

The indirect effect of the mindful parenting of mothers and fathers on the child's perceived well-being through the child's attachment to parents

Catarina Medeiros • Maria João Gouveia • Maria Cristina Canavarro • Helena Moreira

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Corresponding author:

H. Moreira ✉

Cognitive-Behavioural Center for Research and Intervention, Faculty of Psychology and Educational Sciences, University of Coimbra. Rua do Colégio Novo, Apartado 6153, 3001-802 Coimbra, Portugal.

Email: hmoreira@fpce.uc.pt

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Abstract

The main goal of this study is to explore whether the mindful parenting of both mothers and fathers is associated with the well-being of children through the attachment to their parents as well as to explore the moderating role of a child's age on such associations. Moreover, this study examines the differences between mothers and fathers in their mindful parenting levels. The sample comprised 243 family triads that included a child or adolescent (aged between 8 and 19 years old) and both parents, recruited at school settings. Parents completed the Interpersonal Mindfulness in Parenting Scale and the Hospital Anxiety and Depression Scale, whereas children completed the KIDSCREEN-10 and the People in My Life questionnaire. Mothers reported higher levels of mindful parenting than fathers. The child's perception of security in the relationship with their parents mediated the link between the mindful parenting of both parents and the well-being of their child, and these associations were not moderated by the child's age. Our findings suggest that mindful parenting is positively associated with a child's well-being through a more secure perception of the relationship with the parents. This result highlights the importance of including mindful parenting practices in parental training programs directed at both mothers and fathers of children and adolescents with the aim of promoting a more secure parent-child relationship, and consequently, the child's well-being.

Key-words: Mindful parenting; parenting; attachment; well-being; children; adolescents.

Introduction

Over the last decade, researchers interested in family relationships, particularly in parenting, have shown an increasing interest in the study of a mindful approach to parenting. Mindful parenting can be broadly defined as a way of parenting that intends to increase mindful awareness in everyday parent-child interactions (Bögels and Restifo 2014; Duncan et al. 2009a; Kabat-Zinn and Kabat-Zinn 1997). It consists of the application of mindfulness, which is defined as “the awareness that emerges through paying attention, on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (Kabat-Zinn 2003, p. 145), in the context of parenting. Duncan et al. (2009a) proposed a theoretical model suggesting that mindful parenting comprises five key dimensions: (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.

The adoption of this present-centered, compassionate, and non-judgmental approach to parenting may promote more positive interactions between the parents and the child and a more positive relationship between them (Coatsworth et al. 2010; Duncan et al. 2009a; Duncan et al. 2015; Lippold et al. 2015). Mindful parents are more aware of the present moment when interacting with their children, and therefore, are more attentive to their children’s behaviors and to their own cognitive and emotional responses to those behaviors. In addition, they are better able to self-regulate the emotions that may arise in the interactions with their children and to cope better with parenting stress (Bögels et al. 2010; Bögels et al. 2014; Bögels and Restifo 2014; Duncan et al. 2009a). Consequently, they tend to adopt a less reactive stance towards their children and to use more effective parenting practices, which allow them to interrupt automatic and maladaptive cycles that can arise during parent-child interactions (Bögels et al. 2010; Dumas 2005; Duncan et al. 2009a). Moreover, mindful parents tend to assume a kind and warm attitude and to exhibit greater levels of acceptance and compassion towards their children (Beer et al. 2013; Duncan 2009b; Duncan et al. 2015). In fact, recent studies suggest that the parents’ mindfulness skills, and specifically, mindful parenting, are associated with several positive parenting outcomes, such as demonstrating more positive parenting practices (e.g., positive reinforcement, expressions of warmth and affection, supportive parent-child communication) and fewer negative parenting practices (e.g., reactive and intrusive parenting, coercive and ineffective discipline, and hostility) (Parent et al. 2016). Mindful parenting is also associated with adaptive parenting styles, such as more authoritative and less authoritarian styles (Gouveia, Carona, Canavarro, & Moreira, 2016; Williams and Wahler 2010), or less overprotective and rejecting and more autonomy-encouraging styles (Bögels et al. 2014); less dysfunctional discipline practices, such as laxness, over-

reactivity and verbosity (de Bruin et al. 2014); less parenting stress (Beer et al. 2013; Bögels et al. 2014; Bögels and Restifo 2014; Gouveia et al., 2016); and higher involvement in childcare (MacDonald and Hastings 2010). As a result, mindful parenting can foster more positive parent-child interactions (Coatsworth et al. 2010; Dumas 2005; Duncan et al. 2009a; Duncan et al. 2015; Lippold et al. 2015). For instance, Duncan et al. (2015) found that parents with high levels of mindful parenting, compared to those with low levels, exhibited less harsh and more consistent discipline, greater warmth, more positive communication and more positive parenting behaviors in observed dyadic interactions with their children.

Other studies have demonstrated that intervention programs aimed at promoting general mindfulness or mindful parenting can indeed increase the quality of parenting and the parent-child relationship (Bögels and Restifo 2014; Coatsworth et al. 2015; Lippold et al. 2015; Singh et al. 2006; van der Oord et al. 2012). For instance, Coatsworth et al. (2010) found that mothers who participated in a mindfulness-enhanced Strengthening Families Program exhibited higher levels of mindful parenting and greater improvements in several aspects of the parent-child relationship (e.g., anger management and affective behavior towards children) when compared with mothers in a control group or who participated in the regular Strengthening Families Program (i.e., without the mindful parenting component). Similarly, Bögels et al. (2014) found that after an eight-week mindful parenting program (Bögels and Restifo 2014), parents reported decreases in parenting stress and overprotection and rejection of the child, as well as increases in the encouragement of their child's autonomy and co-parenting. In two subsequent studies, Bögels and colleagues evidenced that the mindful parenting program was efficacious in promoting mindful parenting and general mindfulness skills and in reducing parenting stress, parental experiential avoidance and parenting reactivity (Bögels and Restifo 2014).

Several studies have also suggested that mindful parenting is associated with positive psychosocial adjustment of children and adolescents (Bögels et al. 2014; Geurtzen et al. 2015; Parent et al. 2016; Singh et al. 2006; van der Oord et al. 2012). For instance, in a community sample of adolescents and their parents, Geurtzen et al. (2015) found that higher levels of the non-judgmental acceptance dimension of mindful parenting predicted lower levels of depressive and anxiety symptoms in adolescents. Relatedly, Parent et al. (2016) observed that higher levels of dispositional mindfulness in the parents were indirectly associated with lower levels of internalizing and externalizing problems in the child, and this association was mediated by lower levels of negative parenting practices and higher levels of mindful parenting. In addition, studies assessing the effects of mindfulness-based parenting programs on the child's psychological functioning have also provided promising results (Bögels et al. 2014; Bögels and Restifo, 2014; Coatsworth et al. 2010; Srivastava et al. 2011; van der

Oord et al. 2012). For instance, Bögels et al. (2014) found that after completing a mindful parenting program, parents of children with a diagnosed psychiatric disorder reported that their children less often presented internalizing (e.g., depression, anxiety) and externalizing (e.g., behavior problems) problems.

Although the link between mindful parenting and the psychological adjustment of children and adolescents seems to be fairly consistent, the mechanisms explaining this association are still poorly understood. Bringing mindful awareness to the parenting context may promote calm, consistent, and compassionate parenting, which in turn may foster more frequent positive parent-child interactions, which are characterized by a greater responsiveness, flexibility, and sensitivity to the child's needs (Duncan et al. 2009a; Duncan et al. 2015). Therefore, it has been suggested that the adoption of a mindful approach to parenting may facilitate the development and establishment of a secure attachment relationship between the child and their parents (Bögels and Restifo 2014; Duncan et al. 2009a). Because attachment security is a key determinant of the child's psychological functioning (Bowlby 1982; Sroufe 2005), this could explain why mindful parenting has been shown to have positive effects on several of the child's adjustment outcomes. However, to the best of our knowledge, no study has explored these associations.

According to the attachment theory, individual differences in attachment orientations result from the quality of care provided by the attachment figures (Ainsworth et al. 1978; Bowlby 1982, 1988), which means that parenting practices play a major role in the establishment of a secure attachment relationship. In fact, many studies have shown that parental sensitivity and responsivity are strong predictors of attachment security (De Wolff and van IJzendoorn 1997; Lickenbrock et al. 2015; van der Voort et al. 2014). Through repeated interactions with a responsive and sensitive caregiver, the child develops positive internal working models or mental representations of the self as worthy of care and love and of others as trustworthy and consistently available (Bretherton and Munholland 2008). However, if attachment figures are not available, sensitive and responsive to the child's needs, or are inconsistently responsive, then an insecure attachment orientation may develop, and the child gradually learns that he or she is not worthy of love and care and that others are unavailable and unreliable (Ainsworth 1979; Ainsworth et al. 1978; Bowlby 1982).

A secure attachment is one of the strongest protective factors of children's mental health and psychosocial functioning (Ainsworth et al. 1978; Bowlby 1982; Sroufe 2005). For instance, it has been shown that children and adolescents with a secure attachment to parents report higher levels of psychological well-being and life satisfaction (Armsden and Greenberg 1987; Nickerson and Nagle 2004) and higher levels of self-esteem (Pinto et al. 2015), use more adaptive emotion regulation strategies (Kerns et al. 2007; Sroufe 2005), present

greater academic and peer competence at school (Kerns et al. 2015), and establish more positive relationships with their peers (Berlin et al. 2008; Schneider et al. 2001; Sroufe 2005). Several studies have also shown that an insecure attachment relationship with parents increases the risk of developing internalizing and externalizing disorders (Fearon et al. 2010; Groh et al. 2012; Kerns et al. 2011; Kerns and Brumariu, 2014; O'Connor et al. 2014). Therefore, having a secure attachment relationship with parents seems to have a positive effect on several domains of the child's functioning, which may be reflected in a more positive perception of their well-being and quality of life (Eiser and Morse 2001).

In addition to the paucity of studies explaining how mindful parenting is linked to more positive and adjusted outcomes for the child, other important gaps in the literature exist. For instance, research has mainly focused on mothers, and only a few studies have examined father-child dyads or explored gender differences in mindful parenting (e.g., Coatsworth et al. 2015; MacDonald and Hastings 2010; Moreira and Canavarro 2015a, Parent et al. 2016). The few existing studies have shown that mothers demonstrate higher levels of mindful parenting than fathers (Moreira and Canavarro 2015a; Parent et al. 2016). In addition, the majority of studies have only considered specific age groups (for example, adolescence; Duncan et al. 2015; Geurtzen et al. 2015; Lippold et al. 2015), which prevents the investigation of developmental specificities in mindful parenting. It is also important to note that research on mindful parenting has been mainly conducted on clinical samples of children or parents with psychopathology (Beer et al. 2013; Singh et al. 2006; van der Oord et al. 2012) and has been primarily dedicated to the evaluation of the efficacy of mindfulness-based parenting programs (e.g., Bögels et al. 2014; Coatsworth et al. 2010, 2015; van der Oord et al., 2012).

The current study aims to bridge these gaps in the literature and to help advance the knowledge in this field by including a sample of triads composed of a child or adolescent and both parents from the general community and by exploring a mechanism underlying the association between mindful parenting and the well-being of children and adolescents. Therefore, this study has two major goals. First, it intends to explore differences in mindful parenting between mothers and fathers of children (aged between 8 and 12 years old) and adolescents (aged between 13 and 19 years old). Based on previous research, we expect higher levels of mindful parenting among mothers. Second, the current study intends to investigate whether the mindful parenting of both parents is associated with the well-being of the child and whether this association is explained by the child's perception of attachment security to their parents. Moreover, we aim to examine if the child's age moderates the direct and indirect associations in the model. Based on previous investigation, we expect higher levels of mindful parenting to be associated with the perception of a more secure attachment relationship to parents, which in turn

is expected to be related to higher levels of the child's well-being. We did not establish a hypothesis concerning the moderation effect of the child's age because no previous study has examined this model and the moderation effect of the child's age.

Method

Participants

The sample included 243 family triads, which were composed of a child (aged between 8 and 12 years old) or adolescent (aged between 13 and 19 years old) and both parents. The following inclusion criteria were considered for children and adolescents: 1) an age between 8 and 19 years old; 2) the absence of a developmental delay or diagnosis of a psychological disorder (because a developmental delay or psychological disorder can strongly impact parenting practices, including mindful parenting, as well as the well-being of the child); and 3) the ability to understand and answer the questionnaires autonomously. Additionally, only households composed of both parents and the child or adolescent were included in the study (because family dynamics may vary according to the type of family and influence parenting practices as well as children's attachment to parents and their well-being). The main socio-demographic characteristics of the sample are presented in Table 1.

Insert Table 1 about here

Procedures

The sample was collected from three School Units of northern and central Portugal. Authorization for sample collection was obtained from the Portuguese Data Protection Authority and from the Board of Directors of the three School Units. In total, 48 classes of 11 public schools were randomly selected and enrolled in the study. Each student received a packet containing a letter explaining the study, the informed consent form for parents, and the questionnaires. The questionnaires were completed at home and returned to teachers or researchers approximately one week later. In total, 1141 questionnaires were distributed, of which 659 (57.76%) were returned. Given the objectives of this study, 381 families were excluded because only one or two members of the triad completed the questionnaires. In addition, five questionnaires were excluded because the parents reported that the child had an attention deficit hyperactivity disorder, and 10 questionnaires were eliminated because the parents were not married or living together. Finally, 20 triads were invalidated because one or more of the study questionnaires were not answered or were incorrectly answered (e.g., the answers of the mother and the father were identical). Therefore, the final sample was composed of 243 family triads (87.41% of all the family triads and 36.87% of all the returned questionnaires).

Measures

Mindful Parenting. The Portuguese version of the Interpersonal Mindfulness in Parenting Scale (IM-P; Duncan 2007; Moreira and Canavarro 2015b) was used to assess mindful parenting. This scale contains 31 items (e.g., “I rush through activities with my child without being really attentive to him/her”) scored on a 5-point Likert scale, ranging from 1 (*never true*) to 5 (*always true*). In this study, the total score (the mean of all items) was used as a global indicator of mindful parenting, with higher scores suggesting higher levels of mindful parenting. The IM-P has shown adequate reliability and construct validity in American and Dutch samples (de Bruin et al. 2014; Duncan 2007; Duncan et al. 2015). The Portuguese version has also evidenced good psychometric properties, including adequate reliability and construct validity (e.g., Gouveia et al., 2016; Moreira and Canavarro 2015b). In the present sample, the instrument revealed good internal consistency with Cronbach’s alphas of .83 (mothers) and .85 (fathers).

Anxious and depressive symptoms in parents. Because parental psychopathology can negatively affect parenting behaviors (Dix and Meunier 2009; Geurtzen et al. 2015), as well as the child’s well-being and psychosocial adjustment (Cohen and Semple 2010; Parent et al. 2011), parental anxiety and depression symptoms are controlled in the mediation model. Therefore, the parents were evaluated for anxious and depressive symptoms using the Portuguese version of the Hospital Anxiety and Depression Scale (HADS; Pais-Ribeiro et al. 2007; Zigmond and Snaith 1983). Each subscale (anxiety and depression) includes 7 items (e.g., “I feel tense or wound up”; “I still enjoy the things I used to enjoy”) answered in a 4-point Likert scale, ranging from 0 (*not at all/only occasionally*) to 3 (*most of the time/a great deal of the time*). Higher scores on this measure reflect more severe symptomatology. The HADS is one of the most frequently used measures for screening anxious and depressive symptomatology, both in clinical settings and in the general community. Its robust psychometric properties have been demonstrated in a wide range of populations and cultures. The Portuguese version has also demonstrated strong psychometric properties, including adequate reliability and construct validity. In this study, the Cronbach’s alpha values were .81 (anxiety) and .78 (depression) for mothers and .75 (anxiety) and .70 (depression) for fathers.

Children/adolescents’ representations of the relationship with their parents. The attachment to parents scale of the Portuguese self-report version of the People in My Life questionnaire (PIML; Moreira et al. 2015; Ridenour et al. 2006) was used to assess the children’s and adolescents’ representations of the relationships with their parents, and therefore, the extent to which the parents are perceived as secure attachment figures. This scale includes three subscales: (1) Trust, which assesses the degree of mutual respect and trust in the relationship (e.g., “My parents respect my feelings”); (2) Communication, which assesses the quality of

verbal communication with parents (e.g., “I talk to my parents when I am having a problem”); and (3) Alienation, which assesses negative affective-cognitive experiences in the relationship with parents, such as feelings of anger, isolation, and alienation (e.g., “I feel angry with my parents”). Because the three subscales are strongly interrelated and load on a general factor of attachment, the PIML is frequently used as a global indicator of secure attachment. The global score of attachment is obtained by summing all items, after reverse-coding the items from the Alienation subscale. The parents scale is composed of 21 items answered on a 4-point Likert scale, ranging from 1 (*almost never or never true*) to 4 (*always or almost always true*), with higher scores indicating more positive representations of the parents as secure attachment figures. The PIML questionnaire was developed through the adaptation of the Inventory of Parent and Peer Attachment (IPPA), which is the most widely used self-report questionnaire to measure attachment representations in adolescence (Armsden and Greenberg, 1987; Wilson & Wilkinson, 2012). The original version of the PIML has shown adequate reliability, with a Cronbach’s alpha value for the total score above .70, and adequate construct validity. The Portuguese version confirmed the factor structure of the original PIML and has also shown adequate reliability and construct validity. In the current study, the Cronbach alpha was .89.

Well-being of children and adolescents. The Portuguese self-report version of the KIDSCREEN-10 index (Matos et al. 2012; Ravens-Sieberer et al. 2010) was used to assess the children’s and adolescents’ perception of their well-being. This questionnaire covers physical, emotional, mental, social and behavioral components of well-being and functioning and includes 10 items that are answered on a 5-point Likert scale ranging from 1 (*never/not at all*) to 5 (*always/extremely*). The sum of all items provides a global index of well-being or quality of life. In the present study, we used standardized scores (0-100), with higher results suggesting a better perception of well-being. The KIDSCREEN-10 index is a psychometrically sound, cross-cultural and standardized instrument (Ravens-Sieberer et al. 2010). The reliability and temporal stability of the original version were adequate, and the instrument demonstrated good criterion and construct validity (convergent, discriminant, and known-groups). The validation study of the Portuguese version (Matos et al. 2012) confirmed the original unidimensional structure of the scale, demonstrated its invariance across age groups, nationalities, and socio-economic levels, and showed adequate reliability. In the present sample, the Cronbach’s alpha was .79.

Data Analyses

All statistical analyses were conducted using the IBM SPSS Statistics for Mac (version 20.0) and the PROCESS computation tool (Hayes 2013). Considering the non-independence of the observations between the

parents within a family (Cook and Kenny 2005), statistical analyses were conducted using the family as the unit of analysis. Therefore, in the database of the present study, each family triad was the unit of analysis, and each participant's score was a different variable (e.g., parent's gender was considered a within-subjects variable).

First, comparisons between fathers and mothers in mindful parenting and in anxiety and depressive symptoms were performed through a mixed ANOVA (for mindful parenting) and a mixed MANOVA (for anxiety and depressive symptoms), with gender as a within-subjects variable and the child's age group as a between-subjects variable. If a significant multivariate effect was obtained in the MANOVA, univariate tests were performed for each dependent variable. Additionally, differences between children and adolescents in their attachment to parents and well-being were tested through one-way ANOVAS. The Levene's test (simple ANOVA) and Box's M test (mixed ANOVA and MANOVA) were used to verify if the statistical assumptions of the homogeneity of variance and the homogeneity of variance-covariance matrices have been met, respectively. Second, Pearson's correlations were computed among all study variables. Cohen's (1988) guidelines were used to describe the effect sizes of Pearson's correlations (i.e., small for correlations around .10, medium for those near .30, and large for correlations at .50 or higher).

Finally, conditional process analyses were conducted with the PROCESS to examine whether the hypothesized indirect effects of mindful parenting of both parents (independent variables–IV) on the child's well-being (dependent variable–DV) through attachment to parents (mediator–M) were moderated by the child's age. Before conducting these analyses, correlations between the DV and socio-demographic variables (child's age and gender; parents' age, educational level and professional status) were performed to identify potential covariates that should be included in the model. Additionally, anxiety and depression were introduced as covariates to control for their effects on mindful parenting and the outcomes of children and adolescents. Hence, a moderated mediation model was estimated (model 59 in Hayes 2013), in which the moderator was hypothesized to affect the path linking the IVs and the M (path *a*), the path linking the M and the DV controlling for the effect of the IVs (path *b*), and the direct effect from the IVs to the DV holding constant the mediator (path *c'*). In the absence of significant interactions, the moderator was removed and a simple mediation model was estimated (model 4 in Hayes 2013). Indirect effects were probed using a bootstrapping procedure (10000 samples), which creates 95% bias-corrected and accelerated confidence intervals (BCaCIs) of the indirect effects. An indirect effect was considered significant if zero was not contained within the lower and upper CIs.

Results

First, differences between mothers and fathers of children and adolescents in mindful parenting and in anxiety and depressive symptoms were explored. With regard to mindful parenting, significant gender differences were found [Wilk's Lambda = .967, $F(1, 241) = 8.21, p = .005, \eta^2_p = .033$], with mothers reporting higher levels of mindful parenting than fathers (see Table 2). With regard to the main effect of the child's age group, no significant differences were found between parents of children and parents of adolescents [$F(1, 241) = 0.81, p = .369, \eta^2_p = .003$]. Additionally, no significant interaction was found between gender and age group [Wilk's Lambda = .997, $F(1, 241) = 0.79, p = .375, \eta^2_p = .003$].

With regard to anxious and depressive symptoms, a significant multivariate gender effect was found [Wilk's Lambda = .933, $F(2, 240) = 8.58, p < .001, \eta^2_p = .067$]. As presented in Table 2, the subsequent univariate analyses revealed a significant difference between mothers and fathers only for anxious symptoms, with mothers reporting higher levels of anxious symptoms than fathers. The multivariate age group effect [Wilk's Lambda = .995; $F(2, 240) = 0.57, p = .569, \eta^2_p = .005$] and the multivariate interaction effect [Wilk's Lambda = .990, $F(2, 240) = 1.22, p = .297, \eta^2_p = .010$] were not significant (the univariate statistics are presented in Table 2).

Insert Table 2 about here

Differences between children and adolescents in their attachment to parents and well-being were also explored. Significant differences were found between children and adolescents in attachment to parents [$F(1, 241) = 8.62, p = .004, \eta^2_p = .035$] and in well-being [$F(1, 241) = 22.43, p < .001, \eta^2_p = .085$]. Specifically, children perceived their relationship with their parents as more secure than adolescents (children: $M = 3.50, DP = 0.41$; adolescents: $M = 3.33, DP = 0.47$), and children reported higher levels of well-being than adolescents (children: $M = 78.13, DP = 13.26$; adolescents: $M = 69.47, DP = 15.18$).

Bivariate associations were explored among study variables (see Table 3). Overall, the mindful parenting of mothers and fathers was positively correlated with each other and negatively correlated with the anxiety and depressive symptoms of both parents, with the exception of a correlation between the mother's mindful parenting and the father's anxiety symptoms, which was not significant. Moreover, both mindful parenting of both parents was positively correlated with the child's attachment and well-being. Finally, a significant correlation was found between attachment and well-being.

Insert Table 3 about here

Before testing the conditional process model, bivariate associations between attachment and well-being and the main sociodemographic variables were analyzed to identify potential covariates that should be introduced into the model. The child's well-being was significantly correlated with the child's age ($r = -.32, p < .001$), mother's educational level (0 = basic or secondary education; 1 = higher education; $r = .22, p < .001$), father's educational level ($r = .17, p = .008$), mother's age ($r = -.13, p = .041$), or father's age ($r = -.18, p = .007$). No significant correlations were found between the child's well-being and the mother's professional status (0 = active; 1 = non active; $r = .07, p = .285$), father's professional status ($r = .03, p = .629$), or child's gender ($r = -.13, p = .052$). Considering the significant associations between the child's age and the parents' age (mother: $r = .48, p < .001$; father: $r = .51, p < .001$), and between both parents' ages ($r = .76, p < .001$), we decided to not include the parents' age as a covariate to prevent a multicollinearity problem. Therefore, among the sociodemographic variables, only the parents' educational level was included as a covariate in the model. The anxiety and depressive symptoms of parents were also entered as covariates to control for their effect, and the child's age was entered as a moderator.

The conditional process analyses demonstrated that the child's age did not influence any of the associations considered in the model. Specifically, the interaction between age and the mindful parenting of both parents in the path *a* (father: $b = -0.02, SE = 0.02, p = .396, 95\% CI = -0.06/0.03$; mother: $b = -0.001, SE = 0.02, p = .974, 95\% CI = -0.05/0.05$) and the interaction between age and attachment in the path *b* (father: $b = -0.06, SE = 0.63, p = .919, 95\% CI = -1.30/1.17$; mother: $b = 0.06, SE = 0.61, p = .922, 95\% CI = -1.13/1.25$) were not significant. Therefore, the indirect effect of mindful parenting of both parents on the child's well-being was not moderated by the child's age. Similarly, no significant interaction was found between age and the mindful parenting of both parents in the direct effect (father: $b = 0.001, SE = 0.68, p = .999, 95\% CI = -1.34/1.34$; mother: $b = -0.91, SE = 0.70, p = .199, 95\% CI = -2.29/0.48$). Because the child's age did not moderate any of the associations in the model, a simple mediation model was examined and the child's age was introduced in the model as a covariate.

As presented in Figure 1, mindful parenting of the father and mother were significantly associated with the child's attachment (father: $b = 0.19, SE = 0.08, p = .018, 95\% CI = 0.03/0.34$; mother: $b = 0.19, SE = 0.09, p = .031, 95\% CI = 0.02/0.37$) in a model explaining 13.41% of the attachment variance, $F(9, 233) = 4.01, p < .001$. In turn, attachment was significantly associated with the child's well-being ($b = 16.62, SE = 1.86, p < .001, 95\% CI = 12.95/20.29$), in contrast to mindful parenting of the father ($b = 2.75, SE = 2.27, p = .226, 95\% CI = -1.72/7.23$) and mother ($b = 0.20, SE = 2.54, p = .936, 95\% CI = -4.80/5.21$), in a model explaining 37.60% of the

well-being variance, $F(10, 232) = 13.98, p < .001$. Despite the absence of significant direct effects, a significant indirect effect of mindful parenting on the child's well-being through attachment was found for both parents (fathers: $b = 3.12, SE = 1.24, 95\% \text{BCaCI} = 0.82/5.79$; mothers: $b = 3.20, SE = 1.59, 95\% \text{BCaCI} = 0.21/6.46$).

Insert Figure 1 about here

Discussion

The present study aimed to examine the differences between fathers and mothers of children and adolescents in mindful parenting and to determine whether this parenting approach was associated with the child's perception of well-being through the perceived security in the attachment relationship to parents. Moreover, this study explored whether the associations among mindful parenting, attachment, and well-being were moderated by the child's age.

As expected, mothers presented higher levels of mindful parenting than fathers. This result suggests that mothers tend to be more aware and connected to the present moment in parent-child interactions and more sensitive and responsive to their child's needs than fathers. This result is consistent with recent studies on mindful parenting (Moreira and Canavarro 2015a; Parent et al. 2016) and with previous research suggesting that mothers are usually more responsive and more emotionally available to their child than fathers (Kochanska and Aksan 2004; Volling et al. 2002). This difference between mothers and fathers can also be explained by individual, biological and cultural parenting-related gender differences. First, previous studies showed that women are more empathetic than men (Rueckert and Naybar 2008), which may allow them to be more responsive and sensitive to their child's needs. Second, mothers are biologically and evolutionarily better prepared than men to assume the caregiving role (Bell 2001). For instance, the increase in the production of several hormones, such as oxytocin, during the pregnancy and lactation periods facilitates caregiving, making mothers more sensitive to their child's needs (Dozier 2000). Third, it is important to note that although men and women currently share many domestic responsibilities, women continue to be more involved in the childcare than fathers (McBride et al. 2002). Although fathers are important attachment figures for children, in general, they do not assume the role of the primary caregiver because they usually do not spend as much time with their child and are not as involved in caregiving tasks as mothers. These individual, biological and cultural differences may lead women to be more willing than men to adopt a mindful approach in parenting. With regard to differences between parents of children and parents of adolescents, no significant differences in mindful parenting were found. Although this study used a cross-sectional design, these results may suggest that mindful

parenting is an ability that is not dependent on the child's developmental phase. Contrary to what could be expected, the challenges of parenting an adolescent, which often involves some strain in the parent-child relationship (e.g., higher conflict, greater expression of negative affect during parent-child interactions; Laursen et al. 1998), does not necessarily lead to a decreased ability in mindful parenting. In fact, it is at this stage that the adoption of this parenting approach may be more relevant (Duncan et al. 2009a). Future longitudinal studies are needed to understand whether and how this parenting approach may vary across different phases of the child's development.

Although it was not a goal of this study, we observed that mothers presented higher levels of anxiety symptoms than fathers. This is consistent with the literature that shows that women usually present poorer psychological adjustment than men (e.g., Bekker and van Mens-Verhulst 2007). In addition, mothers are usually more involved in childcare and experience higher levels of parenting stress than fathers (Riina and Feinberg 2012), which may also explain their increased levels of anxiety. We have also explored differences between children and adolescents in attachment and well-being. In line with previous studies, we found that adolescents perceived their relationship with their parents as less close than children. Adolescence is a transitional period characterized by an increased demand for autonomy and independence and by reorganization in parent-child dynamics. Although parents still continue to be important attachment figures, in this phase peers assume an increasingly important role as a source of comfort and support, becoming new attachment figures (Allen 2008). Therefore, it is not surprising that adolescents report lower levels of perceived security than children. Furthermore, adolescents have also reported lower levels of well-being. This finding is consistent with previous studies (Nickerson and Nagle 2005) and can be due to the changes occurring in this developmental stage (e.g., cognitive, emotional, social, familiar), which can compromise their well-being in different areas of life. These gender and developmental differences emphasizes the need and relevance for exploring the mindful parenting of both parents in the proposed mediation model, controlling the levels of anxious and depressive symptomatology in parents, and exploring the moderating role of the child's age.

According to our hypothesis, the child's perception of security in the relationship with their parents mediated the link between the mindful parenting of both parents and the child's well-being. This model suggests that parents who adopt a mindful attitude in the parent-child relationship are more likely to have a child who reports a more secure perception of the attachment relationship with their parents, and as a result, a better well-being. Mindful parenting is a parenting approach that has the key ingredients that promote the development of a secure attachment in children. Parents reporting higher levels of mindful parenting are more present in the

parent-child interactions, and as a result, they tend to adopt a less reactive posture and to be more attentive, available, and consistently responsive to their child's needs. Furthermore, they tend to be more caring and compassionate towards their children (Coatsworth et al. 2010; Dumas 2005; Duncan et al. 2009b; Kabat-Zinn and Kabat-Zinn 1997). This parenting attitude can therefore facilitate and promote the development of a secure attachment relationship (Duncan et al. 2009a) because the children will probably learn that their caregivers are available to provide them protection and support when needed (Bowlby 1982). In turn, these positive expectations of availability, sensitivity and responsiveness of the attachment figures can have a positive impact on the child's well-being, as suggested by the results of this study. In fact, our results are in agreement with previous investigations that have consistently shown that children with secure attachment relationships with their caregivers present better adjustment and psychosocial functioning in several areas of their lives (e.g., Ainsworth et al. 1978; Armsden and Greenberg 1987; Bowlby 1982; Kerns et al. 2011; Kerns and Brumariu 2014; Nickerson and Nagle 2004; Sroufe 2005).

Importantly, our results demonstrated that the indirect effect of mindful parenting on a child's well-being was significant for both fathers and mothers. Although fathers reported lower levels of mindful parenting than mothers, their contribution to the child's well-being seems to be equally important. This result corroborates previous studies showing that the father's involvement in childcare plays an important role in the child's development and well-being (Flouri and Buchanan 2003). Finally, our findings indicate that the relationships among the variables in the model were not moderated by the child's age. Therefore, regardless of the developmental stage, mindful parenting seems to play an important role in the child's well-being through the promotion of a more secure attachment relationship. This result is consistent with the study of Parent et al. (2016), which evidenced that mindful parenting was associated with dispositional mindfulness, parenting practices, and the child's internalizing and externalizing problems in a path model that was equally significant in three developmental stages (i.e., young childhood, middle childhood, and adolescence).

Limitations, Strengths, and Clinical Implications

The present study has several limitations that should be noted. First, although the proposed model and the direction of variables is based on the literature, the cross-sectional design of the study does not allow the establishment of causal relationships between the variables. Future studies should test these associations over time in a longitudinal design. Second, the representativeness of the sample cannot be guaranteed because children and adolescents were recruited from only three school units, two of them in the central region of

Portugal and the other in the northern region of the country. Third, the majority of parents have only completed secondary education, with few of the participants reporting completion of higher education. Given that the parents' educational levels were shown correlated with their child's well-being, it would be relevant for future studies to include a larger number of participants with higher education. Fourth, although the measures used in this study were adapted to the participants' ages, the validity of our results can be compromised because we have used only self-report instruments, which can be influenced by social desirability factors and do not reliably reflect what participants feel or think. Therefore, and particularly for the assessment of the representations of attachment, it would be important to use different assessment methods (for example, observational). At last, we should note that the People in My Life questionnaire assesses a child's attachment to both parents simultaneously, which can be a limitation because it cannot distinguish eventual differences in attachment patterns to each parent. According to some studies, attachment to the father and mother can be differently associated with specific outcomes of the child (e.g., Marcus and Betzer 1996). Therefore, future studies should assess a child's attachment to each parent separately. Despite these limitations, the current study has several strengths. It provides an innovative contribution to the literature by exploring a mechanism explaining how mindful parenting can promote a child's well-being. Moreover, this study explores these associations in a sample comprising both parents, which allowed for gender comparisons on mindful parenting and an analysis of the different roles for each parent in the model. The inclusion of children in two different developmental stages (childhood and adolescence) is another strength of the study because this allowed for the investigation of developmental specificities on mindful parenting.

With regard to the clinical implications of this investigation, the results of this study reinforce the importance of developing or adapting mindful parenting programs (e.g., Bögels and Restifo 2014) or including mindful parenting strategies in existing parenting training programs (e.g., Coatsworth et al. 2015) that are aimed at promoting a more secure parent-child relationship and increasing the child's well-being in normative contexts. The majority of the existing mindful parenting programs are directed at parents whose children, or the parents themselves, are referred to mental health care (e.g., Bögels and Restifo 2014). The present study, however, highlights the relevance of implementing a mindful parenting program not only in clinical samples but also in the general community (e.g., in school settings). Mindful parenting training programs can be useful in helping parents and children reduce psychopathological symptomatology, distress, or maladaptive behaviors, as well as promoting their well-being and positive parenting practices. This study also suggests that mindful parenting programs may be particularly important for mothers and fathers of children reporting less secure attachment

relationships or lower levels of well-being. Finally, our results indicate that the involvement of fathers in parenting programs is especially important because they reported lower levels of mindful parenting than mothers, but their mindful parenting proved to be significantly associated with their child's attachment and well-being.

To conclude, the present study adds to the scarce existing literature aimed at understanding the mechanisms underlying the association between mindful parenting and the child's adjustment outcomes. Because mindful parenting is characterized by parenting practices that promote responsive and sensitive care to the child's needs, it seems to facilitate the establishment of secure relationships. Children who perceive a secure attachment to their parents, in turn, will demonstrate a better adjustment in several areas of functioning, which can be reflected in higher levels of well-being. However, other variables can also play important roles in these associations, and therefore, further studies are necessary to continue to explore how mindful parenting promotes more positive outcomes in children and adolescents, focusing on the "active ingredients" of these associations.

Compliance with Ethical Standards

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. In addition, the study was approved by the Portuguese Data Protection Authority and the Board of Directors of the School Units.

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

Informed consent: Informed consent was obtained from all the parents included in the study.

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Table 1. *Sociodemographic characteristics of the sample*

	Mother	Father	Child
	<i>N</i> = 243	<i>N</i> = 243	<i>N</i> = 243
	<i>M</i> (<i>DP</i>); range	<i>M</i> (<i>DP</i>); range	<i>M</i> (<i>DP</i>); range
Age (years)	41.95 (5.57); 28-59	44.31 (6.15); 28-63	12.27 (3.14); 8-19
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Child's Age Category			
Child (8 – 12 years old)	-	-	124 (51%)
Adolescent (13 – 19 years old)	-	-	119 (49%)
Child's Gender			
Female	-	-	139 (57.20%)
Male	-	-	104 (42.80%)
Parents' Education			
Basic or secondary studies	161 (66.30%)	188 (77.40%)	-
Higher education (bachelor's, master's or doctoral degree)	82 (33.70%)	55 (22.60%)	-
Parents' Professional Status			
Active (employed, student, other)	193 (79.40%)	217 (89.30%)	-
Non-active (unemployed, retired, housewife or domestic)	49 (20.20%)	22 (9.10%)	-
Missing information	1 (0.40%)	4 (1.70%)	-

Table 2. Comparisons between mothers and fathers for mindful parenting and psychopathology symptoms

	Mothers		Fathers		Gender		Age		Interaction	
	<i>N</i> = 243		<i>N</i> = 243		Effect		Effect		Effect	
	Children	Adolescents	Children	Adolescents						
	<i>n</i> = 124	<i>n</i> = 119	<i>n</i> = 124	<i>n</i> = 119						
	<i>M</i> (<i>SD</i>)	<i>F</i>	η^2_p	<i>F</i>	η^2_p	<i>F</i>	η^2_p			
Mindful Parenting	3.72 (0.36)	3.66 (0.37)	3.61 (0.37)	3.60 (0.42)	8.21**	.033	0.81	.003	0.79	.003
Anxiety symptoms	6.96 (3.68)	7.74 (3.62)	6.31 (3.13)	6.27 (3.43)	16.41***	.064	1.06	.004	2.43	.010
Depressive symptoms	4.68 (3.47)	5.04 (3.61)	4.44 (2.94)	4.38 (3.23)	3.09	.013	0.19	.001	0.71	.003

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

Table 3. *Correlations among study variables*

	1	2	3	4	5	6	7
1. Mindful Parenting (mother)	-						
2. Mindful Parenting (father)	.36**	-					
3. Anxiety (mother)	-.39**	-.16*	-				
4. Depression (mother)	-.32**	-.22**	.65**	-			
5. Anxiety (father)	-.12	-.31**	.31**	.21**	-		
6. Depression (father)	-.21**	-.39**	.19**	.28**	.59**	-	
7. Children's attachment	.22**	.24**	-.04	-.07	-.08	-.14*	-
8. Children's well-being	.15*	.18**	-.02	-.06	-.02	-.04	.56**

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

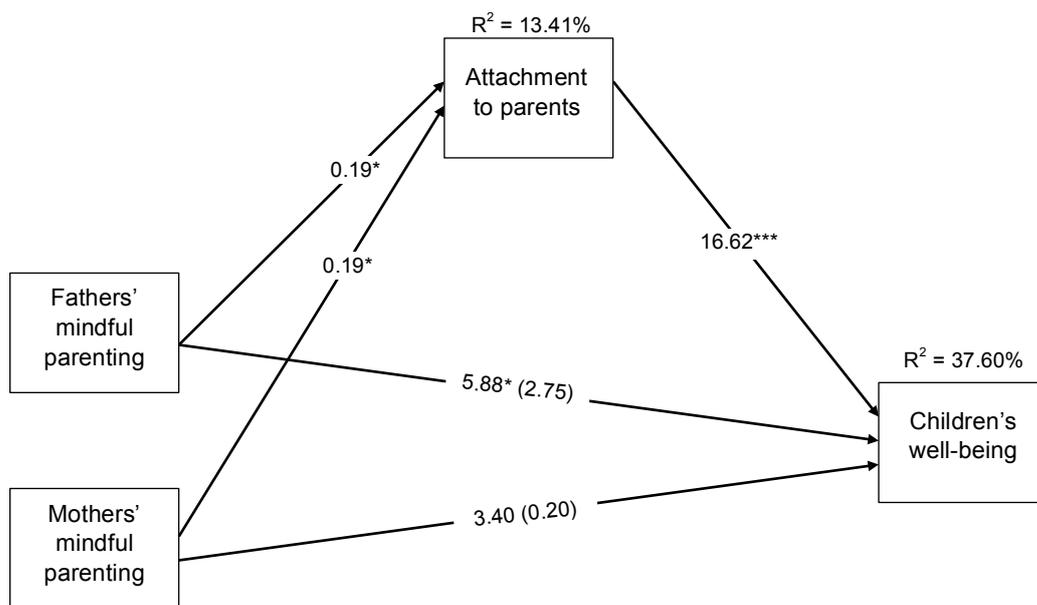


Fig. 1 Statistical diagram of the simple mediation model for the presumed association between the mindful parenting of both parents and the child's well-being through the attachment to parents

Note. Path values represent unstandardized regression coefficients. In the arrows linking the mindful parenting of fathers and mothers and the child's well-being, the value outside the parentheses represent the total effect of mindful parenting on well-being. The value in parentheses represents the direct effect of mindful parenting on well-being after the inclusion of the mediator.

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