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Mothers

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Psychometric Properties of the Interpersonal Mindfulness in Parenting Scale in a Sample of Portuguese

Parents

Abstract

The Interpersonal Mindfulness in Parenting scale (IM-P) is a self-report questionnaire for measuring mindful parenting. The goal of this study was to explore the psychometric properties and factor structure of the Portuguese version of the IM-P. Three studies were conducted. The first study included 300 mothers of children/adolescents; the second study included 323 mothers of children/adolescents; and the third study included 237 mothers and 142 fathers of children/adolescents. In study 1, the exploratory factor analysis and the reliability analyses resulted in a five-factor structure. Furthermore, the scale scores showed adequate internal consistency and correlated as expected with measures of self-compassion, parenting stress, and perceived stress, evidencing adequate convergent validity. In study 2, the five-factor structure was confirmed through a confirmatory factor analysis. In study 3, the construct validity of the scale (convergent and known-groups) was further explored. Significant correlations were found between the IM-P and measures of self-compassion, parenting styles, and anxious/depressive symptomatology. Mothers reported higher levels of compassion for the child and emotional awareness of the child but lower levels of non-judgmental acceptance of parental functioning than fathers. This study demonstrated that mindful parenting can be measured through the assessment of five dimensions (Listening with Full Attention, Compassion for the Child, Non-judgmental Acceptance of Parental Functioning, Self-regulation in Parenting, and Emotional Awareness of the Child) and confirmed that the Portuguese version is an adequate measure of this construct.

Keywords: IM-P; Mindful parenting; Mindfulness; Parenting; Portuguese version.

Introduction

Mindful parenting pertains to the application of mindfulness in the context of parenting and can be broadly defined as the practice of intentionally bringing mindful awareness to everyday parent-child interactions (Bögels and Restifo 2014; Kabat-Zinn and Kabat-Zinn 1997). Therefore, this parenting approach translates into a set of parental practices or skills that seek to enhance moment-to-moment awareness, compassion, and non-judgmental acceptance (of the self and of the child) in parent-child interactions (Duncan et al. 2009). Mindful parents are usually more sensitive and responsive to the child's needs and attempt to be fully present when interacting with their child by adopting an attitude of acceptance and kindness (Bögels and Restifo 2014) as well as regulating their own emotions and behaviors to interact with the child in accordance with their parenting values and goals (Duncan et al. 2009).

Although Kabat-Zinn and Kabat-Zinn (1997) addressed this parenting approach almost 20 years ago, only recently has the scientific community become interested in studying the effects of mindful parenting on the psychosocial functioning of children and parents and on the parent-child relationship, both in normative and in clinical contexts. For instance, recent studies have suggested that mindful parenting is associated with more positive parenting styles and practices (de Bruin et al. 2014; Gouveia et al. 2016; Parent et al. 2016; Williams and Wahler 2010), less parenting stress (Beer et al. 2013; Bögels and Restifo 2014; Bögels et al. 2014; Gouveia et al. 2016), as well as with more positive interactions and higher quality relationships between parents and children (Coatsworth et al. 2010; Coatsworth et al. 2015; Duncan et al. 2009; Duncan et al. 2015; Lippold et al. 2015). In addition, several studies have suggested that mindful parenting may promote more positive psychosocial functioning of children and adolescents (Geurtzen et al. 2015; Parent et al. 2016; Singh et al. 2007) and that mindfulness-based parenting interventions may decrease children's psychopathological problems and promote their psychological adjustment (Bögels et al. 2014; Bögels and Restifo 2014; Coatsworth et al. 2010; Meppelink et al. 2016; van der Oord et al. 2012).

Based on the research developed on mindfulness and on mindfulness-based interventions (Baer 2003; Kabat-Zinn 2003), Duncan et al. (2009) proposed a theoretical model of mindful parenting with the aim of explaining how the adoption of this parenting approach can have positive effects on the parent-child relationship and on the psychological functioning of parents and children. According to these authors, mindful parenting results from the development of five important parenting qualities: (1) listening with full attention to the child (i.e., directing complete attention to the child and being fully present during parent-child interactions); (2) adopting an attitude of non-judgmental acceptance toward the self and the child (i.e., accepting the

characteristics and behaviors of the child, the self as a parent and the challenges of parenting); (3) developing emotional awareness of the self and the child (i.e., noticing and correctly identifying one's emotions when interacting with the child as well as the child's emotions); (4) exerting self-regulation in the parenting relationship (i.e., during parent-child interactions, being able to pause before reacting in order to choose parenting behaviors that are in accordance with values and goals); and (5) directing compassion toward the self as a parent and toward the child (i.e., being kind to and supportive of the child, sensitive and responsive to the child's needs, and compassionate toward oneself as a parent).

The Interpersonal Mindfulness in Parenting scale (IM-P) was developed to assess these five dimensions and is the only self-report instrument that was specifically developed to assess this parenting approach. The IM-P was initially by Duncan (2007) based on existing measures of mindfulness (i.e., the Kentucky Inventory of Mindfulness Skills by Baer et al. (2004); the Mindful Attention and Awareness Scale by Brown and Ryan (2003); and the mindfulness subscale of the Self-compassion Scale by Neff (2003)). The initial version of the scale was composed of 10 items, some new and some adapted from the abovementioned measures, and it intended to assess three hypothesized underlying dimensions: awareness and present-centered attention directed to the child and the self, openness and non-judgmental receptivity to children's thoughts and emotions, and non-reactivity to the culturally accepted norms regarding children's behavior. The factor structure of this 10-item version was tested through a confirmatory factor analysis (CFA), which demonstrated that a hierarchical model with four first-order factors (Present-centered Attention, Present-centered Emotional Awareness, Non-reactivity, and Non-judgmental Acceptance) and one second-order factor of mindful parenting, with only 8 items, was the structure that best fit the data. Cronbach's alphas ranged from .45 (emotional awareness) to .66 (non-judgmental acceptance), and the total scale presented a Cronbach's alpha coefficient of .72 (Duncan 2007). Subsequently, with the aim of more thoroughly assessing the five dimensions proposed in the mindful parenting theoretical model (Duncan et al. 2009), the authors expanded this brief questionnaire to a 31-item questionnaire that was hypothesized to have five subscales: (1) Listening with Full Attention to the Child (5 items); (2) Non-judgmental Acceptance of the Self and the Child (7 items); (3) Emotional Awareness of the Self and the Child (6 items); (4) Self-regulation in the Parenting Relationship (6 items); and (5) Compassion for the Self and the Child (7 items).

The psychometric properties of the 31-item IM-P scale were only investigated by de Bruin et al. (2014) in a study composed of three distinct studies that aimed to validate the Dutch version of the questionnaire. In the first study, the authors conducted an exploratory factor analysis in a sample of 866 mothers, which yielded a six-factor structure that was different from the original English structure. In the second study, this correlated six-

factor structure was confirmed through a CFA in a different sample of 199 mothers. The six dimensions of the Dutch IM-P were named as follows: (1) Listening with Full Attention (composed of the same five items as the original subscale); (2) Compassion for the Child (composed of the three child-focused items from the Compassion for the Self and the Child original subscale and three items from the Non-judgmental Acceptance of the Self and the Child original subscale; all items assess the caring, supportive, and sensible behaviors of parents toward their children); (3) Non-judgmental Acceptance of Parental Functioning (composed of the four parent-focused items from the Compassion for the Self and the Child original subscale and two items from the Non-judgmental Acceptance of the Self and the Child original subscale; all items assess parents' self-criticism in relation to their parenting skills and behaviors); (4) Emotional Non-Reactivity in Parenting (composed of three items from the Self-regulation in the Parenting Relationship original subscale and two other items assessing parents' ability to not automatically respond to their child's behavior); (5) Emotional Awareness of the Child (composed of the three child-focused items from the Emotional Awareness of the Self and the Child original subscale; items assess parents' awareness of their child's emotions); and (6) Emotional Awareness of the Self (composed of three items from the Self-regulation in the Parenting Relationship original subscale and one item from the Non-judgmental Acceptance of Parental Functioning; items assess parents' awareness of their own emotions). Of note, items 3 and 6 were removed from the scale due to their poor psychometric properties and, consequently, the final scale comprised only 29 items.

The factor structure of the Dutch version of the IM-P resulted in a clear separation of the child-focused items and of the parent- or parenting-focused items. Although some subscales in the original English version combined some items pertaining to the child, the parents, and parental functioning (such as Emotional Awareness of the Self and the Child, Non-judgmental Acceptance of the Self and the Child and Compassion for Self and Child subscales), in the Dutch version, items from these subscales loaded on factors that clearly distinguished the child and parent domains. de Bruin et al. (2014) argued that although child- and parent-focused items may be theoretically related, parents may present different scores on items pertaining to their own functioning and items pertaining to their child's functioning, which may result in a differentiation of factors. For instance, whereas parents might be compassionate toward their child, they might not be equally compassionate toward themselves if they have, for example, a history of traumatic or insensitive care in their childhood.

The authors of the Dutch version of the IM-P provided evidence of the construct validity of the scale by showing significant correlations between the IM-P subscales and measures of optimism, depression, quality of life, parenting styles, and mindfulness. The same significant correlations between the mindful parenting

subscales and general mindfulness skills and parenting styles were found in a third sample of 112 mothers of children with diabetes. With regard to the internal consistency of the subscales, adequate Cronbach's alpha values were found in the three samples for most of the subscales and for the total score (.89 in Study 1 and .85 in Studies 2 and 3). However, the Emotional Awareness of Self subscale presented values below the recommendations (.54, .60, and .45 in Studies 1, 2, and 3, respectively), as did the Non-judgmental Acceptance of Parental Functioning subscale (.56 and .68 in Studies 2 and 3, respectively). In the remaining subscales, Cronbach's alphas ranged from .71 to .83 (de Bruin et al. 2014).

Although research on mindful parenting has been growing rapidly and several studies have employed the IM-P scale to explore associations between variables and to assess intervention outcomes, to the best of our knowledge, only de Bruin et al. (2014) have investigated the psychometric properties of the 31-item scale. Given the inconsistency between the English and Dutch factor structures, additional studies are needed to better understand the factor structure of this scale. In addition, validation studies in different cultures are essential to further explore the reliability and validity of this questionnaire and its cross-cultural adequacy. These studies are crucial for establishing the psychometric robustness of the questionnaire and enabling its adequate utilization in other populations. The main goal of the present study is to examine the factor structure of the Portuguese version of the IM-P and to present its psychometric properties. Therefore, three studies were conducted to (1) explore the factor structure of the Portuguese version of the IM-P and its reliability and convergent validity; (2) confirm the adequacy of the factor structure in a different sample of mothers; and (3) further examine the scale's reliability and construct validity (convergent and known-groups) in a third sample of mothers and fathers.

Study 1

The aim of the first study was to explore the factor structure of the Portuguese version of the IM-P through an exploratory factor analysis. In addition, in this study, we intended to examine the reliability of the IM-P subscales and explore their convergent validity by analyzing correlations between the IM-P subscales and measures of self-compassion, perceived stress, and parenting stress. We expected to demonstrate the convergent validity of the scale by finding positive correlations between mindful parenting dimensions and self-compassion and negative correlations between mindful parenting dimensions and perceived stress and parenting stress.

Method

Participants

The sample included 300 mothers of school-aged children. The mothers had a mean age of 36.68 years ($SD = 5.47$; range: 20 - 54) and an average of 1.54 children ($SD = 0.67$; range: 1 - 5). The majority were married

or living with a partner (85%), were employed (86.3%), had completed graduate or post-graduate studies (84.3%), and lived in urban areas (78.3%).

Procedure

Participants were invited to participate in a study about mindful parenting and its correlates. To be included in the study, participants had to be the mother or the father of at least one child or adolescent aged between 1 and 18 years old. The assessment protocol was provided to the participants through a data collection website (LimeSurvey®). The first page of the online protocol consisted of a description of the study objectives, the inclusion criteria, and the ethical issues underpinning the study. Participants were informed that their participation in the study was anonymous and that no information that could identify them was collected. Participants were also informed that their participation in the study was voluntary and that no monetary or other compensation would be given. Only those who agreed to the study conditions completed the questionnaire. The survey link was shared on social networks, including parenting forums and Facebook® pages. Because most parents had more than one child, before beginning the survey they were instructed to select one of their children to answer the questionnaires pertaining to parenting dimensions. These questionnaires were answered in relation to children (50.7% boys) with a mean age of 5.86 years ($SD = 4.34$; range: 1 - 18). Because only four fathers completed the survey, they were excluded from the analyses.

Measures

Mindful Parenting. The original version of the IM-P scale has 31 items rated on a 5-point Likert scale that ranges from 1 (*never true*) to 5 (*always true*). After reverse coding some items, the total score may be obtained by summing all the items, with higher scores indicating higher levels of mindful parenting. The Portuguese version of the IM-P scale was developed through a forward-backward translation procedure. After obtaining authorization from the authors of the original version to translate and validate the questionnaire, three Portuguese researchers independently translated the items of the IM-P. The three translated versions were compared, and after discussing and analyzing their similarities and differences, the first Portuguese version was obtained. This preliminary version was subsequently translated back into English by another researcher in psychology who is fluent in English and was not familiar with the questionnaire. Finally, the original and the back-translated versions were compared, and translation difficulties were analyzed and resolved between translators to obtain a comprehensible instrument that was conceptually consistent with the original.

Self-compassion. Levels of self-compassion were assessed by the Portuguese version of the Self-compassion Scale – Short Form (SCS-SF; Castilho et al. 2015; Raes et al. 2011). This instrument has 12 items

(e.g., “I try to be understanding and patient toward those aspects of my personality I don’t like”) rated on a 5-point Likert scale that ranges from 1 (*almost never*) to 5 (*almost always*) and measures six components of self-compassion (i.e., self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification). After reverse coding negative items, it is possible to obtain a global measure of self-compassion by estimating the mean of the 12 items, with higher scores indicating higher self-compassion. The original SCS-SF (Raes et al. 2011) has shown good psychometric properties, including adequate reliability (α for the total score = .86 (Dutch sample) and .89 (English sample)) and construct validity (convergent and discriminant). The Portuguese version of the SCS-SF (Castilho et al. 2015) has also exhibited adequate reliability ($\alpha = .89$ for the total score), temporal stability ($r = .78$ for the total score), and convergent validity.

Perceived Stress. The Portuguese version of the Perceived Stress Scale (PSS; Cohen et al. 1983; Trigo et al. 2010) was used to assess the extent to which different situations in an individual’s life are appraised as stressful, unpredictable and uncontrollable. This unidimensional self-report questionnaire comprises 10 items (e.g., “In the last month, how often have you felt nervous and ‘stressed’?”) answered on a 5-point Likert-type response scale ranging from 0 (*never*) to 4 (*very often*). Higher scores reflect higher levels of perceived stress. The original version (Cohen et al. 1983) of this instrument demonstrated good psychometric properties, as did the Portuguese version (Trigo et al. 2010), which presented adequate reliability ($\alpha = .87$) and construct validity.

Parenting stress. The Portuguese version of the Parenting Stress Scale (PSS; Berry and Jones 1995; Mixão et al. 2010) was used to assess the distress associated with the parental role (e.g., “Caring for my child(ren) sometimes takes more time and energy than I have to give”). This scale contains 18 items that are answered on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores indicating higher levels of parenting stress. In the current study, we used the total score, which is the sum of the 18 items. Both the original and the Portuguese versions present adequate psychometric properties, including adequate reliability ($\alpha > .80$) and construct validity.

Data Analyses

To explore the factor structure of the Portuguese version of the IM-P, an exploratory factor analysis (Principal Axis Factoring) with Varimax rotation was performed. The Kaiser-Meyer-Olkin test and Bartlett's test of sphericity were conducted to test the sample adequacy to perform this analysis. To explore the internal consistency of the IM-P, Cronbach’s alphas were obtained for each subscale and for the total score. The effect of removing each item from a given subscale was assessed by comparing the Cronbach’s alpha value when excluding a particular item with the subscale final alpha value. Corrected item-total correlations were explored

and considered adequate when $\geq .30$. Correlations between the IM-P subscales and the total score were also analyzed. Finally, correlations between the IM-P subscales and other variables expected to be associated with mindful parenting were analyzed to explore the convergent validity of the scale. 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).

Results

Exploratory Factor Analysis

The Kaiser-Meyer-Olkin test ($KMO = .90$) and Bartlett's test of sphericity [$\chi^2(465) = 3314.90, p < .001$] confirmed the adequacy of the sample for the analyses. The exploratory factor analysis resulted in a six-factor solution (with eigenvalues > 1) that accounted for 44.64% of the total variance. As presented in Table 1, Factor 1 (Non-judgmental Acceptance of Parental Functioning) explained 10.55% of the variance and included the same six items of the Non-judgmental Acceptance of Parental Functioning subscale (items 15, 17, 18, 20, 23, and 26) and one item from the Emotional Non-reactivity in Parenting subscale (item 10) of the Dutch version of the IM-P. Factor 2 (Self-regulation in Parenting) explained 8.90% of the variance and combined the four items of the Emotional Non-reactivity in Parenting subscale (items 5, 11, 14, and 29) and the four items of the Emotional Awareness of Self subscale (items 2, 8, 16, 21) of the Dutch version of the IM-P. This factor is very similar to the original Self-regulation in the Parenting Relationship subscale and was named "Self-regulation in Parenting" because it assesses aspects associated with parents' ability to regulate their own emotions and behaviors in the parenting context. Factor 3 (Compassion for the Child) explained 8.76% of the variance and included the same six items of the Compassion for the Child subscale of the Dutch version of the IM-P (items 4, 7, 25, 27, 28, and 31). Factor 4 (Listening with Full Attention) explained 7.81% of the variance and included the same five items of the Listening with Full Attention subscale of both the original and Dutch versions of IM-P (items 1, 9, 13, 19, and 24). Factor 5 (Emotional Awareness of the Child) explained 5.45% of the variance and included the same three items of the Emotional Awareness of the Child subscale of the Dutch IM-P (items 12, 22, and 30). Finally, Factor 6 (Emotional Awareness of Self) explained 3.18% of the variance and only included items 3 and 6, which belonged to the Emotional Awareness of Self and Child subscale of the original IM-P but that were excluded from the Dutch version due to low psychometric properties. Because these items focus on parents' emotional awareness of their own emotions, this subscale was named "Emotional Awareness of Self". Factor loadings are presented in Table 1. There were no cross-loadings above .40, except for items 11 and 24.

Insert Table 1 about here

Reliability Analyses and Correlations Between Subscales

As presented in Table 2, adequate Cronbach's alpha values were found for the subscales Compassion for the Child ($\alpha = .83$), Non-judgmental Acceptance of Parental Functioning ($\alpha = .80$), Self-regulation in Parenting ($\alpha = .83$), and Listening with Full Attention ($\alpha = .78$) as well as for the total scale ($\alpha = .89$). Lower Cronbach's alphas were found for the Emotional Awareness of the Child ($\alpha = .69$) and the Emotional Awareness of the Self ($\alpha = .42$) subscales. The elimination of each individual item of the corresponding subscale did not contribute to an increase in the subscale's alpha coefficient. Cronbach's alpha if the item was deleted was not calculated for the Emotional Awareness of the Self subscale because it only included two items. All corrected item-total correlations were above .30, with the exception of items 3 and 6 of the Emotional Awareness of the Self subscale. Because of the low reliability of this subscale and the low corrected item-total correlations, we decided to eliminate items 3 and 6. The removal of these items resulted in the elimination of the Emotional Awareness of the Self subscale and, consequently, in a five-factor structure. The Cronbach's alpha coefficient for the total scale with 29 items increased to .90. Finally, as presented in Table 3, all subscales were significantly and strongly correlated with the total score, and all correlations between subscales were significant.

Insert Tables 2 and 3 about here

Convergent Validity

As presented in Table 4, the IM-P subscales and total score correlated significantly and positively with self-compassion and significantly and negatively with perceived stress and parenting stress. Almost all the correlations were moderate to strong.

Insert Table 4 about here

Discussion

One of the main goals of the first study was to explore the factor structure of the Portuguese version of the IM-P. The exploratory factor analyses resulted in a six-factor structure that was very similar to the factor structure of the Dutch version of the scale. The subscales Compassion for the Child, Listening with Full Attention, and Emotional Awareness of the Child were equal to the subscales of the Dutch IM-P and, therefore, we decided to maintain their designations. The Non-judgmental Acceptance of Parental Functioning subscale was also very similar to the Dutch subscale, except that in the Portuguese version, this subscale included item 10. Nevertheless, the Dutch designation was maintained. The subscales Emotional Non-reactivity in Parenting and Emotional Awareness of Self of the Dutch version of the scale were combined in the Portuguese version into the Self-regulation in Parenting subscale. This subscale is very similar to the original Self-regulation in the

Parenting Relationship subscale and assesses parents' ability to regulate their own emotions and behaviors in the parent-child relationship.

Adequate internal consistency was found for the majority of the subscales, with the exception of the Emotional Awareness of the Child subscale, which presented a slightly lower Cronbach's alpha value than recommended ($\alpha = .69$), and the subscale Emotional Awareness of the Self, which presented an unacceptable Cronbach's alpha value ($\alpha = .42$). In addition, items 3 and 6 of the Emotional Awareness of Self subscale presented corrected item-total correlations below the recommendations ($\leq .30$). For these reasons, we decided to exclude these items and, consequently, this subscale. Notably, in the Dutch version of the IM-P, these items were also excluded due to poor psychometric properties. The Portuguese version of the IM-P was therefore composed of 29 items distributed in five subscales.

Supporting the convergent validity of the scale, significant correlations were found between the IM-P subscales and total score and measures of constructs that were expected to be associated with mindful parenting (self-compassion, parenting stress, and perceived stress). With regard to the association with self-compassion, previous studies have found that higher levels of self-compassion can help parents to adopt a more mindful approach in their relationship with their children (Moreira et al. 2015). Self-compassionate parents likely have many of the qualities of mindful parenting. For instance, self-compassionate parents are more kind to themselves and therefore may be less self-critical of their parenting skills, limitations, and behaviors. In addition, significant and negative correlations were found between the IM-P subscales and the total score and parenting stress. This result is consistent with previous studies showing a negative association between this parenting approach and parenting stress (Beer et al. 2013; Gouveia et al. 2016) as well as with studies showing a decrease in parenting stress after the completion of a mindful parenting program (Bögels et al. 2014). With regard to the significant and negative association between mindful parenting and perceived stress, this result is also in agreement with previous investigations (Beer et al. 2013; de Bruin et al. 2014; Parent et al. 2011) and corroborates the assumption that this parenting approach is associated with a better psychological adjustment of parents (Duncan et al. 2009). In fact, when a parent is worried about something or ruminates on their preoccupations, their attentional resources are less likely to be allocated to interactions with their child. In addition, stressed parents may be less able to focus on the positive aspects of their child and the rewarding aspects of parenting and may be less able to be kind and compassionate toward themselves and their child. This may lead them to experience increased difficulty in adopting a mindful approach to their parenting.

Due to the cross-sectional design of the study, these associations may be bidirectional. Therefore, alternative explanations are also plausible. For instance, it is possible that parents with an increased capacity to adopt a mindful approach in parenting and who are therefore more compassionate toward their child and themselves as parents may gradually become more self-compassionate and accepting of their failures and mistakes. In addition, developing mindful parenting abilities may help parents decrease the stress they experience in their parenting role, but parenting stress may also make it more difficult for parents to adopt a mindful stance in the relationship with their children. Likewise, although higher levels of stress in daily life may undermine parents' ability to be mindful in the parent-child relationship, the opposite explanation is also possible. For instance, being more aware of the child's emotions, exerting more self-regulation and being more compassionate and fully present when interacting with the child may help parents to focus more on the positive aspects of their children and their parenting, which may result in lower levels of perceived stress.

Study 2

The goal of the second study was to confirm the adequacy of the five-factor structure found in Study 1 through a confirmatory factor analysis (CFA) in a different sample of mothers.

Method

Participants

The sample included 323 mothers with a mean age of 37.49 years ($SD = 5.73$; range: 21 - 58) and an average of 1.63 children ($SD = 0.69$; range: 1 - 4). The majority were married or living with a partner (82.4%), were employed (84.5%), and had completed graduate or post-graduate studies (88.2%).

Procedure

The sample was collected online through a data collection website (LimeSurvey®) in which the assessment protocol, composed of a sociodemographic form and the IM-P questionnaire, was available. Participants were invited to participate in a study about mindful parenting through social networks, including parenting forums and Facebook® pages, in which the survey link was shared. The only inclusion criterion was to have at least one child under the age of 18 years. Similar to the procedures of Study 1, the first page of the online protocol described the study objectives, the inclusion criteria, and the ethical issues underpinning the study. Only those individuals who agreed to the study conditions completed the survey. Before beginning the survey, participants were instructed to select one of their children to answer the IM-P questionnaire. The mean age of children selected by the mothers was 6.07 years ($SD = 4.36$; range: 1 - 18). Because only eight fathers completed the survey, they were excluded from the analyses.

Measures

The participants completed only the IM-P questionnaire, described in Study 1.

Data Analyses

A CFA using maximum likelihood estimation was conducted in AMOS© 20 to test the adequacy of the factor structure found in Study 1. Two models were estimated: 1) a correlated five-factor structure, which presumes that the IM-P measures five different but correlated dimensions; and 2) a hierarchical model with five first-order factors and a single second-order factor of mindful parenting, which presumes that the dimensions of mindful parenting load on a general mindful parenting factor. Because the chi-square index (χ^2) is very sensitive to sample size and may overestimate the lack of model fit, the assessment of fit was based on four additional indicators: the goodness of fit index (GFI), the comparative fit index (CFI), the root-mean-square error of approximation (RMSEA), and the standardized root-mean-square residual (SRMR). Criteria for adequate and good model fit were CFI values $\geq .90$ and $\geq .95$, RMSEA values $\leq .08$ and $\leq .06$, and SRMR values $\leq .10$ and $\leq .08$, respectively (Browne and Cudeck 1993; Hu and Bentler 1999). The relative chi-squared ($\chi^2/2$) was also reported, with values ≤ 2 and ≤ 5 suggestive of good and acceptable fit, respectively (Arbuckle 2011). Cronbach's alphas were obtained for each subscale and for the total score of the IM-P to explore its internal consistency.

Results

Confirmatory Factor Analysis

The correlated five-factor model presented an acceptable fit to the data, $\chi^2(367) = 663.86, p < .001; \chi^2/2 = 1.81; CFI = .92; RMSEA = .05; SRMR = .05$. Modification indices were examined, suggesting that the errors belonging to items 1 and 19 and 16 and 21 might be correlated. Because these pairs of items had similar content and belonged to the same factors, their measurement errors were allowed to correlate (Byrne 2010). The re-specified model had an adequate fit to the data [$\chi^2(365) = 624.16, p < .001; \chi^2/2 = 1.71; CFI = .93; RMSEA = .05; SRMR = .05$], which was significantly better than the fit of the initial model [$\Delta\chi^2(2) = 39.70, p < .001$]. All standardized factor loadings for the items were significant ($p < .001$), ranging from .44 (item 10) to .82 (item 23) (see Table 1).

The hierarchical model, in which the same errors were allowed to correlate, also presented adequate fit, $\chi^2(370) = 656.89, p < .001; \chi^2/2 = 1.78; CFI = .93; RMSEA = .05; SRMR = .06$. All first-order factors loaded significantly on the general mindful parenting factor (standardized factor loadings were .80 for the subscale Compassion for the Child; .81 for the subscale Listening with Full Attention; .68 for the subscale Non-

judgmental Acceptance of Parental Functioning; .62 the subscale for Emotional Awareness of Child; and .90 for the subscale Self-regulation in Parenting), and all standardized factor loadings for the items were significant ($p < .001$), ranging from .44 (item 10) to .82 (item 23). The difference in the adjustment of the correlated and hierarchical models was significant [$\Delta\chi^2(5) = 32.73, p < .001$], which means that the correlated model seems to be a better representation of the IM-P factor structure.

Internal Consistency

Adequate Cronbach's alphas were found for the total score ($\alpha = .93$) and for the subscales Compassion for the Child ($\alpha = .85$), Non-judgmental Acceptance of Parental Functioning ($\alpha = .82$), Self-regulation in Parenting ($\alpha = .86$), Emotional Awareness of the Child ($\alpha = .70$), and Listening with Full Attention ($\alpha = .84$).

Discussion

The results of Study 2 support the utilization of the IM-P scale and indicate that the Portuguese five-factor version of the IM-P is a reliable measure of mindful parenting. Both the correlated five-factor model and the hierarchical model with a second-order factor of mindful parenting presented adequate fit. However, we should note that the correlated model performed slightly better than the hierarchical model, which indicates that the IM-P structure is best represented by five differentiated dimensions. Nevertheless, this does not preclude the utilization of a total score of mindful parenting because the adjustment of the hierarchical model was also adequate.

Study 3

The goal of the third study was to further analyze the convergent validity and the known-groups validity (i.e., the ability of a questionnaire to differentiate between groups known to differ on a certain variable) of the IM-P. The convergent validity was assessed through the examination of its associations with measures of self-compassion, parenting styles, and anxious and depressive symptomatology. We expected mindful parenting to be positively correlated with self-compassion and the authoritative parenting style and to be negatively correlated with anxious and depressive symptomatology and the authoritarian and permissive parenting styles. This study also intended to explore the known-groups validity of the scale by analyzing gender differences in mindful parenting. Based on previous studies (e.g., Medeiros et al. 2016; Parent et al. 2016), we hypothesized that men would present lower scores on mindful parenting than women.

Method

Participants

The sample comprised 142 family dyads composed of both parents and 95 mothers (i.e., 237 mothers and 142 fathers) of children and adolescents. Mothers had a mean age of 41.38 years ($SD = 5.80$; range: 28-59) and had an average of 1.88 children ($SD = 0.80$; range: 1-6). The majority were married or living with a partner (85.2%) and employed (80.9%). With regard to education levels, 69.2% had completed basic or secondary studies, and only 30.8% had completed graduate or postgraduate studies. Fathers had a mean age of 43.17 years ($SD = 6.01$; range: 28-60) and had an average of 1.84 children ($SD = 0.67$; range: 1-5). The majority were married or living with a partner (94.3%) and employed (89.4%). With regard to education levels, 79.4% had completed basic or secondary studies, and only 20.6% had completed graduate or postgraduate studies. Children and adolescents (54.9% girls) were aged between 8 and 18 years ($M = 11.76$; $SD = 2.85$). The majority (34.2%) were in the 1st cycle of basic education (grades 3 to 4), 19.8% were in the 2nd cycle (grades 5 to 6), 31.6% were in the 3rd cycle (grades 7 to 9), and 14.3% were in secondary education (grades 10 to 12).

Procedure

To be included in this study, participants had to be the mother or the father of a child/adolescent aged between 8 and 18 years old. The sample was collected in four basic schools and in one secondary school from one public school unit from the central region in Portugal. Twenty-four classes were randomly selected to participate in the study. Each student received an assessment protocol containing a letter explaining the study, the informed consent form for parents, and the questionnaires for both parents and for the child. The questionnaires were completed at home and returned to the teachers or researchers approximately one week later. In total, 528 assessment protocols were distributed, of which 282 (53.41%) were returned completed by at least one of the family members (i.e., the mother, the father, or the child). Of these, 17 protocols were excluded because only the child completed the questionnaires. In addition, 12 protocols were excluded because the IM-P was not answered. Of the remaining 253 protocols, 16 were invalidated because one or more of the study questionnaires were answered incorrectly (e.g., the respondent selected the same response option in all the items). Therefore, the final sample was composed of 237 mothers and 142 fathers (i.e., 142 family dyads and 95 independent mothers).

Authorization for sample collection was obtained from the Portuguese Data Protection Authority and from the Board of Directors of the school unit. Participation in the study was voluntary, and no monetary or other compensation was given to the participants. All parents signed the informed consent form.

Measures

In addition to the IM-P and the SCS-SF, parents completed two additional measures of parenting styles and anxious/depressive symptomatology.

Parenting Styles. The Portuguese version of the Parenting Styles and Dimensions Questionnaire (PSDQ; Pedro et al. 2015; Robinson et al. 2001) was used to assess parenting styles. The PSDQ contains 32 items that 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 5-point Likert response scale ranging from 1 (*never*) to 5 (*always*). The total score of each subscale is the mean of the items, with higher scores in a specific subscale indicating a stronger tendency to adopt a particular style. The original PSDQ (Robinson et al. 2001) has shown adequate reliability and construct validity (convergent and discriminant). Likewise, the Portuguese version of the PSDQ (Pedro et al. 2015) has demonstrated acceptable psychometric properties, including adequate reliability for almost all the subscales (α authoritative = .88; α authoritarian = .73; α permissive = .62) and construct validity (convergent and discriminant).

Anxious and depressive symptoms. The Portuguese version of the Hospital Anxiety and Depression Scale (HADS; Pais-Ribeiro et al. 2007; Zigmond and Snaith 1983) was used to assess levels of anxious and depressive symptomatology. This instrument has two subscales (Anxiety and Depression), each with 7 items (e.g., "I feel tense or wound up"; "I still enjoy the things I used to enjoy") answered on 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 these subscales reflect more severe symptomatology. The HADS has robust psychometric properties and has been proven to be a valid screening measure in a wide range of clinical populations and in the general community. The Portuguese version has demonstrated adequate psychometric properties, including adequate construct validity and reliability (α = .76 for anxiety and α = .81 for depression).

Data Analyses

To explore the internal consistency of the IM-P, Cronbach's alphas were obtained for each subscale and for the total score for both mothers and fathers. Correlations between subscales and the total score were also analyzed for both parents. To explore the convergent validity of the scale, correlations between the IM-P subscales and self-compassion, parenting styles, and anxious and depressive symptomatology were analyzed for both parents. Considering the nonindependence of the observations between the parents within a family (Cook and Kenny 2005), comparison analyses were conducted using the family as the unit of analysis. Therefore, in the

database of the present study, each family dyad was the unit of analysis, and each participant's score was a different variable (parent's gender was considered a within-subjects variable). Therefore, gender differences in the mindful parenting dimensions were analyzed through a repeated-measures ANOVA (for the total score) and a repeated-measures MANOVA (for the five dimensions). If a significant multivariate effect was obtained in the MANOVA, univariate tests were analyzed for each dependent variable.

Results

Internal Consistency and Correlations Between Subscales

Adequate Cronbach's alpha values were found for almost all subscales (see Table 5). A lower Cronbach's alpha was found for the Emotional Awareness of the Child subscale among mothers ($\alpha = .57$) and for the Non-judgmental Acceptance of Parental Functioning ($\alpha = .56$) and Self-regulation in Parenting ($\alpha = .61$) subscales among fathers. Correlations between the IM-P subscales were analyzed for both parents. As presented in Table 3, all subscales were significantly and strongly correlated with the total score, and all correlations between subscales were significant.

Convergent Validity

Correlations between the IM-P subscales and other variables were analyzed for both parents to explore the convergent validity of the scale. As presented in Table 5, positive and moderate to large correlations were found between self-compassion and the IM-P subscales and total score for both parents. Similarly, positive and moderate to large correlations were found between the authoritative style and almost all the IM-P subscales and the total score for both parents (with the exception of the fathers' subscale Non-judgmental Acceptance of Parental Functioning, which had a non-significant correlation with the authoritative style). Conversely, negative correlations (mostly moderate for mothers and mostly small for fathers) were found between the authoritarian and permissive styles and almost all the IM-P subscales and total score (with the exception of the fathers' subscales Compassion for the Child and Emotional Awareness of Child, which had non-significant correlations with these parenting styles). Finally, negative and small to moderate correlations were found between anxiety and depression subscales and almost all the IM-P subscales and the total score for both parents (with the exception of the mothers' subscale Emotional Awareness of Child, which had a non-significant correlation with anxiety).

Insert Table 5 about here

Gender Differences in Mindful Parenting

Gender differences were analyzed on the subset of the 142 mother-father dyads. A significant multivariate effect of gender was found (Wilk's Lambda = 0.83, $F(5, 137) = 5.50, p < .001, \eta_p^2 = .17$). As presented in Table 6, univariate analyses showed that women reported higher levels of Compassion for the Child and Emotional Awareness of the Child than men. In contrast, men presented higher scores on Non-judgmental Acceptance of Parental Functioning than women. No significant differences were found for Listening with Full Attention and Self-regulation in Parenting. With regard to the total score of mindful parenting, no significant differences were found between mothers and fathers.

Insert Table 6 about here

Discussion

Consistent with the results found in Studies 1 and 2, most subscales presented adequate Cronbach's alphas among mothers, with the exception of the Emotional Awareness of the Child subscale, which presented a Cronbach's alpha value below .70. Among fathers, the Self-regulation in Parenting and the Non-judgmental Acceptance of Parental Functioning subscales presented Cronbach's alpha values below .70. The lower Cronbach's alphas in this study may be partly related to the sample characteristics and sampling procedure. In contrast to the samples of Studies 1 and 2, which were collected online, the parents in Study 3 were collected through their child's schools. Whereas the parents in the online studies were likely to be genuinely interested in participating in the study, the parents recruited in schools may have felt pressured to complete the questionnaires without being motivated to participate in the study, which may have resulted in less accurate answers and, consequently, in lower internal consistency. In addition, the education levels of the parents in Study 3 were lower than those of the parents in Studies 1 and 2 (whereas the majority of mothers in Studies 1 and 2 had completed higher education, the majority of parents in Study 3 had only completed basic or secondary studies). This factor may also have contributed to less accurate answers and, consequently, to the lower internal consistency of some subscales.

Supporting the convergent validity of the scale, significant correlations between the IM-P subscales and the total score and measures of self-compassion, parenting styles, and anxious and depressive symptomatology were found. The pattern of associations was very similar among mothers and fathers. With regard to parenting styles, positive correlations were found between the majority of the IM-P subscales and the authoritative parenting style. Additionally, there were negative correlations with the authoritarian and permissive styles (except for the Compassion for the Child and Emotional Awareness for the Child subscales, which did not correlate significantly with these parenting styles among fathers). These findings are in accordance with the

mindful parenting model (Duncan et al. 2009), which suggests that mindful parenting may promote more adaptive parenting practices (e.g., consistent discipline, monitoring) and overall positive parenting (e.g., better parent-child communication, higher parenting self-efficacy). However, due to the cross-sectional design of the study, we may also hypothesize that more authoritative and less authoritarian or permissive parents are more likely to adopt a mindful approach in parenting. These findings are also in line with the study of de Bruin et al. (2014), in which significant and negative associations were found between mindful parenting subscales and laxness, over-reactivity and verbosity, as well as with other studies showing that mindful parenting is associated with more positive parenting practices (Duncan et al. 2015; Geurtzen et al. 2015; Gouveia et al. 2016; Parent et al. 2016). We also found that higher levels of mindful parenting were associated with lower levels of anxiety and depressive symptoms (except for the Emotional Awareness of the Child subscale, which did not correlate significantly with anxiety among mothers). This result is consistent with the significant correlations between mindful parenting and perceived stress found in Study 1 and underline the critical role that the psychological well-being of parents plays in their parenting practices.

As additional support for the construct validity of the scale, specifically its known-groups validity, we found that women presented higher levels of compassion for the child and of emotional awareness of the child than men. However, we should note that differences were only small to moderate (i.e., effect sizes were $\leq .47$). These findings may suggest that mothers tend to be more attuned and sensitive to their child's needs and to be more nurturing and empathetic to their child than fathers. In fact, several studies demonstrate that mothers are usually more responsive to and emotionally aware of their child's needs than fathers (Kochanska and Aksan 2004; Volling et al. 2002). These differences may be due to gender differences in individual variables (e.g., women are usually more affectionate and empathetic than men), biological variables (e.g., through evolution, women became biologically better prepared to assume the caregiving role of their offspring), and cultural variables (e.g., in most cultures, women tend to assume the main caregiving role for their children) (Gouveia et al. 2016; Medeiros et al. 2016). In contrast, men presented higher scores on the non-judgmental acceptance of parenting functioning dimension than women. Because mothers are usually more involved in and take more responsibility for childcare than fathers, it is likely that they are more critical of themselves and criticize themselves more often for their perceived mistakes and failures as a parent than fathers.

General Discussion

One of the main goals of this study was to explore the factor structure of the Portuguese version of the IM-P. The results of the exploratory factor analyses and of the reliability analyses suggested a five-factor

structure, which was confirmed through a CFA. This factor structure is very similar to the Dutch structure (de Bruin et al. 2014) and therefore confirms that the child-focused and parent-focused items load on distinct subscales. We also aimed to examine whether the IM-P factor structure could incorporate an underlying global mindful parenting factor. Although the correlated five-factor model exhibited better fit than the hierarchical model, our results support the use of subscale scores to assess different facets of mindful parenting as well as the use of a total mindful parenting score.

This study has some limitations that should be noted. First, we were not able to determine the test-retest reliability of the IM-P because the assessment protocol was only administered once. Second, the samples of Studies 1 and 2 included only mothers; therefore, the results are not generalizable to fathers. Third, the representativeness of the sample of Study 3 cannot be guaranteed because the participants were recruited from only one school unit in the central region of Portugal. However, it is important to note that the mothers who participated in Studies 1 and 2 were collected online and were from different regions of Portugal. Fourth, although adequate Cronbach's alphas were found for the total score and for most subscales in the three studies, the Emotional Awareness of the Child subscale presented a Cronbach's alpha value below the recommendations in Studies 1 and 3; therefore, this subscale may not be suitable for individual measurement. In addition, the Non-judgmental Acceptance of Parental Functioning and the Self-regulation in Parenting subscales presented low Cronbach's alphas in the sample of fathers, which underlines the need to develop future psychometric studies of the IM-P scale among fathers. Fifth, the validity of our results may be compromised because we used only self-report instruments, which may be influenced by social desirability factors and may not precisely reflect what participants feel or think. Therefore, particularly for the assessment of mindful parenting, it is important to use different assessment methods (for example, observational; Duncan et al. 2015). Despite these limitations, this study represents an important contribution to the measurement of mindful parenting. This is a relatively recent research field that has received increasing attention in the last few years and that we believe will continue to grow, particularly if adequate measures are available. The results of this study demonstrate that the Portuguese version of the IM-P is a psychometrically adequate measure of mindful parenting.

Compliance with Ethical Standards

Funding: This study was supported by the Portuguese Foundation for Science and Technology (Grant number SFRH/BPD/70063/2010)

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 Unit.

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

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

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Table 1

Factor loadings after a Principal Axis Factoring with Varimax rotation (Study 1) and standardized factor loadings in CFA (Study 2)

Items	Original IM-P	Dutch IM-P	Non-judgmental acceptance of Parental Functioning	Self-regulation in Parenting	Compassion for the Child	Listening with Full Attention	Emotional Awareness of the Child	Emotional Awareness of the Self	Standardized factor loadings in CFA
17. Self-blaming during difficult times with the child.	CSC	NJAPF	.72						.73
15. Self-criticism when making mistakes as a parent.	CSC	NJAPF	.69						.68
23. Self-criticism for not being the desired type of parent.	NJASC	NJAPF	.68						.82
20. Self-forgiving when regretting parenting actions.	CSC	NJAPF	.60						.59
18. Accepting parenting failures.	NJASC	NJAPF	.50						.62
26. Negative comparisons with other parents in difficult times.	CSC	NJAPF	.42						.52
10. Accepting child's independence.	NJASC	ENRP	.40						.44
29. Getting carried away with feelings when upset with the child.	SRPR	ENRP		.65					.73
5. Reacting too quickly to the child's behavior.	SRPR	ENRP		.60					.73
21. Pausing before reacting in difficult situations with the child.	NJASC	EAS		.54					.71
16. Trying to keep emotions in balance when upset with the child.	SRPR	EAS		.51					.54
14. Regretting things said or done when upset with the child.	SRPR	ENRP		.49					.72
11. Realizing later that feelings affect parenting decisions.	EASC	ENRP	.42	.45					.68
2. Noticing feelings before reacting when upset with the child.	SRPR	EAS		.44					.54
8. Calmly telling the child how the parent is feeling when upset.	SRPR	EAS		.43					.59

27.	Being nurturing to the child when he/she is going through difficult times.	CSC	CC	.63					.74
28.	Trying to understand the child's point of view.	NJASC	CC	.62					.74
7.	Allowing the child express his/her feelings.	NJASC	CC	.55					.69
31.	Trying to be patient when the child is going through difficult times.	CSC	CC	.55					.80
25.	Being kind to the child when he/she is upset.	CSC	CC	.49					.64
4.	Listening carefully to the child's ideas.	NJASC	CC	.42					.62
19.	Being busy thinking about other things and not listening to the child.	LFA	LFA				.69		.71
13.	Being easily distracted when doing things with the child.	LFA	LFA				.59		.69
9.	Rushing through activities with the child.	LFA	LFA				.59		.72
24.	Paying close attention to the child when spending time together.	LFA	LFA	.41		.59			.73
1.	Not listening to the child attentively.	LFA	LFA				.54		.66
30.	Being able to identify the child's feelings when the child does not express them.	EASC	EAC					.79	.73
12.	Not easily noticing the child's feelings.	EASC	EAC					.51	.71
22.	Noticing when the child is worried.	EASC	EAC					.47	.58
6.	Being aware of the impact of the parent's mood on parenting behaviors.	EASC	---					.46	--
3.	Noticing the impact of the child's mood on the parent's mood.	EASC	---					.46	--
% Explained Variance				10.55	8.90	8.76	7.81	5.45	3.18

Note. Factors in the original IM-P: CSC = Compassion for Self and Child; NJASC = Non-judgmental Acceptance of Self and Child; SRPR = Self-regulation in the Parenting Relationship; LFA = Listening with Full Attention; EASC = Emotional Awareness of Self and Child. Factors in the Dutch IM-P: NJAPF = Non-judgmental Acceptance of Parental Functioning; ENRP = Emotional Non-reactivity in Parenting; EAS = Emotional Awareness of Self; CC = Compassion for the Child; LFA = Listening with Full Attention; EAC = Emotional Awareness of Child. Only factor loadings $\geq .40$ are presented in the table.

Table 2

Mean scores and standard deviation for the items and reliability analyses in Study 1

	Mean (SD)	Range	Corrected item-total correlation	Cronbach's alpha if item deleted
Compassion for the Child				
Item 4	4.22 (0.67)	2 – 5	.56	.81
Item 7	4.44 (0.67)	1 – 5	.62	.80
Item 25	4.12 (0.66)	2 – 5	.52	.82
Item 27	4.60 (0.55)	3 – 5	.59	.80
Item 28	4.29 (0.64)	2 – 5	.66	.79
Item 31	4.35 (0.64)	3 – 5	.63	.79
Cronbach's alpha = .83				
Non-judgmental Acceptance of Parental Functioning				
Item 10	4.07 (0.84)	2 – 5	.38	.80
Item 15	2.63 (0.99)	1 – 5	.57	.76
Item 17	3.12 (0.92)	1 – 5	.62	.75
Item 18	3.49 (0.77)	1 – 5	.49	.78
Item 20	3.13 (0.92)	1 – 5	.54	.77
Item 23	3.32 (1.09)	1 – 5	.68	.74
Item 26	3.58 (0.98)	1 – 5	.43	.79
Cronbach's alpha = .80				
Self-regulation in Parenting				
Item 2	3.55 (0.75)	1 – 5	.42	.82
Item 5	2.95 (0.77)	1 – 5	.59	.80
Item 8	3.64 (0.83)	1 – 5	.50	.81
Item 11	3.33 (0.77)	1 – 5	.57	.80
Item 14	3.50 (0.81)	2 – 5	.61	.80
Item 16	3.68 (0.71)	1 – 5	.43	.82
Item 21	3.25 (0.83)	1 – 5	.63	.79
Item 29	3.18 (0.71)	1 – 5	.65	.79
Cronbach's alpha = .83				
Listening with Full Attention				
Item 1	3.59 (0.56)	3 – 5	.50	.75
Item 9	3.84 (0.73)	2 – 5	.56	.74
Item 13	3.71 (0.68)	2 – 5	.55	.74
Item 19	3.88 (0.62)	2 – 5	.59	.73
Item 24	4.11 (0.63)	2 – 5	.58	.73
Cronbach's alpha = .78				
Emotional Awareness of the Child				
Item 12	3.81 (0.72)	2 – 5	.46	.66
Item 22	3.94 (0.80)	1 – 5	.44	.69
Item 30	3.86 (0.71)	1 – 5	.63	.44
Cronbach's alpha = .69				
Emotional Awareness of the Self				
Item 3	3.95 (0.74)	1 – 5	.27	--
Item 6	4.13 (0.80)	1 – 5	.27	--
Cronbach's alpha = .42				

Table 3

Correlations between the IM-P subscales and total score in Study 1 and Study 3

	<i>M (SD)</i>	Range	1	2	3	4	5
Study 1							
1. IM-P total score (29 items)	107.22 (11.54)	75.00 – 138.00	--				
2. Compassion for child	26.03 (2.81)	16.00 – 30.00	.77**	--			
3. Non-judgmental acceptance	23.35 (4.39)	13.00 – 34.00	.77**	.39**	--		
4. Self-regulation in parenting	27.10 (4.15)	16.00 – 39.00	.85**	.57**	.53**	--	
5. Listening with full attention	19.13 (2.36)	11.00 – 25.00	.66**	.48**	.34**	.46**	--
6. Emotional awareness of child	11.61 (1.76)	6.00 – 15.00	.53**	.50**	.19**	.36**	.30**
Study 3							
Mothers							
1. IM-P total score (29 items)	108.20 (10.17)	81.00 – 134.00	--				
2. Compassion for child	26.27 (3.10)	16.00 – 30.00	.74**	--			
3. Non-judgmental acceptance	23.61 (3.50)	14.00 – 33.00	.67**	.25**	--		
4. Self-regulation in parenting	26.62 (3.57)	17.00 – 38.00	.72**	.36**	.35**	--	
5. Listening with full attention	19.51 (2.75)	13.00 – 25.00	.73**	.54**	.30**	.36**	--
6. Emotional awareness of child	12.20 (1.71)	7.00 – 15.00	.57**	.43**	.26**	.23**	.39**
Fathers							
1. IM-P total score (29 items)	106.52 (11.47)	75.00 – 134.00	--				
2. Compassion for child	24.83 (3.34)	13.00 – 30.00	.77**	--			
3. Non-judgmental acceptance	24.30 (3.15)	19.00 – 35.00	.63**	.29**	--		
4. Self-regulation in parenting	26.85 (3.81)	16.00 – 38.00	.76**	.41**	.38**	--	
5. Listening with full attention	19.01 (3.12)	11.00 – 25.00	.80**	.55**	.36**	.52**	--
6. Emotional awareness of child	11.54 (2.25)	4.00 – 15.00	.68**	.58**	.23**	.34**	.51**

** $p < .01$

Note. In Study 2, $N = 237$ mothers and $N = 142$ fathers

Table 4

Correlations between the IM-P subscales and total score and other variables in Study 1

	Self- compassion	Perceived Stress	Parenting Stress
IM-P subscales			
Compassion for child	.33**	-.23**	-.40**
Non-judgmental acceptance	.57**	-.43**	-.41**
Self-regulation in parenting	.37**	-.31**	-.36**
Listening with full attention	.25**	-.22**	-.29**
Emotional awareness of child	.28**	-.28**	-.39**
IM-P total score (29 items)	.53**	-.42**	-.51**
<i>M (SD)</i>	3.41 (0.73)	17.56 (6.39)	34.27 (7.70)
Cronbach's α	.91	.81	.88

** $p < .01$

Table 5

Cronbach's alphas and correlations between the IM-P subscales and total score and other variables in Study 3

	Cronbach's α	Self- compassion	Parenting Styles			Psychopathological Symptoms	
			Authoritative	Authoritarian	Permissive	Anxiety	Depression
Mothers							
IM-P subscales							
Compassion for child	.78	.35**	.50**	-.36**	-.23**	-.13*	-.20**
Non-judgmental acceptance	.71	.52**	.14*	-.24**	-.34**	-.40**	-.42**
Self-regulation in parenting	.70	.41**	.29**	-.32**	-.28**	-.24**	-.31**
Listening with full attention	.76	.36**	.32**	-.24**	-.26**	-.20**	-.20**
Emotional awareness of child	.57	.27**	.33**	-.15*	-.19**	-.12	-.13**
IM-P total score (29 items)	.83	.57**	.44**	-.40**	-.39**	-.34**	-.39**
<i>M (SD)</i>		3.45 (0.55)	4.07 (0.56)	2.04 (0.45)	1.93 (0.50)	7.26 (3.42)	4.78 (3.25)
Cronbach's α		.83	.86	.72	.53	.78	.75
Fathers							
IM-P subscales							
Compassion for child	.81	.36**	.65**	-.11	-.16	-.30**	-.30**
Non-judgmental acceptance	.56	.44**	.12	-.20*	-.17*	-.35**	-.33**
Self-regulation in parenting	.61	.42**	.24**	-.20*	-.20*	-.30**	-.21*
Listening with full attention	.79	.37**	.36**	-.19*	-.22**	-.32**	-.38**
Emotional awareness of child	.74	.41**	.48**	-.09	-.08	-.22**	-.32**
IM-P total score (29 items)	.85	.55**	.50**	-.22**	-.24**	-.41**	-.42**
<i>M (SD)</i>		3.53 (0.49)	3.76 (0.67)	2.14 (0.51)	2.10 (0.66)	6.16 (3.18)	4.39 (3.21)
Cronbach's α		.75	.89	.78	.66	.71	.74

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

Table 6

Gender differences in mindful parenting subscales and total score in Study 3

	<i>N</i> = 142		Univariate analyzes
	Mothers <i>M (SD)</i>	Fathers <i>M (SD)</i>	
IM-P subscales			
Compassion for child	26.34 (3.11)	24.83 (3.34)	$F(1, 141) = 15.41, p < .001, d = 0.47$
Non-judgmental acceptance	23.54 (3.47)	24.30 (3.15)	$F(1, 141) = 4.34, p = .038, d = 0.23$
Self-regulation in parenting	26.49 (3.52)	26.86 (3.81)	$F(1, 141) = 0.80, p = .373, d = 0.10$
Listening with full attention	19.37 (2.72)	19.01 (3.12)	$F(1, 141) = 1.34, p = .250, d = 0.12$
Emotional awareness of child	12.17 (1.79)	11.54 (2.25)	$F(1, 141) = 8.70, p = .004, d = 0.31$
IM-P total score (29 items)	107.80 (10.28)	106.52 (11.47)	$F(1, 141) = 1.27, p = .261, d = 0.12$

Note. Gender differences were analyzed on the subset of the 142 mother-father dyads.