

Self-Compassion and Dispositional Mindfulness Are Associated with Parenting Styles and Parenting Stress: the Mediating Role of Mindful Parenting

M. J. Gouveia¹  · C. Carona¹ · M. C. Canavarro¹ · H. Moreira¹

Published online: 2 March 2016
© Springer Science+Business Media New York 2016

Abstract Mindful parenting is a recent concept in parenting studies and has been described as a set of parental practices or skills that seek to enhance moment-to-moment awareness in the parent–child relationship. Some studies suggest that mindful parenting is associated with parent’s dispositional mindfulness and self-compassion, while others suggest that mindful parenting can reduce parenting stress and promote a positive parenting. However, there is no study describing an integrative model with these variables. The present study explored whether parents’ dispositional mindfulness and self-compassion are associated with parenting stress and parenting styles through mindful parenting. A sample of 333 parents (87 fathers, 246 mothers) between the ages of 27 and 63 years participated in the study. The results revealed that higher levels of dispositional mindfulness and self-compassion are associated with higher levels of mindful parenting that, in turn, is associated with lower levels of parenting stress, higher levels of authoritative parenting style, and lower levels of authoritarian and permissive parenting styles. This study provides relevant and innovative data on mindful parenting research by clarifying some of the modifiable variables that may facilitate the adoption of mindful parenting and of adaptive parenting styles and decrease parenting stress. These findings have important clinical implications for the identification of groups of more vulnerable parents who would benefit most from mindful parenting interventions.

Keywords Mindful parenting · Dispositional mindfulness · Self-compassion · Parenting styles · Parenting stress

Introduction

Mindful parenting is a parental set of skills or practices that extends the concept of mindfulness to the context of parent–child relationships (Duncan, Coatsworth, and Greenberg 2009a; Kabat-Zinn and Kabat-Zinn 1997). Mindful parenting reflects the way parents integrate the concepts of mindfulness into their thoughts, feelings, and parenting behaviors, bringing an attitude of compassion, acceptance, and kindness to the parent–child relationship and being fully present during parent–child interactions (Bögels and Restifo 2014; Coatsworth et al. 2010; Kabat-Zinn and Kabat-Zinn 1997). Based on the concept of mindfulness, mindfulness-based interventions, and parenting studies, Duncan et al. (2009a) proposed a theoretical model explaining the positive effects of mindful parenting on youth’s and parents’ psychological adjustment as well as on the parent–child relationship. These authors proposed five dimensions of mindful parenting: (1) listening with full attention to the child, (2) non-judgmental acceptance of the self and the child, (3) emotional awareness of the self and the child, (4) self-regulation in the parenting relationship, and (5) compassion for the self as a parent and for the child (Duncan et al. 2009a).

In the last decade, various mindfulness-based parenting interventions have been developed and tested among clinical (e.g., Bögels and Restifo 2014; Bögels et al. 2014; Neece 2014; Van de Weijer-Bergsma et al. 2012; Van der Oord et al. 2012; Singh et al. 2006, 2007) and non-clinical child and adolescent populations (e.g., Altmaier and Maloney 2007; Coatsworth et al. 2010, 2015; Duncan, Coatsworth, and Greenberg 2009b; Lippold et al 2015). Most of these

✉ M. J. Gouveia
maria.gouveia@student.fpce.uc.pt

¹ Cognitive and Behavioural Center for Research and Intervention (CINEICC), Faculty of Psychology and Education Sciences, University of Coimbra, Rua do Colégio Novo, 3000-115 Coimbra, Portugal

programs are based on mindfulness interventions and include themes such as self-regulation, forgiveness, kindness, and compassion along with practices such as meditation, yoga, and attention training to focus on everyday activities (Bögels and Restifo 2014). Studies on the effectiveness of mindful parenting intervention programs provide preliminary support for the assumption that mindful parenting has positive effects on the psychological functioning of both youth and parents (e.g., fewer psychological problems in parents and children, less parenting stress) and on the parent–child relationship (Bögels et al. 2014; Duncan et al. 2009a, 2015; Harnett and Dawe 2012; Lippold et al. 2015; Singh et al. 2007). For instance, after completing a mindful parenting training program, parents usually report that they are more aware of how their mood affects the way that they react and that they become less reactive in family situations (Baillie et al. 2012; Coatsworth et al. 2010; Duncan et al. 2009b).

In fact, by adopting a mindful approach in the relationship with their children, parents are able to develop a calm and consistent stance toward their children that is in accordance with their parenting values and goals (Duncan et al. 2009a). Parents might also interrupt a judgmental attitude when interacting with their child and may be able to objectively assess in the present moment the child's behavior and the parent–child interaction (Duncan et al. 2009a; Williams and Wahler 2010), which may foster a more positive parent–child relationship. In addition, by adopting a compassionate attitude toward their children, mindful parents are able to express more warmth and less negativity during interactions with their children (Miller et al. 2015), which, in turn, may have a positive effect on their children's functioning and well-being.

Despite the growing number of theoretical and efficacy studies on mindful parenting, there is still scarce literature that focuses on the factors that may account for variability in mindful parenting and that may explain why some parents are more likely to adopt this parental attitude than others. In addition, little is known about the relationship between mindful parenting and other parenting dimensions, such as parenting styles and parenting stress. Identifying mindful parenting predictors and correlates may contribute to a better understanding of this construct and may have important clinical implications by allowing the identification of modifiable factors of mindful parenting that could be targeted in interventions aimed at facilitating the adoption of this parenting practice (e.g., mindful parenting programs). Furthermore, this may allow the identification of groups of more vulnerable parents who would benefit most from mindful-parenting-based interventions.

One of the factors that may account for the mindful parenting variability emerges from the mindfulness theory and is the concept of dispositional mindfulness. Mindfulness has been defined as “paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally” (Kabat-Zinn 1994, p. 4). The extent to which one has the capacity or the

tendency to be mindful or to sustain attention to experiences and events occurring in the present moment is usually termed “dispositional mindfulness” (Brown et al. 2007). Although mindfulness interventions primarily focus on intrapersonal processes by changing the relationship that an individual has with his or her thoughts and feelings, it has been suggested that mindfulness may also have positive effects in interventions targeting interpersonal processes (Brown and Ryan 2004; Coatsworth et al. 2010). In addition, several studies have suggested that mindfulness is related to various interpersonal processes (e.g., perspective taking, interpersonal closeness), including processes in the context of parenting (e.g., Brown and Ryan 2004).

Consistent with the mindful parenting literature, parents who have more mindfulness skills have an enhanced capacity to adopt a mindful attitude in the relationship with their children (e.g., Bögels et al. 2010; Dumas 2005; Duncan et al. 2009a; Parent et al. 2016; Williams and Wahler 2010). For instance, Singh et al. (2010) stated that as caregivers become more mindful, they may increase their responsiveness in each moment of interaction with their children. In a study examining the associations between mindful parenting and parents' background characteristics (e.g., intrapersonal mindfulness, psychological symptoms, psychological well-being), Duncan (2007) found that parents' intrapersonal mindfulness accounted for nearly half of the observed variance in mindful parenting. Therefore, parents' general capacity to be aware of the present moment with a non-judgmental attitude seems to be a key feature of the mindful parenting attitude.

Another important individual aspect that is intrinsically associated with mindfulness is self-compassion. Self-compassion is an adaptive way of self-to-self relating (Gilbert and Procter 2006; Neff 2009, 2012) that has been described by three bipolar dimensions (Neff 2003, 2009): (1) self-kindness versus self-judgment, (2) a sense of common humanity versus isolation, and (3) mindfulness versus over-identification. Self-compassion not only has been associated with a variety of positive individual outcomes (e.g., higher levels of optimism, happiness, and positive affect; Neff 2003; Neff et al. 2007), but also has been proven to benefit others as well as interpersonal relationships (Neff 2012; Neff and Beretvas 2013; Yarnell and Neff 2013). According to Neff (2012), self-compassion cultivates an individual's open-hearted stance toward negative aspects of oneself and one's experience that facilitates a kind, forgiving, and empathetic attitude toward others. For instance, a robust link has been observed between self-compassion and a healthy functioning of interpersonal relationships, which suggests that a self-compassionate stance allows people to be more accepting and caring and to display greater relational well-being (Neff and Beretvas 2013; Yarnell and Neff 2013).

Although it has rarely been investigated in the context of parent–child relationships, self-compassion is believed to be

essential for good parenting by helping parents to cope with their negative emotions and particularly with the difficulties and frustrations of parenting (Moreira et al. 2015a; Neff 2011; Neff and Faso 2015). Self-compassion may help parents develop a calm acceptance and compassionate attitude toward their children's behavior, especially when children express negative emotions (Bögels et al. 2010; Neff and Faso 2015). Additionally, it is possible that in a compassionate frame of mind toward their children, parents might re-connect with their positive feelings toward their child and may think more positively about themselves as parents (Bögels et al. 2010). Moreira et al. (2015b) found that self-compassion seems to help parents to successfully manage parenting stress, which, in turn, is reflected in a better quality of life of their children. These authors also suggested that self-compassionate parents may be more able to reduce their self-criticism about their parenting skills and their child's behaviors and may learn to accept both themselves and their children as imperfect individuals worthy of compassion. Recently, Moreira et al. (2015a, b) found that higher levels of self-compassion were associated with higher levels of mindful parenting. These findings support the assumption that the way that parents relate to themselves may be significantly associated with the adoption of a particular parenting practice or attitude and with how they relate to their children.

In addition to understanding why some parents are more likely to adopt a mindful approach in parenting than others, it is also important to understand whether and how mindful parenting is associated to other parenting dimensions, such as parenting styles and parenting stress. According to the mindful parenting theoretical model (Duncan et al. 2009a), mindful parenting may contribute to more adaptive parenting styles and practices (e.g., consistent discipline, monitoring) and to an overall positive parenting (e.g., better parent–child communication, higher parenting self-efficacy), which, in turn, are expected to contribute to greater child's well-being. Some studies support this theoretical assumption. For instance, Duncan et al. (2015) found that parents with higher self-reported levels of mindful parenting exhibited, during in-home interaction tasks, lower levels of harsh parenting and higher levels of positive parenting dimensions (i.e., positive interaction, positive parenting, consistent discipline, communication skills, and warmth) when compared to parents with lower levels of mindful parenting. Other studies have also demonstrated significant associations between mindful parenting and various parenting outcomes, such as parental involvement in child care (MacDonald and Hastings 2010); responsiveness, behavioral and psychological control, and autonomy support (Geurtzen et al. 2015); parenting stress (Beer et al. 2013); and parenting practices (Parent et al. 2016).

Parenting styles have been defined as the parents' behaviors and characteristics that describe their typical interactions with their child in a variety of situations and that foster the

interactional environment for the parent–child relationship (Darling and Steinberg 1993). Two dimensions are presumed to underlie the construct of parenting styles (Maccoby and Martin 1983): (1) parental responsiveness or warmth, which represents intentional parenting attitudes of attunement, support, and acceptance of children's needs and demands with the aim of promoting individuality, self-regulation, and self-assertion, and (2) parental demandingness or control, which refers to the degree to which parents manage their children's behavior using strategies such as maturity demands, supervision, discipline, confrontation of children's disobedience, or other claims for the children to become integrated into the family (Baumrind 1991). These two global dimensions can be combined in three patterns of parenting, representing Baumrind's typology of parenting styles (1971, 1989). Specifically, this typology includes the authoritative style (when the parent exerts high parental control along with warmth), the authoritarian style (when the parent exerts high control without warmth or support), and the permissive style (when the parent is non-controlling and relatively warm).

To the best of our knowledge, no study has focused on the link between mindful parenting and parenting styles, although previous studies have found significant associations between dispositional mindfulness and parenting styles (Williams and Wahler 2010) and between mindful parenting and parenting styles and practices (de Bruin et al. 2014; Parent et al. 2016). Specifically, Williams and Wahler (2010) have found that mothers' dispositional mindfulness was positively correlated with the authoritative parenting style, negatively correlated with the authoritarian parenting style, and uncorrelated with the permissive parenting style. These authors have also found that the authoritative and authoritarian parenting styles mediated the association between mothers' dispositional mindfulness and children's psychological problems. According to these authors, an authoritative mother may already have developed periodic states of mindfulness, suggesting that dispositional mindfulness may occur prior to the adoption of a specific parenting style. In addition, Parent et al. (2016) observed that higher levels of dispositional mindfulness were indirectly associated with lower levels of negative parenting practices (e.g., reactive and intrusive parenting, coercive and ineffective discipline, and hostility) and higher levels of positive parenting practices (e.g., positive reinforcement, expressions of warmth and affection, supportive parent–child communication) through higher levels of mindful parenting. Similarly, de Bruin et al. (2014) observed that mindful parenting was negatively correlated with laxness, over-reactivity, and verbosity, which represent dysfunctional discipline styles.

Several studies have also focused on the role of mindfulness or mindful parenting in decreasing different dimensions of parents' psychological functioning, such as parenting stress. Parenting stress has been defined as the stress that arises when the parenting demands exceed the parent's personal and social

resources (e.g., knowledge, parenting skills, social support) to cope with those demands (Abidin 1992; Deater-Deckard 2004). Under high levels of stress, parents may become more rejecting, controlling, and less warm toward their child, reacting automatically with negative interaction patterns with their child (Webster-Stratton 1990). As a result, parenting stress is strongly associated with negative psychological outcomes in children (Deater-Deckard 2004; Neece 2014; Robinson and Neece 2015; Webster-Stratton 1990), negative parenting behaviors such as an authoritarian disciplinary style or less nurturing behavior (Anthony et al. 2005; Crnic and Low 2002), and problematic parent–child relationships (Belsky 1984; Bögels et al. 2010; Webster-Stratton 1990). Mindfulness training has been found to enable a more constructive response to relationship stress (Barnes et al. 2007) and, in particular, to decrease parenting stress (Bögels et al. 2014; Singh et al. 2007). For instance, Bögels et al. (2014) found that after completing a mindful parenting course, parents reported significantly lower levels of parenting stress. Similarly, Beer et al. (2013), in a correlational study, found that higher levels of mindful parenting were associated with lower levels of parenting stress in a sample of parents of children diagnosed with an autism spectrum disorder.

Based on previous research and on the theoretical model of mindful parenting (Duncan et al. 2009a), the present study aims to test an integrative model in which the associations between self-compassion, dispositional mindfulness, mindful parenting, parenting styles, and parenting stress can be elucidated. Specifically, this study explores whether parents' dispositional mindfulness and self-compassion are associated with parenting stress and parenting styles through mindful parenting. Based on the literature, we hypothesize that higher levels of dispositional mindfulness and self-compassion will be associated with higher levels of mindful parenting that, in turn, will be associated with lower levels of parenting stress, higher levels of authoritative parenting style, and lower levels of authoritarian and permissive parenting styles.

Method

Participants

The sample included mothers and fathers of school-aged children and adolescents. A total of 480 parents participated in the study. Of these, 144 fathers and 144 mothers were parents of the same children. Therefore, 72 mothers and 72 fathers were randomly eliminated with the aim of obtaining a sample exclusively composed of independent observations (i.e., no father or mother was the parent of the same child). In addition, three participants who did not report sociodemographic information about their children were eliminated. This resulted in a

final sample of 333 parents, among which 87 (26.1 %) were men and 246 (73.9 %) were women.

To be included in the study, individuals had to have at least one child aged between 8 and 18 years at the time of recruitment who did not have serious chronic health conditions or developmental delays. This exclusion criterion was considered because caring for a child with special needs often implies specific challenges, concerns, and demands that can influence the parent–child relationship.

With regard to the main sociodemographic characteristics of the sample, the parents were between the ages of 27 and 63 years ($M=42.31$; $SD=5.66$). All participants had at least one child and a maximum of eight children ($M=1.96$; $SD=0.87$), and the majority were married or living with a partner ($n=289$; 86.8 %). The participants were from different regions of Portugal, mostly from rural areas ($n=211$; 63.4 %). With regard to educational level, 230 (69.1 %) parents had completed basic or secondary studies, and 103 (30.9 %) had completed graduate or post-graduate studies. The mean age of children/adolescents that were participating in the research project was 11.98 years old ($SD=3.02$; range=8–18). In total, 187 (56.2 %) were aged between 8 and 12 years and 146 (43.8 %) were aged between 13 and 18 years; 183 (55 %) children/adolescents were girls and 150 (45 %) were boys.

Procedure

The sample was collected in two Portuguese public school units between January and April 2014. Authorization for the sample collection was obtained from the Portuguese Data Protection Authority and the Direction Board of each school unit. After authorization was received, several classes from different schools of the two school units were randomly selected. A research assistant visited each class, explained the objectives of the study to the children/adolescents, and gave a packet to each child's parents or legal representatives. Each packet contained a letter explaining the study, the informed consent form, and the parents' questionnaires to be completed at home and returned a week later. Informed consent was obtained from all individual participants included in the study.

Measures

Mindful Parenting The Portuguese version of the Interpersonal Mindfulness in Parenting Scale (IM-P; Duncan 2007; Moreira and Canavarro 2015) was used to assess mindful parenting. The instrument is organized in five dimensions (listening with full attention, emotional awareness of self and child, self-regulation in the parenting relationship, non-judgmental acceptance of self and child, and compassion for self and child), although it also provides a total score that is used as a global indicator of mindful parenting. The IM-P contains 31 items (e.g., "I often react too quickly to what my

child says or does”) answered on a Likert-type response scale with five options ranging from 1 (*never true*) to 5 (*always true*). After reverse-coding negative items, the total score was obtained by estimating the mean of the 31 items, with higher scores indicating higher levels of mindful parenting. The IM-P has shown adequate reliability ($\alpha=0.72\text{--}0.89$) and construct validity (convergent and discriminant) in both American and Dutch samples (de Bruin et al. 2014; Duncan 2007). The Portuguese version has also evidenced good psychometric properties and construct validity (Moreira and Canavaro 2015). In this study, the Cronbach’s alpha coefficient for the total score of mindful parenting was 0.82.

Mindfulness Dispositional mindfulness was assessed by the Portuguese version of the Mindful Attention and Awareness Scale (MAAS; Brown and Ryan 2003; Gregório and Pinto-Gouveia 2013). This is a unidimensional self-report measure of trait mindfulness that comprises 15 items (e.g., “I rush through activities without being really attentive to them”) answered on a Likert-type response scale with six options ranging from 1 (*almost never*) to 6 (*almost always*). Higher scores reflect higher levels of dispositional mindfulness. This instrument demonstrated good internal consistency across a wide range of samples (e.g., Brown and Ryan 2003; MacKillop and Anderson 2007). The Portuguese version also presents good psychometric properties, including excellent reliability ($\alpha=0.90$) and construct validity (convergent and discriminant; Gregório and Pinto-Gouveia 2013). In this study, the Cronbach’s alpha coefficient was 0.91.

Self-Compassion The Portuguese version of the Self-Compassion Scale (SCS; Neff 2003; Pinto Gouveia and Castilho 2011) was used to assess self-compassion. This instrument contains 26 items (e.g., “I try to be understanding and patient toward those aspects of my personality I don’t like”) distributed through six dimensions: self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification. Items are answered on a five-point Likert response scale ranging from 1 (almost never) to 5 (almost always). After reverse-coding negative items and calculating the mean of all items, a global measure of self-compassion can be obtained, with higher scores indicating higher levels of self-compassion. The original instrument (Neff 2003) has shown good reliability ($\alpha=0.92$), temporal stability ($r=0.93$), and construct validity (convergent and discriminant). The Portuguese version of SCS (Pinto Gouveia and Castilho 2011) has also demonstrated good psychometric properties, including adequate reliability ($\alpha=0.89$), temporal stability ($r=0.78$), and construct validity (convergent and discriminant). In the current study, adequate internal consistency was obtained for the total score of self-compassion ($\alpha=0.87$).

Parenting Styles The Portuguese version of the Parenting Styles and Dimensions Questionnaire (PSDQ; Carapito et al. 2008; Robinson et al. 2001) was used to characterize the parenting styles of parents. The PSDQ contains 32 statements of different parental reactions to child’s behaviors, which are organized in a three-factor structure corresponding to the three dimensions of the Baumrind’s typology: (1) authoritative style (e.g., “I encourage our child to talk about his/her troubles”), (2) authoritarian style (e.g., “I use physical punishment as a way of disciplining our child”), and (3) permissive style (e.g., “I find it difficult to discipline our child”). Items are answered on a five-point Likert response scale ranging from 1 (*never*) to 5 (*always*). The original instrument of PSDQ has shown adequate reliability (α authoritative=0.86; α authoritarian=0.82; α permissive=0.64) and construct validity (convergent and discriminant; Robinson et al. 2001). Likewise, the Portuguese version of the PSDQ (Carapito et al. 2008) has demonstrated acceptable psychometric properties, including adequate reliability (α authoritative=0.88; α authoritarian=0.73; α permissive=0.62) and construct validity (convergent and discriminant). Adequate Cronbach’s alpha coefficients were also obtained in our sample for authoritative ($\alpha=0.90$), authoritarian ($\alpha=0.81$), and permissive ($\alpha=0.67$) parenting styles.

Parenting Stress Parenting stress was evaluated with the Parental Distress subscale of the Portuguese version of the Parenting Stress Index–Short Form (PSI-SF; Abidin 1995; Santos 1997). This subscale is a self-report measure of the level of stress directly associated with the parenting role. It contains 12 items (e.g., “I feel trapped by my responsibilities as a parent”), rated on a five-point Likert scale that ranges from 1 (*completely disagree*) to 5 (*completely agree*). The subscale score consists of the mean of the items, with higher scores indicating higher levels of parenting stress. Although the PSI-SF was originally designed for parents of children 12 years and younger, its appropriateness for use with parents of both children and adolescents has been well documented (e.g., Schaaijk et al. 2013; Streisand et al. 2001). The original instrument has good psychometric properties, including adequate internal consistency ($\alpha=0.78$) and test–retest stability ($r=0.61$) in the parental distress subscale, as well as adequate construct (convergent and discriminant) and predictive validity (Abidin 1995; Haskett et al. 2006). Similarly, the Portuguese version presents good psychometric properties, with adequate internal consistency in the parental distress subscale ($\alpha=0.82$) (Santos 2008). Adequate internal consistency was demonstrated in our sample, with a Cronbach’s alpha of 0.86.

Sociodemographic Information Sociodemographic information was reported by the participants and included parents’ age, number of children, marital status, area of residence, and educational level, as well as children’s age and gender.

Data Analyses

All statistical analyses were conducted using SPSS version 20.0. Missing data were random and infrequent [Little's MCAR test: $\chi^2(82)=67.13$, $p=.882$] and, therefore, were managed by listwise deletion. Cronbach's coefficient alpha was used as an indicator of the internal consistency of the instruments. Descriptive statistics were computed for the sociodemographic and study variables, and Pearson's correlations were computed between all study variables and between study variables and the main sociodemographic characteristics. Regression-based path analyses were performed with the PROCESS computation tool (Hayes 2013). Four simple mediation models were estimated to examine whether parents' self-compassion and mindfulness were associated with parenting stress and with the authoritative, authoritarian, and permissive parenting styles through mindful parenting, as depicted in Fig. 1. A bootstrapping procedure using 5000 resamples was used to assess the unconditional indirect effects. This procedure creates 95 % bias-corrected and accelerated confidence intervals (95 % BCa CIs) of the indirect effects, which are considered significant if zero is not contained within the lower and upper CIs.

Cohen's (1988) guidelines were used to describe the effect sizes of Pearson's correlations (i.e., small for correlations around 0.10, medium for those near 0.30, and large for correlations at 0.50 or higher). The empirical power tables proposed by Fritz and MacKinnon (2007) for mediation models suggest that the sample size of this study is sufficient to find an indirect effect including small-to-medium *a* and *b* paths (i.e., *a* and *b*=0.26) with a 0.80 power.

Results

Table 1 presents the descriptive statistics of the study variables along with the correlations between them. With regard to the main correlations, self-compassion and mindfulness were both positively associated with mindful parenting and with an authoritative parenting style and negatively correlated with permissive and authoritarian parenting styles and with

parenting stress. Parenting stress was positively associated with permissive and authoritarian parenting styles and negatively correlated with mindful parenting and an authoritative parenting style. With regard to parenting styles, the authoritative parenting style was positively associated with mindful parenting, and the authoritarian and permissive parenting styles were negatively correlated with mindful parenting. Most correlations were weak or moderate, with the exception of the correlations between self-compassion and parenting stress, self-compassion and mindful parenting, authoritative style and mindful parenting, and authoritarian and permissive styles, which were found to be strong associations (see Table 1).

Prior to the estimation of the mediation models, correlations between sociodemographic variables (parents' gender, age, number of children, marital status, area of residence, and educational level; children's age and gender) and mindful parenting, parenting stress, and the three parenting styles were analyzed to identify variables that should be controlled in the mediation models. Statistically significant correlations were found between mindful parenting and gender (0 = man; 1 = woman) ($r=0.16$; $p=.003$), number of children ($r=-0.13$; $p=.023$), and parent's educational level (0 = secondary studies or less; 1 = graduate or post-graduate studies) ($r=0.11$; $p=.049$). The authoritative parenting style also correlated significantly with gender ($r=0.20$; $p<.001$), number of children ($r=-0.13$; $p=.020$), and parent's educational level ($r=0.26$; $p<.001$). The authoritarian parenting style only correlated significantly with parents' age ($r=-0.16$ $p=.004$). Therefore, parents' gender, number of children, education, and age were introduced as covariates in the mediation models when appropriate.

The direct effects of self-compassion and mindfulness on mindful parenting and the remaining model coefficients are presented in Table 2, and the total and indirect effects are presented in Table 3. As presented in Table 2, self-compassion, mindfulness, gender, and number of children were significantly associated with mindful parenting in a model explaining about 37 % of the mindful parenting variance. In turn, mindful parenting was found to be significantly associated with all parenting outcomes.

Fig. 1 Conceptual mediation model of the presumed influence of mindfulness and self-compassion on parenting outcomes (parenting stress and authoritarian, authoritative and permissive parenting styles) through mindful parenting

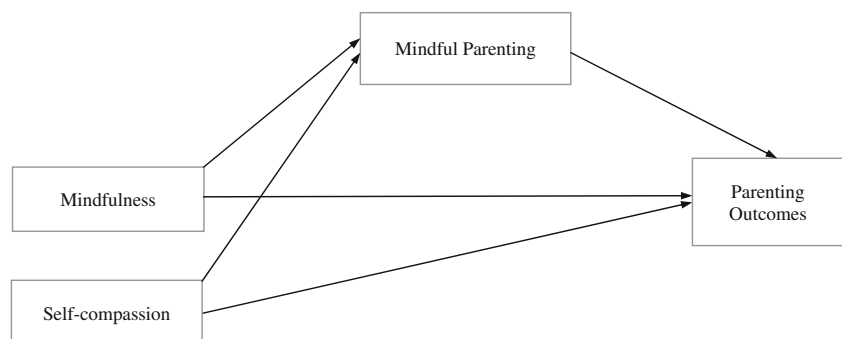


Table 1 Descriptive statistics and correlations among study variables ($N=333$)

Variables	<i>M</i>	<i>SD</i>	Range	1	2	3	4	5	6
1. Self-compassion	3.34	0.45	1.81–4.69	–					
2. Mindfulness	67.68	12.87	29–90	0.42**	–				
3. Parenting stress	26.99	7.82	12–51	–0.57**	–0.37**	–			
4. Authoritative style	3.98	0.64	1.00–5.00	0.26**	0.19**	–0.18**	–		
5. Authoritarian style	2.12	0.57	1.00–4.83	–0.34**	–0.25**	0.37**	–0.07	–	
6. Permissive style	2.11	0.69	1.00–4.80	–0.37**	–0.19**	0.41**	–0.05	0.52**	–
7. Mindful parenting	3.63	0.37	1.90–4.71	0.54**	0.35**	–0.43**	0.57**	–0.39**	–0.32**

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

In the parenting stress model, the total and direct effects of self-compassion and mindfulness on parenting stress were significant. The indirect effects of self-compassion and mindfulness on parenting stress through mindful parenting were also significant. With respect to the authoritative style, whereas the total effects of self-compassion and mindfulness on this outcome were significant, the direct effects were not. In addition, the indirect effects of self-compassion and mindfulness on this parenting style through mindful parenting were significant. In the authoritarian parenting style model, whereas the total effects of self-compassion and mindfulness on this parenting style were both significant, only self-compassion was found to be directly and indirectly associated with the authoritarian style. A similar pattern of results was found in the permissive style model, in which only self-compassion was found to be directly and indirectly associated with this parenting style.

Discussion

This study explores an integrative model linking self-compassion and dispositional mindfulness to parenting styles and parenting stress through mindful parenting. Our results suggest that higher levels of dispositional mindfulness and self-compassion may increase the likelihood of implementing a mindful parenting attitude in the parent–child relationship, which, in turn, may be associated with more adaptive parenting styles and less parenting stress. Additionally, our findings suggest that being a mother and having fewer children may also increase the likelihood of being a mindful parent.

As expected, some of the individuals' sociodemographic characteristics (gender, number of children, and educational level) were significantly associated with mindful parenting and with the authoritative parenting style. With regard to parents' gender, our results demonstrated that mothers are more likely to adopt a mindful parenting attitude and an authoritative parenting style than fathers. This result can be understood in light of the personal, biological, and cultural differences between men and women. First, some individual

characteristics of women, such as being more emotional and empathic (e.g., Derntl et al. 2010; Lennon and Eisenberg 1987), may make them more sensitive to detecting their children's needs as well as more responsive and caring toward their children. Second, women are biologically and evolutionarily better prepared than men to assume the caregiving role for their offspring. For instance, the increase in the production of oxytocin and other hormones during pregnancy and lactation and the capacity to breastfeed facilitate caregiving (Dozier 2000). Third, at a cultural level, it is important to note that in modern society, women are still expected to assume the role of primary caregivers for their children, whereas men are usually more responsible for obtaining financial income for the family's sustenance (Wille 1995). These personal, biological, and cultural differences between genders may lead women to be more willing than men to adopt and implement warmth and compassionate behaviors and attitudes toward their children. This finding suggests that men could benefit most from mindful-parenting-based interventions, although they may also experience more difficulties in undertaking such a program and in adopting this parental attitude.

With regard to the number of children, we found that a higher number of children were related to decreased mindful parenting. Considering that mindful parenting involves bringing present-centered attention to the self and child in parent–child interactions (e.g., listening with full attention, directing compassion for the self as a parent and for the child), for parents to adopt this parental attitude, it is essential that they are mentally and physically available to be with their child. Having more than one child is particularly demanding in terms of caregiving availability and time management. As a result, parents with more than one child have an increased likelihood of finding it more difficult to implement a mindful parenting attitude in their daily routines. Therefore, these parents in particular should be screened and referred for interventions focusing on the promotion of mindful parenting.

Finally, our study suggests that parents with higher educational levels have a greater likelihood of adopting an authoritative parenting style than those with lower educational

Table 2 Regression coefficients for direct effects, standard errors, and model summary information for the mediation model depicted in Fig. 1

	<i>b</i>	<i>SE</i>	<i>p</i> value	95 % BCa CIs (LLCI; ULCI)	<i>b</i>	<i>SE</i>	<i>p</i> value	95 % BCa CIs (LLCI; ULCI)
	Mindful parenting				Parenting stress			
Self-compassion	0.39	0.04	<.001	0.310; 0.468	-7.27	0.96	<.001	-9.162; -5.375
Mindfulness	0.01	0.00	.001	0.002; 0.008	-0.08	0.03	.008	-0.142; -0.022
Gender	0.17	0.04	<.001	0.092; 0.240	0.37	0.82	.656	-1.248; 1.980
Education	0.04	0.04	.131	-0.016; 0.125	-0.05	0.76	.944	-1.549; 1.443
Number of children	-0.05	0.02	.019	-0.082; -0.007	0.02	0.40	.965	-0.777; 0.813
Mindful parenting	-	-	-	-	-3.33	1.17	.005	-5.630; -1.026
	$R^2 = 0.368$ $F(5, 327) = 38.10, p < .001$				$R^2 = 0.357$ $F(6, 326) = 30.19, p < .001$			
	Mindful parenting				Authoritative parenting style			
Self-compassion	0.39	0.04	<.001	0.310; 0.468	-0.09	0.08	.241	-0.245; 0.062
Mindfulness	0.01	0.01	.001	0.002; 0.008	0.02	0.02	.490	-0.003; 0.007
Gender	0.17	0.04	<.001	0.092; 0.240	0.15	0.07	.023	0.021; 0.282
Education	0.05	0.04	.131	-0.016; 0.125	0.27	0.06	<.001	0.148; 0.390
Number of children	-0.05	0.02	.020	-0.082; -0.007	-0.04	0.03	.182	-0.108; 0.021
Mindful parenting	-	-	-	-	0.94	0.10	<.001	0.758; 1.131
	$R^2 = 0.368$ $F(5, 327) = 38.10, p < .001$				$R^2 = 0.379$ $F(6, 326) = 33.16, p < .001$			
	Mindful parenting				Authoritarian parenting style			
Self-compassion	0.39	0.04	<.001	0.306; 0.464	-0.16	0.08	.036	-0.315; -0.011
Mindfulness	0.01	0.00	.001	0.002; 0.008	-0.01	0.02	.092	-0.009; 0.001
Gender	0.18	0.04	<.001	0.101; 0.256	0.03	0.07	.621	-0.102; 0.170
Education	0.05	0.04	.150	-0.019; 0.122	0.08	0.06	.220	-0.045; 0.195
Number of children	-0.05	0.02	.013	-0.086; -0.010	-0.01	0.03	.710	-0.077; 0.053
Age	0.00	0.00	.279	-0.003; 0.009	-0.02	0.01	.006	-0.025; -0.004
Mindful parenting	-	-	-	-	-0.45	0.09	<.001	-0.640; -0.269
	$R^2 = 0.370$ $F(6, 326) = 31.96, p < .001$				$R^2 = 0.211$ $F(7, 325) = 12.43, p < .001$			
	Mindful parenting				Permissive parenting style			
Self-compassion	0.39	0.04	<.001	0.310; 0.468	-0.39	0.10	<.001	-0.582; -0.203
Mindfulness	0.01	0.00	.001	0.002; 0.008	-0.01	0.00	.786	-0.007; 0.005
Gender	0.17	0.04	<.001	0.092; 0.240	0.05	0.08	.513	-0.108; 0.216
Education	0.05	0.04	.131	-0.016; 0.125	0.02	0.08	.755	-0.126; 0.174
Number of children	-0.05	0.02	.020	-0.082; -0.007	-0.03	0.04	.434	-0.111; 0.048
Mindful parenting	-	-	-	-	-0.35	0.12	.003	-0.580; 0.119
	$R^2 = 0.368$ $F(5, 327) = 38.10, p < .001$				$R^2 = 0.160$ $F(6, 326) = 10.37, p < .001$			

levels. Having a higher level of education is associated with greater opportunity to acquire specialized and in-depth knowledge and skills about parenting and parent–child relationships (Grossman 2006). Therefore, these parents may be more likely to recognize the benefits of promoting better-quality relationships with their children, which may lead them to be more willing and prepared to be more authoritative in their parenting role. On the other side, parents with lower educational levels seem to be those who most need and may benefit from interventions focused on promoting positive parenting styles.

As expected, mindfulness and self-compassion were significantly associated with mindful parenting. The role of dispositional mindfulness on mindful parenting can be understood given that the development of this capacity helps people to increase their emotional awareness of internal states, which can allow them, for instance, to think before reacting automatically. In the parenting context, we may assume that the enhanced emotional awareness of mindful parents may extend to emotions and thoughts concerning their children, thus helping parents achieve greater self-regulation in the interactions with

Table 3 Total, direct, and indirect effects

	Estimate	<i>p</i> value	BC 95 % CI Lower/upper
Total effects			
Self-compassion → parenting stress	−8.56	<.001	−10.249/−6.877
Mindfulness → parenting stress	−0.10	.001	−0.158/−0.038
Self-compassion → authoritative style	0.28	<.001	0.121/0.430
Mindfulness → authoritative style	0.01	.024	0.001/0.012
Self-compassion → authoritarian style	−0.34	<.001	−0.477/−0.199
Mindfulness → authoritarian style	−0.01	.011	−0.011/−0.002
Self-compassion → permissive style	−0.53	<.001	−0.689/−0.359
Mindfulness → permissive style	−0.00	.407	−0.009/0.003
Indirect effects			
Self-compassion → MP → parenting stress	−1.30		−2.339/−0.303
Mindfulness → MP → parenting stress	−0.02		−0.039/−0.003
Self-compassion → MP → authoritative style	0.37		0.255/0.522
Mindfulness → MP → authoritative style	0.01		0.002/0.008
Self-compassion → MP → authoritarian style	−0.18		−0.273/−0.098
Mindfulness → MP → authoritarian style	−0.00		−0.005/0.001
Self-compassion → MP → permissive style	−0.14		−0.256/−0.018
Mindfulness → MP → permissive style	−0.00		−0.004/0.000

their children, which constitutes a crucial foundation of mindful parenting. Similar findings were described in previous research (e.g., Duncan 2007; Parent et al. 2016). It is also important to note that higher levels of mindfulness were found to be negatively associated with parenting stress (directly and indirectly) and positively associated with the authoritative parenting style (only indirectly). These results seem to suggest that a greater emotional awareness and self-regulation capacity may help parents experience less stress and interact with their children with a more adaptive parenting style, which is consistent with previous research (Beer et al. 2013; Parent et al. 2016; Williams and Wahler 2010). However, given the cross-sectional design of this study, it is important to acknowledge that the inverse relationship is also possible. Therefore, these results may also suggest that less stressed and more authoritative parents have greater emotional awareness and self-regulation and, consequently, higher levels of mindful parenting and dispositional mindfulness.

We also found that self-compassion was significantly associated with mindful parenting as well as with parenting stress and parenting styles (directly and indirectly through mindful parenting). These findings are consistent with the study of Moreira et al. (2015a, b) that shows a significant link between self-compassion and mindful parenting and with other studies suggesting that self-compassion is a relevant factor in parenting (Moreira et al. 2015a, b; Neff and Faso 2015). These results can be understood in light of the three dimensions of self-compassion, which not only foster an adaptive way of self-to-self and self-to-other relating (Neff 2009, 2012) and a more positive parenting (Moreira et al. 2015a, b; Neff and

Faso 2015), but are also intrinsically associated with the mindful parenting dimensions as defined by Duncan et al. (2009a).

For instance, people who are more self-compassionate have higher levels of self-kindness (i.e., they are more caring and supportive toward themselves, their failures, and suffering) and may therefore be less self-critical in relation to their parenting behaviors and feel more confident in their ability to care for a child, which is an important aspect of mindful parenting. Moreover, the greater sense of common humanity (i.e., the acknowledgment that everyone fails and suffers) can help self-compassionate individuals to non-judgmentally accept their limitations as parents and their children's imperfections, which is also an important aspect of mindful parenting. Another important characteristic of self-compassionate people is their greater capacity to be mindful of their painful emotions and thoughts instead of denying them, avoiding them, or ruminating on them. This characteristic can help parents who are more self-compassionate to have an increased ability to de-center and to avoid over-identifying with negative thoughts about their children and their parenting role. Consequently, this greater mindful capacity can help parents to have higher emotional awareness of their own and their children's emotional states and, as a result, can provide greater self-regulation in the parenting relationship. This capacity for self-regulation helps parents to be less over-reactive, to have less dependence on their children's emotions, and to parent in accordance with their parenting goals, which are key features of mindful parenting. Finally, the concept of mindful parenting itself identifies compassion for the self as a parent and for the child as an essential feature of parent–child interactions.

The higher levels of self-kindness, the greater sense of common humanity, and the greater capacity of mindfulness and self-regulation of self-compassionate parents may also help parents experience less stress in their parenting roles (Moreira et al. 2015a, b) and adopt more authoritative (through mindful parenting) and less authoritarian and permissive parenting styles. In addition, it is worthy of note that individuals with higher levels of self-compassion are better able to activate the soothing system of affect regulation (Gilbert 2005, 2014), which may help them better regulate their negative emotions and therefore feel less stressed by the daily challenges of parenting. This may also help self-compassionate parents to more easily implement the child-centered approach that describes the authoritative parenting (i.e., characterized by high warmth, supportiveness and nurturance, and high parental demands).

As hypothesized, higher levels of mindful parenting were associated with higher levels of an authoritative parenting style and lower levels of authoritarian and permissive parenting styles and parenting stress. Moreover, we also found a significant indirect effect of self-compassion on the three parenting styles as well as a significant indirect effect of mindfulness on the authoritative parenting style, through mindful parenting. Self-compassion and mindfulness were also found to be indirectly associated with parenting stress through mindful parenting. Although there are no studies exploring the relationship between mindful parenting and parenting styles, some studies show that parents who are more mindful report more positive parenting styles (e.g., Williams and Wahler 2010). In addition, higher levels of mindful parenting were shown to be associated with less harsh and more positive parenting (e.g., de Bruin et al. 2014; Duncan et al. 2015) and with less parenting stress (e.g., Beer et al. 2013; Bögels et al. 2014). Similarly, our results suggest that more mindful parents tend to exhibit greater warmth and support in the relationship with their children, while also exerting control whenever necessary (i.e., they seem to be more likely to adopt an authoritative style and to be less likely to adopt authoritarian or permissive styles). In fact, being a mindful parent entails adopting an attitude of compassion and kindness in the parent–child interactions as well as being sensitive and responsive to the child’s needs (Bögels and Restifo 2014). Nevertheless, it also implies imposing rules and discipline when necessary (Duncan et al. 2009a), which characterizes an authoritative style of parenting.

The theoretical model proposed by Duncan et al. (2009a) explains why the development of mindful parenting can positively influence parenting behaviors and decrease the stress associated with the parenting role. For instance, developing emotional awareness of self and the child can assist parents in correctly identifying both their own and their child’s emotions during parent–child interactions and reducing automatic patterns of response that may negatively affect parenting styles.

Exerting self-regulation in interactions with the child implies the ability to pause and purposely choose parenting practices that are in accordance with the parents’ values and goals instead of automatically reacting to the child’s behaviors. Also, listening with full attention can help parents to more accurately perceive their child’s verbal and non-verbal communication as well as their thoughts and feelings and to be more successful in noticing and responding to their child’s needs. In sum, our findings corroborate some of the links proposed in the mindful parenting model (Duncan et al. 2009a) and are in line with previous studies showing significant associations between mindful parenting and other parenting outcomes (e.g., Beer et al. 2013; Geurtzen et al. 2015; MacDonald and Hastings 2010; Parent et al. 2016).

Limitations, Strengths, and Clinical Implications

This study has several limitations that must be noted. First, the cross-sectional design of the study does not allow causal inferences or the determination of the direction of associations. Second, although we intended to recruit mothers and fathers in the same proportion, the majority of participants were mothers (73.9 %). Although this disparity is common in psychological research, future studies should attempt to include an equal number of mothers and fathers to more accurately assess gender differences in mindful parenting. Third, the representativeness of the sample may be compromised because of the higher number of people living in rural areas (65.3 %). Ideally, the sample should have been composed of an equivalent number of people living in urban and rural areas and from different regions of Portugal. Fourth, we have exclusively employed self-report measures and a single informant in each family, which may limit the validity of our findings. A multi-informant and multi-method measurement strategy would have been preferred and should be considered in future studies. Fifth, this study did not explore the associations between the three dimensions of self-compassion (self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus over-identification) and the other study variables. Future studies should explore the specific role of each dimension, which will allow a more thorough understanding of the associations between self-compassion and parenting outcomes that, in turn, could help clinicians understand better how to tailor their interventions.

With regard to the clinical implications, we should first consider that the study of clinical and normative populations is mutually informing (Cicchetti 2006). Therefore, on a first level, this study has clinical implications for general health promotion by identifying some of the facilitators of mindful parenting and of an overall adaptive parenting in community samples. For instance, it may be possible to design and implement interventions for risk groups of the general population based on the characteristics identified in our study that are

associated with a lower likelihood of adopting a mindful parenting attitude or a positive parenting style.

On a second level, in clinical practice, this study can help clinicians recognize parents who are more likely to adopt and implement specific parenting behaviors toward their children and identify possibly vulnerable parents who would benefit most from mindful-parenting-based interventions (i.e., risk groups). Our findings suggest that special attention should be given to parents who are male, have more children, and present lower levels of dispositional mindfulness and self-compassion. Parents with such characteristics, both from normative and clinical populations, are those who most need and may benefit from a mindful parenting intervention. Although these individuals would presumably be those with more difficulties in undertaking a mindful parenting program and in implementing this attitude toward their children, they would also be those who could benefit most from mindful parenting interventions. As suggested in the present study, such an intervention could help parents cope better with the stress associated with child rearing and facilitate the development of a more authoritative parenting.

Acknowledgments This work was supported by the Portuguese Foundation for Science and Technology under grants [ref. SFRH/BD/102722/2014; SFRH/BPD/70063/2010].

Compliance with Ethical Standards

Funding This study was funded by the Portuguese Foundation for Science and Technology (grants number SFRH/BD/102722/2014 and SFRH/BPD/70063/2010).

Conflict of Interest The authors declare that they have no conflict of interest.

Informed Consent Informed consent was obtained from all individual participants included in the study.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

References

- Abidin, R. R. (1992). The determinants of parenting behavior. *Journal of Clinical Child Psychology, 21*, 407–412. doi:10.1207/s15374424jccp2104_12.
- Abidin, R. R. (1995). *Parenting Stress Index: professional manual* (3rd ed.). Odessa: Psychological Assessment Resources, Inc.
- Altmaier, E., & Maloney, R. (2007). An initial evaluation of a mindful parenting program. *Journal of Clinical Psychology, 63*, 1231–1238. doi:10.1002/jclp.20395.
- Anthony, L. G., Anthony, B. J., Glanville, D. N., Naiman, D. Q., Waanders, C., & Shaffer, S. (2005). The relationships between parenting stress, parenting behaviour and preschoolers' social competence and behaviour problems in the classroom. *Infant and Child Development, 14*, 133–154. doi:10.1002/icd.385.
- Bailie, C., Kuyken, W., & Sonnenberg, S. (2012). The experiences of parents in mindfulness-based cognitive therapy. *Clinical Child Psychology and Psychiatry, 17*, 103–119. doi:10.1177/1359104510392296.
- Barnes, S., Brown, K. W., Krusemark, E., Campbell, W. K., & Rogge, R. D. (2007). The role of mindfulness in romantic relationship satisfaction and responses to relationship stress. *Journal of Marital and Family Therapy, 33*, 482–500. doi:10.1111/j.1752-0606.2007.00033.x.
- Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology, 4*, 1–103. doi:10.1037/h0030372.
- Baumrind, D. (1989). Rearing competent children. In W. Damon (Ed.), *Child development today and tomorrow* (pp. 349–378). San Francisco: Jossey-Bass.
- Baumrind, D. (1991). The influence of parenting style on adolescent competence and substance use. *The Journal of Early Adolescence, 11*, 56–95. doi:10.1177/0272431691111004.
- Beer, M., Ward, L., & Moar, K. (2013). The relationship between mindful parenting and distress in parents of children with an autism spectrum disorder. *Mindfulness, 4*, 102–112. doi:10.1007/s12671-012-0192-4.
- Belsky, J. (1984). The determinants of parenting: a process model. *Child Development, 55*, 83–96.
- Bögels, S. M., & Restifo, K. (2014). *Mindful parenting: a guide for mental health practitioners*. New York: Springer.
- Bögels, S. M., Lehtonen, A., & Restifo, K. (2010). Mindful parenting in mental health care. *Mindfulness, 1*, 107–120. doi:10.1007/s12671-010-0014-5.
- Bögels, S. M., Helleman, J., Van Deursen, S., Römer, M., & Van der Meulen, R. (2014). Mindful parenting in mental health care: effects on parental and child psychopathology, parental stress, parenting, coparenting, and marital functioning. *Mindfulness, 5*, 536–551. doi:10.1007/s12671-013-0209-7.
- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology, 84*, 822–848. doi:10.1037/0022-3514.84.4.822.
- Brown, K. W., & Ryan, R. M. (2004). Perils and promise in defining and measuring mindfulness: observations from experience. *Clinical Psychology: Science and Practice, 11*, 242–248. doi:10.1093/clipsy/bph078.
- Brown, K. W., Ryan, R. M., & Creswell, J. D. (2007). Mindfulness: theoretical foundations and evidence for its salutary effects. *Psychological Inquiry, 18*, 211–237. doi:10.1080/10478400701598298.
- Carapito, E., Pedro, M., & Ribeiro, M. (2008). Questionário de dimensões e estilos parentais (QDEP): Adaptação para o contexto português. Actas da XIII Conferência Internacional “Avaliação Psicológica: Formas e Contextos”, Universidade do Minho.
- Cicchetti, D. (2006). Development and psychopathology. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental psychopathology. Theory and method* (Vol. 1, pp. 1–23). New York: Wiley.
- Coatsworth, J. D., Duncan, L. G., Greenberg, M. T., & Nix, R. L. (2010). Changing parent's mindfulness, child management skills and relationship quality with their youth: results from a randomized pilot intervention trial. *Journal of Child and Family Studies, 19*, 203–217. doi:10.1007/s10826-009-9304-8.
- Coatsworth, J.D., Duncan, L.G., Nix, R.L., Greenberg, M.T., Gayles, J.G., Bamberger, K.T., ... & Demi, M.A. (2015). Integrating mindfulness with parent training: effects of the mindfulness-enhanced strengthening families program. *Developmental Psychology, 51*, 26-35. doi:10.1037/a0038212.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale: Erlbaum.

- Cmic, K. A., & Low, C. (2002). Everyday stresses and parenting. In M. Bornstein (Ed.), *Handbook of parenting. Practical issues in parenting* (Vol. 5, pp. 243–267). Mahwah: Lawrence Erlbaum Associates.
- Darling, N., & Steinberg, L. (1993). Parenting style as context: an integrative model. *Psychological Bulletin*, *113*, 487–496.
- De Bruin, E., Zijlstra, B., Geurtzen, N., van Zundert, R., van deWeijer-Bergsma, E., Hartman, E., ... & Bögels, S. M. (2014). Mindful parenting assessed further: psychometric properties of the Dutch version of the Interpersonal Mindfulness in Parenting Scale (IM-P). *Mindfulness*, *5*(2), 200–212. doi:10.1007/s12671-012-0168-4.
- Deater-Deckard, K. (2004). *Parenting stress*. New Haven: Yale University Press.
- Derntl, B., Finkelmeyer, A., Eickhoff, S., Kellerman, T., Falkenberg, D., Schneider, F., & Habel, U. (2010). Multidimensional assessment of empathic abilities: neural correlates and gender differences. *Psychoneuroendocrinology*, *35*, 67–82. doi:10.1016/j.psyneuen.2009.10.006.
- Dozier, M. (2000). Motivation for caregiving from an ethological perspective. *Psychological Inquiry*, *11*, 97–100.
- Dumas, J. E. (2005). Mindfulness-based parent training: strategies to lessen the grip of automaticity in families with disruptive children. *Journal of Clinical Child and Adolescent Psychology*, *34*, 779–791. doi:10.1207/s15374424jccp3404_20.
- Duncan, L. G. (2007). Assessment of mindful parenting among parents of early adolescents: development and validation of the Interpersonal Mindfulness in Parenting scale. Unpublished doctoral dissertation. The Pennsylvania State University.
- Duncan, L. G., Coatsworth, J. D., & Greenberg, M. T. (2009a). A model of mindful parenting: implications for parent-child relationships and prevention research. *Clinical Child and Family Psychology Review*, *12*, 255–270. doi:10.1007/s10567-009-0046-3.
- Duncan, L. G., Coatsworth, J. D., & Greenberg, M. T. (2009b). Pilot study to gauge acceptability of a mindfulness-based, family focused preventive intervention. *Journal of Primary Prevention*, *30*, 605–618. doi:10.1007/s10935-009-0185-9.
- Duncan, L. G., Coatsworth, J. D., Gayles, J. G., Geier, M. H., & Greenberg, M. T. (2015). Can mindful parenting be observed? Relations between observational ratings of mother-youth interactions and mothers' self-report of mindful parenting. *Journal of Family Psychology*, *29*(2), 276–282. doi:10.1037/a0038857.
- Fritz, M. S., & MacKinnon, D. P. (2007). Required sample size to detect the mediated effect. *Psychological Science*, *18*, 233–239. doi:10.1111/j.1467-9280.2007.01882.x.
- Geurtzen, N., Scholte, R. H., Engels, R. C., Tak, Y. R., & van Zundert, R. M. (2015). Association between mindful parenting and adolescents' internalizing problems: non-judgmental acceptance of parenting as core element. *Journal of Child and Family Studies*, *24*, 1117–1128. doi:10.1007/s10826-014-9920-9.
- Gilbert, P. (2005). Compassion and cruelty: a biopsychosocial approach. In P. Gilbert (Ed.), *Compassion: conceptualisations, research and use in psychotherapy* (pp. 9–74). London: Routledge.
- Gilbert, P. (2014). The origins and nature of compassion focused therapy. *British Journal of Clinical Psychology*, *53*, 6–41. doi:10.1111/bjc.12043.
- Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism: a pilot study of a group therapy approach. *Clinical Psychology and Psychotherapy*, *13*, 353–379. doi:10.1002/cpp.507.
- Gregório, S., & Pinto-Gouveia, J. (2013). Mindful attention and awareness: relationships with psychopathology and emotion regulation. *The Spanish Journal of Psychology*, *16*. doi:10.1017/sjp.2013.79.
- Grossman, M. (2006). Education and non-market outcomes. In E. Hanushek & F. Welch (Eds.), *Handbook of the economics of education* (pp. 577–633). Amsterdam: Elsevier.
- Harnett, P. H., & Dawe, S. (2012). The contribution of mindfulness-based therapies for children and families and proposed conceptual integration. *Child and Adolescent Mental Health*, *17*, 195–208. doi:10.1111/j.1475-3588.2011.00643.x.
- Haskett, M. E., Ahern, L. S., Ward, C. S., & Allaire, J. C. (2006). Factor structure and validity of the parenting stress index–short form. *Journal of Clinical Child and Adolescent Psychology*, *35*(2), 302–312. doi:10.1207/s15374424jccp3502_14.
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: a regression-based approach*. New York: The Guilford Press.
- Kabat-Zinn, J. (1994). *Wherever you go there you are: mindfulness meditation in everyday life*. New York: Hyperion.
- Kabat-Zinn, M., & Kabat-Zinn, J. (1997). *Everyday blessings: the inner work of mindful parenting*. New York: Hyperion.
- Lennon, R., & Eisenberg, N. (1987). Gender and age differences in empathy and sympathy. In N. Eisenberg & J. Strayer (Eds.), *Empathy and its development* (pp. 195–217). Cambridge: Cambridge University Press.
- Lippold, M. A., Duncan, L. G., Coatsworth, J. D., Nix, R. L., & Greenberg, M. T. (2015). Understanding how mindful parenting may be linked to mother-adolescent communication. *Journal of Youth and Adolescence*, *44*, 1663–1673. doi:10.1007/s10964-015-0325-x.
- Maccoby, E. E., & Martin, J. A. (1983). Socialization in the context of the family: parent-child interaction. In P. H. Mussen, & E. M. Hetherington (Eds.), *Handbook of child psychology. Socialization, personality, and social development* (4th ed., pp. 1–101). New York: Wiley.
- MacDonald, E. E., & Hastings, R. P. (2010). Mindful parenting and care involvement of fathers of children with intellectual disabilities. *Journal of Child and Family Studies*, *19*(2), 236–240. doi:10.1007/s10826-008-9243-9.
- MacKillop, J., & Anderson, E. J. (2007). Further psychometric validation of the Mindful Attention Awareness Scale (MAAS). *Journal of Psychopathology and Behavioral Assessment*, *29*, 289–293. doi:10.1007/s10862-007-9045-1.
- Miller, J. G., Kahle, S., Lopez, M., & Hastings, P. D. (2015). Compassionate love buffers stress-reactive mothers from fight-or-flight parenting. *Developmental Psychology*, *51*, 36–43. doi:10.1037/a0038236.
- Moreira, H., & Canavarro, M. C. (2015). The Portuguese version of the Interpersonal Mindfulness in Parenting Scale: a study with mothers and fathers from the general community. Unpublished manuscript.
- Moreira, H., Carona, C., Silva, N., Nunes, J., & Canavarro, M.C. (2015). Exploring the link between maternal attachment-related anxiety and avoidance and mindful parenting: the mediating role of self-compassion. *Psychology and Psychotherapy: Theory, Research and Practice*. Advance online publication. doi:10.1111/papt.12082.
- Moreira, H., Gouveia, M. J., Carona, C., Silva, N., & Canavarro, M. C. (2015b). Maternal attachment and children's quality of life: the mediating role of self-compassion and parenting stress. *Journal of Child and Family Studies*, *24*, 2332–2344. doi:10.1007/s10826-014-0036-z.
- Neece, C. L. (2014). Mindfulness-based stress reduction for parents of young children with developmental delays: implications for parental mental health and child behavior problems. *Journal of Applied Research in Intellectual Disabilities*, *27*(2), 174–186. doi:10.1111/jar.12064.
- Neff, K. D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity*, *2*, 223–250. doi:10.1080/15298860309027.
- Neff, K. D. (2009). Self-Compassion. In M. R. Leary & R. H. Hoyle (Eds.), *Handbook of individual differences in social behavior* (pp. 561–573). New York: Guilford Press.

- Neff, K. D. (2011). *Self-compassion: stop beating yourself up and leave insecurity behind*. London: Hodder & Stoughton.
- Neff, K. D. (2012). The science of self-compassion. In C. Germer & R. Siegel (Eds.), *Compassion and wisdom in psychotherapy* (pp. 79–92). New York: Guilford Press.
- Neff, K. D., & Beretvas, S. N. (2013). The role of self-compassion in romantic relationships. *Self and Identity, 12*, 78–98. doi:10.1080/15298868.2011.639548.
- Neff, K. D., & Faso, D. J. (2015). Self-compassion and well-being in parents of children with autism. *Mindfulness, 6*, 938–947. doi:10.1007/s12671-014-0359-2.
- Neff, K. D., Rude, S. S., & Kirkpatrick, K. (2007). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of Research in Personality, 41*, 908–916. doi:10.1016/j.jrp.2006.08.002.
- Parent, J., McKee, L. G., Rough, J., & Forehand, R. (2016). The association of parent mindfulness with parenting and youth psychopathology across three developmental stages. *Journal of Abnormal Child Psychology, 44*, 191–202. doi:10.1007/s10802-015-9978-x.
- Pinto Gouveia, J., & Castilho, P. (2011). Auto-compaixão: Estudo da validação da versão portuguesa da Escala da Auto-Compaixão e da sua relação com as experiências adversas na infância, a comparação social e a psicopatologia. *Psicologica, 54*, 203–230.
- Robinson, M., & Neece, C. L. (2015). Marital satisfaction, parental stress, and child behavior problems among parents of young children with developmental delays. *Journal of Mental Health Research in Intellectual Disabilities, 8*, 23–46. doi:10.1080/19315864.2014.994247.
- Robinson, C., Mandlco, B., Olsen, S., & Hart, C. (2001). The parenting styles and dimensions questionnaire (PSDQ). In B. Perlmutter, J. Touliatos, & G. Holden (Eds.), *Handbook of family measurement techniques: instruments & index* (Vol. 3, pp. 319–321). Thousand Oaks: Sage.
- Santos, S. V. (1997). Versão portuguesa do Parenting Stress Index (PSI): Validação preliminar. In M. Gonçalves, I. Ribeiro, S. Araújo, C. Machado, L. Almeida, & M. Simões (Eds.), *Avaliação psicológica: Formas e contextos* (Vol. 5, pp. 139–149). Braga: Associação dos Psicólogos Portugueses (APPOR).
- Santos, S. V. (2008). Forma reduzida do Parenting Stress Index (PSISF): Estudo preliminar. In Poster session at the XIII Conferência Internacional Avaliação Formas e Contextos, Braga, Portugal.
- Schaaijk, N. M., Roeleveld-Versteegh, A. B., & Baar, A. L. (2013). The interrelationships among paternal and maternal parenting stress, metabolic control, and depressive symptoms in adolescents with type 1 diabetes mellitus. *Journal of Pediatric Psychology, 38*, 30–40. doi:10.1093/jpepsy/jss096.
- Singh, N.N., Lancioni, G. E., Winton, A.S.W., Fisher, B.C., Wahler, R.G., McAleavey, ... & Sabaawi, M. (2006). Mindful parenting decreases aggression, noncompliance, and self-injury in children with autism. *Journal of Emotional and Behavioral Disorders, 14*, 169–177. doi:10.1177/10634266060140030401.
- Singh, N. N., Lancioni, G. E., Winton, A. S. W., Singh, J., Curtis, W. J., Wahler, R. G., & McAleavey, K. M. (2007). Mindful parenting decreases aggression and increases social behavior in children with developmental disabilities. *Behavior Modification, 31*, 749–771. doi:10.1177/0145445507300924.
- Singh, N. N., Singh, A. N., Lancioni, G. E., Singh, J., Winton, A. S. W., & Adkins, A. D. (2010). Mindfulness training for parents and their children with ADHD increases the children's compliance. *Journal of Child and Family Studies, 19*, 157–166. doi:10.1007/s10826-009-9272-z.
- Streisand, R., Braniecki, S., Tercyak, K. P., & Kazak, A. E. (2001). Childhood illness-related parenting stress: the pediatric inventory for parents. *Journal of Pediatric Psychology, 26*, 155–162. doi:10.1093/jpepsy/26.3.155.
- Van de Weijer-Bergsma, E., Formsma, A. R., de Bruin, E. I., & Bögels, S. M. (2012). The effectiveness of mindfulness training on behavioral problems and attentional functioning in adolescents with ADHD and their parents. *Journal of Child and Family Studies, 21*, 775–787. doi:10.1007/s10826-011-9531-7.
- Van der Oord, S., Bögels, S.M., & Peijnenburg, D. (2012). The effectiveness of mindfulness training for children with ADHD and mindful parenting for their parents. *Journal of Child and Family Studies, 21*, 139–147. doi:10.1007/s10826-011-9457-0.
- Webster-Stratton, C. (1990). Stress: a potential disruptor of parent perceptions and family interactions. *Journal of Clinical Child Psychology, 19*, 302–312. doi:10.1207/s15374424jccp1904_2.
- Wille, D. E. (1995). The 1990s: gender differences in parenting. *Sex Roles, 33*, 803–817. doi:10.1007/BF01544780.
- Williams, K. L., & Wahler, R. G. (2010). Are mindful parents more authoritative and less authoritarian? An analysis of clinic-referred mothers. *Journal of Child and Family Studies, 19*, 230–235. doi:10.1007/s10826-009-9309-3.
- Yarnell, L. M., & Neff, K. D. (2013). Self-compassion, interpersonal conflict resolutions, and well-being. *Self and Identity, 12*, 146–159. doi:10.1080/15298868.2011.649545.