using SPSS version 27. Prior to testing the main study hypotheses, descriptive statistics and bivariate correlations between the main study variables were computed. To test the hypotheses related to the association between parenting and CU traits, all the parenting variables were entered in multiple regression analyses with CU behaviors scores as the dependent variables, to test the association for significance. Further, the regressions were repeated adding CP as a predictor to determine if the correlations between each parenting variable and CU behaviors remained significant after controlling for conduct problems. Thus, we ran seven hierarchical multiple regressions, one per parenting measure, entering CP at Step 2 to control for their shared variance.

4.3.1 Results

Table 9 shows descriptive statistics for the main variables in the study (i.e., parent report CU behaviors, conduct problems, and prosocial behaviors).

Table 9. Descriptive statistics for study variables

Variable	M	SD	Skewness	Kurtosis
1 ICU Pr – total score	.65	.33	.46	-.25
2 SDQ – Conduct Problems	1.33	.31	.95	.57
3 SDQ – Prosocial Behaviors	2.56	.37	-.61	-.46

Notes: ICU Pr: Inventory of Callous-unemotional Preschool Version; SDQ: Strengths and Difficulties Questionnaire

Results of the bivariate correlations analyses between parents' practices and affective parenting dimensions and children's variables are showed in **Table 10**.

Table 10. Bivarate correlations (Pearson's *r*) for study variables

Variable	1	2	3	4	5	6	7	8	9	10
1 ICU Pr – total score	/	.49***	-.60***	-.33***	.23**	.16*	-.31***	.35***	-.06	-.05
2 SDQ – Conduct Problems		/	-.36***	-.18*	.22**	.26***	-.29***	.46**	-.11	-.07
3 SDQ – Prosocial Behaviors			/	.32***	-.17*	-.19*	.35***	-.36**	.05	.14
4 APQ – Positive Parenting				/	-.01	-.04	.33***	-.35***	.16*	.20*
5 APQ – Inconsistent Parenting					/	.16*	-.20**	.22**	-.10	.39***
6 APQ – Punitive Parenting						/	-.43***	.34***	-.11	.16*
7 PFQ – Warmth feelings							/	-.34***	.28***	-.10
8 PFQ – Negativity								/	-.10	-.18*
9 MESQ – Coaching									/	-.06
10 MESQ – Dismissing										/

Notes: MESQ: Maternal Emotional Style Questionnarie; PFQ: Parent Feeling Questionnaire; APQ: Alabama parenting Questionnaire * *p* < .05, ** *p* < .01, *** *p* < .001

As expected, there were significant positive correlations between CU behaviors and Conduct problems (*r* = .49, *p* < .001) and negative with Prosocial behaviors (*r* = -.60, *p* <.001). In addition, there were modest to moderate correlations between the parenting variables, and both Conduct problems and CU behaviors. Particularly, positive parenting and warmth feelings were significantly negatively correlated with CU behaviors (*r* = -.33, *p* < .001; *r* = -.31, *p* < .001, respectively). Moreover, there were negative associations between CU behaviors and other dimensions of parenting such as Inconsistent Parenting (*r* = .23, *p* < .01) Punitive Parenting (*r* = .16 *p* < .05) and Negative feelings (*r* = .35; *p* <.001). None of the correlations testing the associations between coaching and dismissing style with CU behaviors, Conduct Problems and Prosocial Behaviors were reached statistical significance.

We applied multiple regression analyses to test whether the associations between parenting and CU behaviors were due to their correlations with conduct problems. Separate models were computed for all the measures of parenting and the results are showed in **Table 11**.

Table 11 *Results of Hierarchical Regression Analyses on CU Behaviors*

	APQ – Positive Parenting	APQ – Inconsistent Parenting	APQ – Punitive Parenting	PFQ – Warmth feelings	PFQ – Negativity	MESQ – Coaching	MESQ – Dismissing
Step 1	$F(1,161)=19.062$ $R^2= .10$	$F(1,161)=12.387$ $R^2= .07$	$F(1,161)=4.387$ $R^2= .02$	$F(1,161)=6.729$ $R^2= .09$	$F(1,161)=25.165$ $R^2=.13$	$F(1,161)=.959$ $R^2= .00$	$F(1,161)=.630$ $R^2= .00$
	β	β	β	β	β	β	β
Parenting	-.33***	.27***	.16*	-.31***	.37***	-.08	-.06
Step 2	$F(2,161)=33.848$ $\Delta R^2=.19***$; $R^2=.29$	$F(2,161)=29.143$ $\Delta R^2=.19***$; $R^2=.26$	$F(2,161)=25.381$ $\Delta R^2=.21***$; $R^2=.23$	$F(2,161)=29.542$ $\Delta R^2=.17***$; $R^2=.26$	$F(2,161)=28.964$ $\Delta R^2=.12***$; $R^2=.25$	$F(2,161)=25.282$ $\Delta R^2=.23***$; $R^2=.23$	$F(2,161)=25.304$ $\Delta R^2=.23***$; $R^2=.23$
Parenting	-.24***	.17*	.04	-.18*	.18*	-.02	-.02
SDQ-CP	.45***	.45***	.48***	.44***	.41***	.49***	.49***

Note. β = standardized beta coefficient; CP = conduct problems; MESQ: Maternal Emotional Style Questionnarie; PFQ: Parent Feeling Questionnaire; APQ: Alabama parenting Questionnaire . *$p < .05$; **$p < .01$; ***$p < .001$

To test whether the association with parenting and CU behaviors were due to their correlations with conduct problems, these multiple regression models were repeated adding CP behaviors as a predictor. After controlling for level of CP, Positive parenting (β =-.24, $p < .001$), Inconsistent parenting (β =.17, $p < .05$), Warmth feelings (β =-.18, $p < .05$), and Negativity (β =.18, $p < .05$) remained significantly associated with CU behaviors. Punitive Parenting (β =.04, $p > .05$) lost his significant positive association with CU behaviors when adding the CP behaviors. No remarkable unique associations emerged considering both Coaching and Dismissing style of emotions and CU behaviors; only Conduct Problems demonstrated a unique positive relationship with levels of CU behaviors.

4.4 The potential moderating role of cu behaviors on the association between parenting and conduct problems, exploring the contributions of the maternal emotion socialization style in the association among parenting and variance in levels of cu behaviors

To test the hypothesis that CU behaviors would moderate the relation between parenting practices and conduct problems simultaneous multiple regression analyses in which CU behaviors and each parenting variable were entered as predictors. In the Step 2, the product terms of CU Behaviors X Parenting variable were entered. Before performing multiple regression analysis, all the continuous

variables were centered by subtracting the sample mean from scores. Any significant interaction was tested at high (1 SD above the mean) and low (1 SD below the mean) levels of CU behaviors (Cohen, Cohen, West, & Aiken, 2003) and the form was explored using post-hoc probing procedures indicated (Holmbeck, 2002).

4.4.1 Results

The multiple regression analyses for the parenting variable testing the interactive effects of CU behaviors on conduct problems are summarized in **Table 12**.

Table 12. Regression analyses testing the main and interactive effects of CU behaviors and parenting dimensions on Conduct Problems

	APQ -Positive	APQ – Inconsistent	APQ - Punitive	PFQ- Warmth	PFQ - Negativity	Coaching	Dismissing
	$F_{(2,161)} = 25.293$ $R^2 = .23$	$F_{(2,161)} = 26.294$ $R^2 = .24$	$F_{(2,161)} = 30.234$ $R^2 = .24$	$F_{(2,161)} = 28.160$ $R^2 = .25$	$F_{(2,161)} = 30.049$ $R^2 = .32$	$F_{(2,161)} = 25.965$ $R^2 = .24$	$F_{(2,161)} = 25.482$ $R^2 = .23$
SDQ -CP	-.03	.09	.19**	-.16*	.32***	-.07 (a)	-.04

Notes. ; CP = conduct problems APQ: Alabama Parenting Questionnarie. PFQ: Parent Feelings Questionnarie. * $p < .05$, ** $p < .01$, *** $p < .001$.

(a) There was a significant two-way interaction effect with Conduct problems in the association between CU behaviors and Coaching Style ($\beta = .14$, $p < .05$; $F(3,161 = 18.996$ $p < .001$; $\Delta R^2 = .01$, $p < .05$, $R^2 = .25$) indicating that higher levels of coaching style was related to higher conduct problems with low CU behaviors ($\beta = .21$, $p < .05$) but not with high CU behaviors ($\beta = -.08$, $p > .05$).

There were main negative effects of Warmth ($\beta = -.16$, $p < .05$) and positive effects of Punitive Parenting ($\beta = -.19$, $p < .05$) and Negativity ($\beta = .32$, $p < .001$) on Conduct problems. The child CU behaviors significantly moderated the associations between parents' Coaching style and child Conduct problems. The form of the significant interaction effect emerged is provided in **figure 4**. It showed that higher levels parent's Coaching style were associated with fewer Conduct problems in children with low ($b = -.21$, $p < .05$) versus high ($b = .08$, $p > .05$) levels of CU behaviors. CU behaviors did not moderate the association between the others parenting variables and child conduct problems.

Figure 4. The moderating role of CU behaviors in the association between coaching and CP
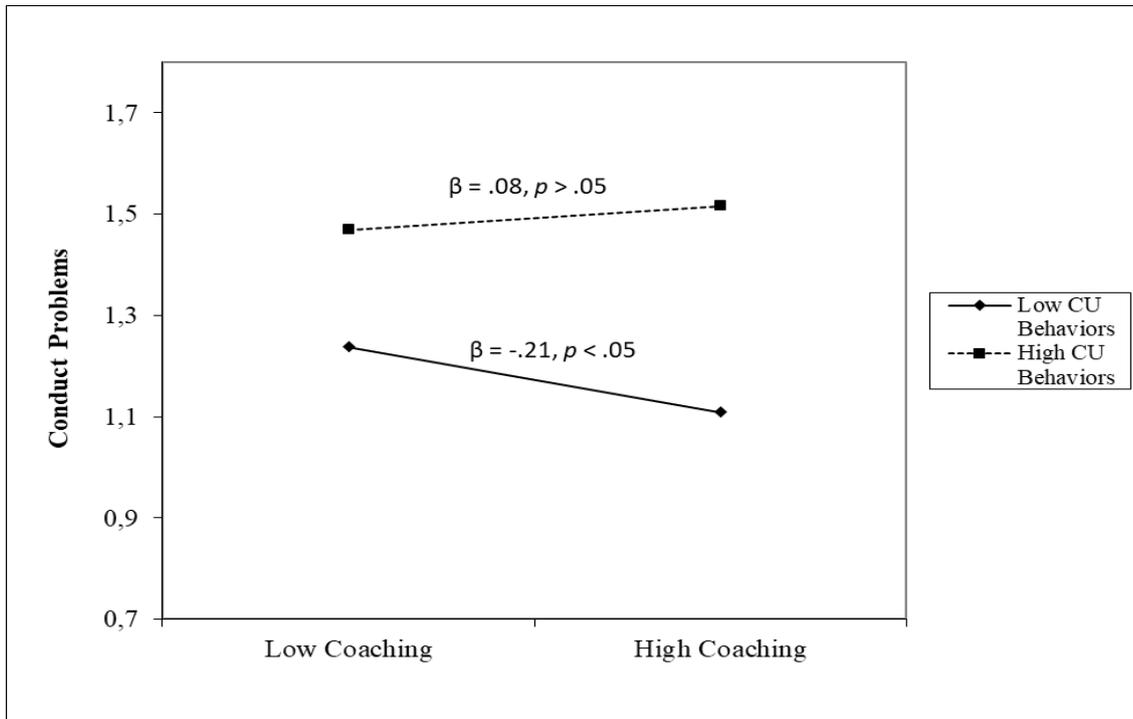
4.5 Exploring the association among parenting dimensions and cu behaviors, controlling for the prosocial behaviors

To test the hypotheses related to the associations between parenting and CU behaviors, multiple regression analyses were conducted in which the association between each parenting variable and CU behaviors was tested for significance. Further, at the step 2 the Prosocial behaviors were added as predictors to determine if the correlations between each parenting variable and CU behaviors remained significant after controlling for prosociality.

4.5.1 Results

Separate models were computed for all the measures of parenting and the results are showed in **Table 13.**

Table 13
Results of Hierarchical Regression Analyses on CU Behaviors

	APQ – Positive Parenting	APQ – Inconsistent Parenting	APQ – Punitive Parenting	PFQ – Warmth feelings	PFQ – Negativity	MESQ – Coaching	MESQ – Dismissing
	$F_{(1,161)}$ =19.062 R^2= .10	$F_{(1,161)}$ =12.387 R^2= .07	$F_{(1,161)}$ = 4.387 R^2 = .02	$F_{(1,161)}$ = 16.729 R^2= .09	$F_{(1,161)}$ =25.165 R^2=.13	$F_{(1,161)}$ =.959 R^2= .00	$F_{(1,161)}$ = .630 R^2= -.00
	β	β	β	β	β	β	β
Parenting	-.32***	.27***	.16*	-.31***	.37***	-.08	-.06
	$F_{(2,161)}$=49.297 ΔR^2=.27***; R^2=.37	$F_{(2,161)}$=51.120 ΔR^2=.31***; R^2=.38	$F_{(2,161)}$= 45.781 ΔR^2=.34***; R^2= .36	$F_{(2,161)}$= 47.435 ΔR^2=.27***; R^2= .36	$F_{(2,161)}$=50.610 ΔR^2=.25***; R^2=.38	$F_{(2,161)}$= 40.728 ΔR^2=.36***; R^2=.36	$F_{(2,161)}$= 45.379 ΔR^2=.35***; R^2=.35
Parenting	-.14*	.17**	.04	-.11	.17*	-.05	-.02
SDQ- PB	.55***	-.57***	-.59***	-.56***	-.54***	-.60***	-.60***

Note. β = standardized beta coefficient; PB = prosocial behaviors; MESQ: Maternal Emotional Style Questionnarie; PFQ: Parent Feeling Questionnaire; APQ: Alabama parenting Questionnaire . *$p < .05$; **$p < .01$; ***$p < .001$

After controlling for level of prosociality, Positive parenting (β =-.14, $p < .05$), Inconsistent parenting (β = .17, $p < .05$), and Negativity (β = .17, $p < .05$) remained significantly associated with CU behaviors; Punitive Parenting (β = .04, $p > .05$) and Warmth feelings (β = -.11, $p > .05$) no longer were associated with CU behaviors. There were no unique associations between maternal emotional styles and CU behaviors; only prosocial behaviors demonstrated a unique negative relationship with levels of CU behaviors.

4.6. Discussion

The present study was realized to update extant literature about the associations between the parenting dimensions and CU behaviors within an Italian sample of mothers with preschool children. Research on CU behaviors have mainly focused on negative parenting; to date less attention has been given to the preschool period and to the positive and warmth dimensions of parenting. Past research has shown that various dimensions of parent–child interaction, including supportive and cooperative parenting, are associated with levels of CU behaviors in children (Clark & Frick, 2018; Pasalich et al., 2014; Waller et al., 2015). Here we extend on this body of research,

by exploring the role of affective dimensions of parenting (i.e., warmth, negativity, coaching and dismissing style).

Across all the analyses, we expected the parenting practices and emotional styles to be associated with CU behaviors. Moreover, performing the analyses according to the study of Clark & Frick (2018), the findings for positive and negative parenting did not replicate those already found. In our sample a negative association between the negative parenting practices and the CU behaviors and conduct problems emerged. In contrast, positive parenting and warmth feelings were both negatively correlated with CU behaviors and conduct problems. Contrary to past studies (Pasalich et al., 2014), none of the measures of emotional parenting styles (i.e., coaching and dismissing) are associated with CU behaviors and conduct problems. The lack of association between maternal emotional styles and CU behaviors in this study may be due to a limited explanation of the emotional style variable in this sample of preschool-children. Although this could be due to limited power to detect significant effects associated with the sample, it should also be noted that levels of CU behaviors appear to be strongly associated with others affective dimentions (i.e., warmth and negativity). Thus, pattern of emotion style and practices could be not easily detectable, particularly with a self-report measure.

The importance of various parenting dimensions occurred also in the analyses testing their associations with CU behaviors themselves. Particularly, all the parenting variables, except for punitive parenting, remained significantly negatively (i.e., Positive parenting, Warmth) and positively (i.e., Inconsistent parenting, Negativity) correlated with CU behaviors, after controlling for the conduct problems. Thus, punitive parenting may be not relevant for CU behaviors and it is applied from parents mostly for the externalizing problems of the children. Over and above the association between CU behaviors and conduct problems the role of parenting variables emerged negatively for positive practices and warmth feelings, and positively for inconsistent practices and negative feelings. These findings suggest that parenting dimensions, particularly positive, may be relevant for the development of CU behaviors.

Moreover, our findings suggest that maternal coaching style could be quite important for understanding the development of conduct problems and CU behaviors. CU behaviors moderated the association of maternal coaching style with conduct problems; specifically, coaching style was negatively associated with conduct problems in those low on CU behaviors but not in those high on these behaviors. Coaching style expresses both parental awareness and acceptance of children emotions, and supporting the regulation of them; therefore, it is possible that parents of children with low levels of CU behaviors view conduct behaviors differently from parents of children with high levels of CU behaviors. Such as, children with low levels of CU behaviors may be perceived by their parents as trying to control their emotionality but also ready to be supported showing remorse after parent-child disagreement. Differently, children with high CU behaviors are distinguished for the shallow affect and imperturbability; in so doing, they may lead parents to significant challenges throughout their emotion socialization practices. and may lead them to be less involved in supporting their children.

In the end, considering the association among parenting dimensions and CU behaviors controlling for the level of prosociality, punitive parenting and warmth feelings no longer are significantly correlated with CU behaviors. Parents seems to engage in punitive parenting in response to low prosociality instead of CU behaviors and warmth feelings seem to be particularly relevant for the development of prosociality.

CHAPTER 5: Conclusion

This project aimed to broaden the field of research on parental meta-emotion philosophy defined as parents' emotion beliefs, awareness, and feelings about child emotions (Katz. et al., 2012), in relation to parenting practices and children's outcomes, such as behavioral problems and CU behaviors. Specifically, the focus of this work was primarily on parenting practices, parental emotional styles, and their role in children's CU behaviors, among parents of children in preschool years. The main aim is to explore whether and how parental emotional styles can influence the level of CU behaviors, that operate as a specifier for serious forms of conduct problems.

Overall, parenting has played a major role in many theories of the development of adaptive or maladaptive behaviors in children, increasing interest in identifying the different dimensions of parenting in promoting children's socio-emotional adjustment (Eisenberg et al., 1998; Morris et al., 2007). Specifically, there is evidence, even mixed, that parental emotions influence parenting practices (Johnson et al., 2017; Morris et al., 2007). It is suggested that parents with more awareness of their emotions are more able to apply supportive parenting practices because they are more attentive to their emotional resonances in response to the emotions experienced and expressed by their children (Meyer et al., 2014; Mence et. al., 2014); various feelings may make it harder for parents to engage in positive parenting and in supportive emotional style (Havingoust et al., 2017). Moreover, past research has shown the relations between parental emotional styles toward children's emotions and children's internalizing, externalizing, and peer problems (Katz et al., 2012): parental coaching of emotions is inversely associated with severity of behavioral problems (Dunsmore et al., 2012) but positively associated with emotional competence in children (Harris, de Rosnay & Pons, 2005). Contrary, higher levels of emotion rejection have been associated with important children's behavioral problems (Lunkenheimer et al., 2007).

Moreover, the role of parental emotional style could undertake changes in response to children characteristics. Particularly focusing on children with high levels of CU behaviors and their

difficulties in emotional functioning (Frick, et al., 2014b), research shows the relations between parenting, both negative and positive dimensions, and CU behaviors has a bidirectional influence (Waller et al., 2013). Particularly, mutually responsive, warm, and positive parent–child interactions are important for preventing further development of behavior problems in children with CU behaviors (Waller et al., 2014a) and that lower levels of parental acceptance of children's emotions are associated with higher children's CU behaviors (Pasalich et al., 2014).

In this project, we reviewed the empirical literature that has explored the relationship between parenting dimensions (i.e., Positive Parenting, Negative Parenting and Control and Supervision) and CU traits. Then we focused on exploring different aspects of parenting, distinguishing between affective dimension of parenting (i.e., feelings and emotional style) and parenting practices (i.e., positive, inconsistent and punitive parenting). Moreover, focusing on CU behaviors, we investigated which of the above dimensions of parenting are most highly related to these behaviors, controlling for conduct problems and low prosociality: this was important because it is possible that dimensions of parenting may relate differentially to the development of conduct problems and prosocial behaviors versus CU behaviors because of their shared variance. Finally, considering that research suggests that the association between parenting and conduct problems may differ depending on the level of CU behaviors displayed by the child we explored the association for the level of CU behaviors.

The general goal of the review was to exam the role of different dimensions of parenting on CU traits. In the last years there has been an increasing interest in the topic of parenting as a relational factor that can influence the trajectories development of CU traits and conduct problems. Findings of the review showed that early childhood seems to be a significant period for understanding the influence of parenting practices on CU behavior (Waller et al., 2015; Brown et al., 2017; Trentacosta et al., 2019). Moreover, the research appears to be moving in the direction of considering multifactorial effects. Therefore, the influence of parental dimensions in terms of gene-

environment correlation it is considered, focusing on the parental warmth and harshness in association with genetic or hereditary variables that increase the risk of children with CU behaviors. Most of the studies analyzed had a longitudinal research design that explores the relationship between parenting variables and behavioral outcomes over time, also evaluating the moderating or mediating role of other variables (e.g., parental depression, effects of child characteristics within a twin sample, hormonal levels).

In order to explore different aspects of parenting, distinguishing between affective dimension of parenting and parenting practices, the investigation of the psychometric properties of two questionnaires used for the assessment emotional style (MESQ) and parental feelings toward the children (PFQ) have been tested. This work contributed on the investigation of the psychometric properties of the MESQ, that previous Italian research (Ciucci & Menesini, 2008) started. The factor structure of the measure was explored with an EFA in a sample of mother of primary school children (Ciucci & Menesini; 2008), in our work a CFA and a EFA have been performed revealing two factors: emotion coaching and emotion dismissing style. Consistently with the literature (Ciucci & Menesini, 2008; Lagacé-Séguin and Coplan, 2005), we identified the two emotional styles for mothers of preschool children. Our evidence also identified two factor-structure for the PFQ measure, consistently with the literature (Deater-Deckard, K. (1996; 2000). To our knowledge this work contributed for the first time in the Italian context to the investigation of the psychometric properties of PFQ. Despite the limitations, how results are an advancement on past work on the measure and started initial validations of two tools that measure the affective dimensions of parenting.

Previous evidence indicates that both emotion coaching and emotion dismissing were distinguished from parenting dimensions such as involvement, support or detachment and harshness (Gottman et al.,1996; Katz et AL. 2012) and those parental emotions influence their parenting behaviors, but they do not necessarily determine them (Hajal & Paley, 2020); parents could be guided by their beliefs and awarness to engage consistent parenting practices (Lozada et al., 2016).

Our results, with the aim to expand to expand construct validity of our affective dimensions of parenting, show that affective dimensions (i.e. parental feelings and emotional style) related to each other. Coaching style positively correlates with warmth and dismissing style negatively with negativity. Mothers who value emotions as problematic experience fewer negative feelings towards their children.

Moreover, emotion dismissing style appeared to have a role in moderating the association between both negative and positive parental feelings and positive parenting. Positive parenting, as looking for closeness and sharing with the child seems to be challenging when the negative emotions are associated with dismissing style of emotions. It is possible that parents no confident with negative emotions are highly distressed by undesirable and negative feelings. Moreover, positive parenting becomes highly unlikely for parents who experience high levels of negative feelings towards their child, particularly with high levels of dismissing style. This situation could be at risk for the children because they experience both negative feelings from the parent and denying or minimizing the validity of the children's emotions. To engage in positive parenting, it is important to feel warmth feelings and have an emotional style that do not avoid and dismiss.

Our findings suggest the importance of specific parenting dimensions in the unique association with CU behaviors, controlling for conduct problems and low prosociality; particularly, the adaptive parenting dimensions (i.e., positive parenting, warmth feelings) emerged to be negatively associated with CU behaviors after controlling for CP. These results are in line with previous research on CU behaviors (Clark & Frick, 2018). Thus, supportive parenting may be particularly relevant and critical for the development of empathy, guilt, and other prosocial emotions. In this regard, coaching style of emotions is a parenting dimensions that emerged as significant considering different levels of CU behaviors. The coaching style appears to be effective in those low on CU behaviors but not in those high on these behaviors. This dimension of parenting seems model and influence children's socio-emotional development, especially in children who

have individual characteristics (CU behaviors) that may interfere with the normal development of empathy and prosociality (Kochanska et al., 2013).

5.1 Limitations and future directions

All this work and findings should be interpreted in the context of several study limitations. First, both size and representativeness of our sample limit the generalizability of results. The sample used in this study was primarily Italian, from central regions and was of all mothers, these characteristics limit results interpretation to specific cultural and gender background. Different cultural perspective may affect how parents think about emotions, and specifically about children's emotions (Parker et al., 2012). In addition, the emotion style of fathers could influence in different way the children adjustment. Another important aspect that could be considered in future research could be the income of the families that may be associated with a risk factor, such as stress, that can affect the quality and quantity of parental emotion styles (Taraban &Shaw, 2018). Therefore, additional work is needed in different populations.

Moreover, other limits concern analyses: exploratory and confirmatory factor analyses for the affective dimensions (i.e., MESQ and PFQ) were both conducted on the same dataset and concurrent and discriminant validity were not tested. Future studies could fill this gap. Future work could explore the contribution of parental style towards others emotions, such as sadness. Second, the cross-sectional design of the study prevents us to capture causation of the associations. Only longitudinal research can improve our understanding of the contribution of parenting dimensions and CU behaviors, particularly in a bidirectional association. Third, we relied on parent report measure for own emotional style, parenting practices, and children's behaviors. As a result, the associated risk of biases and subjectivity can be present. Thus, future analyses could combine different measures, such as observational measure of the parent-child interaction and child behavioral problems and prosocial actions. For instance, a measure widely used in preschool sample is Mutually Responsive Orientation (MRO; Kochanska, 1997) for the responsiveness of the parent-

child interaction, or Prosocial Task (PT- Dunfield, & Kuhlmeier; 2013) which observe children's helping, sharing, and comforting behaviors. Furthermore, the specific contribution of parental s emotional styles did not emerge as significant in the association with children's behaviors; it only emerged considering the moderating role of CU behaviors. This may be due to the questionnaire MESQ that only referred to parental emotional style toward children's anger, and sadness; in the future, it would be desirable to use a measure that consider parental emotional style toward children's fear because it would better bring out the role of parental emotional socialization practices in explaining CU behaviors, due to their association fearless temperament (Waller, R., Shaw & Hyde, 2017).

Despite these above limitations, the findings provide the basis for further examination of components of parental meta-emotion philosophies (Katz et al., 2012; Pasalich et al., 2014) and their associations with parenting practices. Also, these findings offer partial support for the previous work of others (Waller et al., 2015; Clark & Frick; 2018) about the association between parenting dimensions and children's CU behaviors. It is important to note that these findings support the view that during childhood the parent-child interaction could be describe by different dimensions of both parental (e.g., feelings and emotional styles) and children (e.g., behavioral problems). The effort of this investigation to assess affective dimensions of parenting – feelings and emotional styles – highlights the importance of studying aspects that may be relevant to children's socio-emotional development (e.g., emotional regulation, emotional awareness, emotional expressions, beliefs about emotions) Certainly, these results suggest that affective dimensions of parenting could also be studied within different contexts. To allow for broader and more comprehensive causal models for development of CU traits, future research could explore the role of caregivers' emotional styles in contexts other than families but equally fundamental for the emotional socialization of children from early childhood, such as educational setting. Educators and teachers are emotional socializers, and their emotional styles contribute to children's social and emotional adjustment and competence (Baroncelli & Ciucci; 2020; Ciucci, Baroncelli, & Toselli, 2015).

These findings underline the importance of affective dimensions of parenting, particularly emphasizing the role of parental emotion styles and parenting practices on children's CU behaviors. Our results suggest that studying these dimensions in preschool children is critically important, considering that CU behaviors with conduct problems and prosocial behaviors were already highly correlated and that the parent-child relationship is quite challenging in this developmental period (Havighurst & Kehoe, 2017). Clarifying the role of the dimensions of parenting in relations to parental (e.g., emotional styles) and children's characteristics (i.e., CU behaviors, conduct problems) could have important implications for determining targets for intervention in supporting parents' caregiving (McCart et al., 2006; Loop et al.,2017). Identifying the co-occurrence of different factors that contribute to parents' practices to children's problematic behaviors may help to tailor parenting interventions on at-risk children (for example, by improving emotion socialization practices). It is therefore important to identify specific interventions to sustain parental socialization practices (Loop et al., 2017; Kimonis et al., 2019) since parental sensitive responding to children's emotions and parental warmth are critical for conscience development during childhood age (Kochanska, 1997; Pasalich et al., 2012).

The value of considering multiple dimensions has received support in recent research (Loop et al., 2017). Interventions towards parents should therefore consider both raising awareness about the affective dimensions towards the children as well as promoting emotional competence in them, recognizing, accepting and regulating their own and children's emotions.

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ACKNOWLEDGMENTS

I would like to express my gratitude to my primary supervisor, Prof. Enrica Ciucci, for her input and support throughout the project. I feel fortunate to have worked with such a experienced and passionate researcher. The knowledge I have gained from conducting this research has been invaluable in my development as a young researcher and psychologist and I hope to keep working and grow.

I particularly express sincere thanks to Dott. Andrea Baroncelli, PhD for his valuable and significant assistance, and particularly to the broader research group at the FORLILPSI Department, for their supportive help. I am thankful for the opportunity to conduct research in an area I am passionate about with valid colleagues.

I would also like to thank the Scholastic Institutions, that supported the project allowing us to conduct research at their schools, and families who participated in the project for their time and information shared. Without them, the study would not have been possible.

Finally, sincere thanks go to my family, partner and friends for their support and encouragement over the course of my studies. My accomplishments would not have been possible without them.

DECLARATION

This thesis is presented to the University of Florence in fulfillment of the requirements for the PhD in Education Sciences and Psychology (Cycle XXXIV).

I declare that this research project meets the ethical guidelines and informed written consent and /or assent rom all individual participants included in the project written consent and /or assent from the participants have been obtained.

All procedures performed in studies involving human participants were in accordance with the ethical standards and obtained the Ethical Approval from the Ethical Commission of the University of Florence (n. 142 - 26 February 2021)

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Date: 15/01/2022