



The Interpersonal Mindfulness in Parenting Scale: Examining the Reliability and Validity in Spanish Parents

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Abstract

Objectives Mindful parenting is the extension of dispositional mindfulness to parent–child interactions. The Interpersonal Mindfulness in Parenting scale (IM-P) is a 31-item self-report measure to assess different dimensions of mindful parenting. Its psychometric properties have been evaluated in several countries. Two studies were conducted, and the principal aim was to assess the psychometric properties of the Spanish version of the IM-P in two samples of Spanish parents.

Method In Study 1, 785 parents filled out this questionnaire and a dispositional mindfulness questionnaire. In Study 2, 859 parents responded to questions about mindful parenting and self-compassion.

Results The results of an exploratory factor analysis suggested a 5-factor structure in Study 1: nonjudgmental acceptance of parental functioning, compassion for the child, listening with full attention, self-regulation in parenting, and emotional awareness of the child. This 5-factor model was also evaluated through a confirmatory factor analysis in Study 2. The 5 factors showed good internal consistency and positive correlations with measures of dispositional mindfulness (Study 1) and self-compassion (Study 2).

Conclusions The Spanish version of the IM-P has demonstrated adequate psychometric properties in terms of reliability and validity in two samples of Spanish parents.

Keywords Parenting · Mindfulness · Mindful parenting · Spanish · Psychometrics

Mindfulness has been described 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) and has been established as an important protective factor of mental health in adults, children, and adolescents (Tomlinson et al., 2018). The last two decades have seen a growing trend toward studying mindfulness in the family context. The concept of mindful parenting (MP; Parent & DiMarzio, 2021) extends the characteristics of mindfulness to parent–child interactions (Duncan et al., 2009; Kabat-Zinn & Kabat-Zinn, 1997). Recently, Ahemaitijiang et al. (2021) provided a comprehensive definition of MP as “a parenting process in which parents do their best to give awareness, attention, nonjudgmental acceptance, and compassion, with high quality of self-regulation, to themselves and to their

children in their moment-to-moment interaction” (pp. 2–3). MP can play an important role in promoting mental health for both parents and children (Ahemaitijiang et al., 2021; Parent & DiMarzio, 2021). However, due to the novelty of the concept of MP, one of the greatest challenges is developing and validating appropriate instruments to measure its use in different populations.

The Interpersonal Mindfulness in Parenting scale (IM-P; Duncan, 2007) is a widely used instrument for assessing MP, based on a model of MP by Duncan et al. (2009). According to this model, MP is characterized by five dimensions: (1) nonjudgmental acceptance of the self and child, (2) compassion of the self and child, (3) listening with full attention, (4) self-regulation in the parenting relationship, and (5) emotional awareness of the self and child. According to this model, higher scores in these dimensions will improve parenting and parental well-being, which will be associated with more positive child management practices and more affection between parent and child. The ability of parents to apply present-moment awareness to parenting will then indirectly benefit the children by minimizing symptoms

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of psychological problems and improving their welfare. In support of this theoretical model, numerous studies have found that parental practices explain part of the association between MP and children's psychological outcomes (Han et al., 2021; Parent et al., 2016; Wang et al., 2018; Yang et al., 2022).

The original version of the IM-P consisted of 10 items that included content about nonjudgmental acceptance in parenting, present-centered attention in parenting, nonreactivity in parenting, and present-centered emotional awareness in parenting. Later, Duncan et al. (2009) added more items until obtaining a 31-item questionnaire that measured the five dimensions of MP proposed in their model. The IM-P is the only specific scale for measuring the five dimensions of MP proposed by Duncan et al. (2009). Different adaptations to different cultures have been made in which psychometric aspects have been analyzed (Caiado et al., 2020). The IM-P has been adapted to the populations of countries and territories, such as the Netherlands (de Bruin et al., 2014), Hong Kong (Lo et al., 2018), Portugal (Moreira & Canavarro, 2017), Mainland China (Pan et al., 2019), and South Korea (Kim et al., 2019). Although these adaptations attempted to evaluate MP according to the 5-factor structure proposed in the original version, none succeeded in adhering to this structure. In fact, all these adaptations reduced the number of items of the scale or proposed a different factorial structure.

For instance, in the Dutch adaptation (de Bruin et al., 2014), an exploratory factor analysis (EFA) was performed to determine whether this version followed the structure proposed in the model by Duncan et al. (2009). In this case, Item 3 ("Aware of impact of child mood on own mood") was excluded from the analysis, since it was negatively intercorrelated with the rest of the items. The EFA results showed a different structure from the original, in which 6 factors were identified. Item 6 ("being aware of how one's own mood affects the treatment given to the child") was not included in any of the factors due to its low loadings on all factors. In the second study, the Dutch version of the IM-P showed adequate psychometric properties, and its scores were positively correlated with different aspects of quality of life and some mindfulness facets of parents and negatively with dysfunctional parenting styles. In the third study, the IM-P was tested on another sample of mothers. Overall, the results of the three studies suggest that there is validity evidence for the use of this scale as a 6-factor structure: (1) nonjudgmental acceptance of parental functioning, (2) compassion for the child, (3) listening with full attention, (4) emotional non-reactivity in parenting, (5) emotional awareness of the child, and (6) emotional awareness of the self. The reliability of the Dutch IM-P version was strong, except for the sixth factor.

Similarly, the factorial structure of the Portuguese adaptation (Moreira & Canavarro, 2017) and its psychometric

properties were evaluated in three consecutive studies involving parents of children and adolescents between the ages of one and 18. Like in the case of the Dutch adaptation, in the first study, a 6-factor structure was obtained through an EFA, which was similar to that obtained in the Dutch version. However, the sixth factor (emotional awareness of self) was removed from the model, as it only consisted of 2 items and showed low reliability (Caiado et al., 2020; Moreira & Canavarro, 2017). Cronbach's alphas for the rest of the factors and for the total score on the scale were high. In the second and third studies, the scores verified that this version of 29 items and 5 factors fit adequately with different samples of parents.

The psychometric properties of the Hong Kong Chinese version of the IM-P scale (Lo et al., 2018) were evaluated in a large sample of participants with children in preschool, primary school, and secondary school. A total of 9 items were eliminated because they had low reliability and loaded in more than one factor. The remaining 23 items were grouped into 4 factors: (1) nonjudgmental acceptance in parenting, (2) compassion for the child, (3) emotional awareness in parenting, and (4) listening with full attention. The IM-P was found to have moderate negative correlations with parental depression, stress, and child behavioral problems. It also showed moderate positive correlations with parental dispositional mindfulness. In Mainland China, Pan et al. (2019) found a 4-factor structure. The exploratory factor analysis resulted in a 24-item 4-factor structure (interacting with full attention, compassion and acceptance, self-regulation in parenting, emotional awareness of child), which was more comparable to the Portuguese IM-P than to that of the Hong Kong Chinese IM-P factor structure.

Finally, regarding the Korean version of the IM-P (Kim et al., 2019), the use of an EFA iterative approach and a confirmatory factor analysis (CFA) resulted in an 18-item grouped into six 3-item subscales: (1) nonjudgmental acceptance of parental functioning, (2) emotional self-regulation, (3) compassion for the child, (4) listening with full attention, (5) noticing child's feelings, and (6) insight into effect of mood. The Korean IM-P total scores correlated with parents' self-compassion, depression (negatively), psychological well-being, and perceived stress (negatively).

Additional research is necessary to better understand the factor structure of the IM-P, since different structures have been found in different countries, and the proposed structures differ from the structure proposed in the original model by Duncan et al. (2009). The main purpose of this study was to examine the psychometric properties of the Spanish version of the IM-P. In summary, the goals of this study were (1) to study the factorial structure of the Spanish IM-P through an EFA (Study 1), (2) to perform a CFA to study the internal consistency of the subscales (Study 2), and (3) to assess the convergent validity by evaluating the

relationships of MP factors with parental dispositional mindfulness (Study 1) and self-compassion (Study 2). Previous studies have found that parental dispositional mindfulness and MP are related (Gouveia et al., 2016; Han et al., 2021; McCaffrey et al., 2017; Orue et al., 2020), indicating that parents with higher levels of dispositional mindfulness are likelier to engage in MP with children (Parent et al., 2016). Therefore, we expect to find positive relationships between parents' dispositional mindfulness and MP. Similarly, MP has also been related to parents' self-compassion (Kim et al., 2019; Moreira & Canavarro, 2017), indicating that parents who practice self-kindness and are nonjudgmental toward themselves engage in more MP. Thus, we also expect to find a positive relationship between self-compassion and MP.

Study 1

The objective of the first study was to evaluate the factorial structure of the IM-P using an EFA. Moreover, the internal consistency of the subscales was evaluated, and the relationships of the factors with the dimensions of parental dispositional mindfulness were studied to obtain evidence about the convergent validity. Based on previous studies (Gouveia et al., 2016; Han et al., 2021; McCaffrey et al., 2017; Orue et al., 2020), we expected to find positive relationships between the dimensions of the IM-P and dispositional mindfulness.

Method

Participants

The sample consisted of 785 mothers and fathers (89.9% mothers, 10.1% fathers) between 21 and 58 years of age ($M = 36.76$, $SD = 5.98$). The vast majority were of Spanish origin (94.4%), while 4.5% came from a South American country, 0.9% from another European country, 0.1% from Asia, and 0.1% from Africa. Of the participants, 67.4% were married, 11.9% lived with a partner, 5.8% were divorced, 0.2% were widowed, and 14.7% were single. In our sample, 43.9% of the parents had only one child, 45.3% had two children, 9.9% had three children, 0.6% had four children, and 0.3% had five children. Of these children, 51.9% were boys and 48.1% girls. They were all between 1 and 8 years old.

Procedure

First, 30 schools in different regions of Spain were contacted to collaborate on the recruitment for this project. From those, 18 schools agreed to collaborate, and they sent by email the information about the study to the parents of

children between 1 and 8 years so that they could voluntarily and anonymously answer the questionnaire. The parents that agreed to participate had to click the link to the questionnaire. The questionnaires were administered online through Qualtrics. Participation in the study was anonymous and confidential. The time needed to complete the questionnaires ranged between 10 and 20 min.

Measures

To measure mindfulness in parenting, the Spanish version of the IM-P (Duncan, 2022) was used. The Spanish version of the IM-P was provided to the authors by Duncan. This questionnaire has 31 items. All items were answered on a 5-point Likert scale: 1 (*never true*), 2 (*rarely true*), 3 (*sometimes true*), 4 (*often true*), and 5 (*always true*). The final score is the sum of all the items after reverse-coding some of them, with higher scores indicating higher degrees of MP.

The Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006) was used to measure the dispositional mindfulness of the parents. The questionnaire consists of 39 items that measure five facets of full attention: observing, describing, acting with awareness, nonjudging reacting, and non-reactivity. Participants were requested to answer each item on a Likert scale ranging from 1 (*never or very rarely true*) to 5 (*very often or always true*). The questionnaire has good psychometric properties in its Spanish adaptation (Cebolla et al., 2012). Alpha coefficients were 0.77 for observing, 0.86 for describing, 0.82 for acting with awareness, 0.79 for nonjudging, and 0.74 for nonreactivity.

Data Analyses

To determine the dimensionality of the Spanish IM-P, we conducted an EFA. Mardia's multivariate test for skewness was not statistically significant (test statistic = 13,419, $p = 1.00$), but there was evidence of excessive kurtosis (test statistic = 61.18, $p < 0.001$). Robust unweighted least squares (RULS) was chosen as the extraction method, and Robust Promin rotation (an oblique rotation method; Lorenzo-Seva & Ferrando, 2019) was used following the recommendations of Izquierdo et al. (2014). The polychoric correlation matrix was used in the EFA. The procedure to determine the number of recommended extracted factors was parallel analysis (Horn, 1965). The EFA was carried out with the program FACTOR 12 (Ferrando & Lorenzo-Seva, 2017). The sphericity was checked using Bartlett's test and the sampling adequacy using the Kaiser–Meyer–Olkin (KMO) measure. Normed-Measure of Sampling Adequacy (MSA) indices were obtained to test whether any item did not measure the same domain as the remaining items in the pool and, as a result, should be deleted. Normed-MSA values below 0.50 indicate that the item does not measure the same domain as

the rest of the items (Lorenzo-Seva & Ferrando, 2021). To evaluate the model fit, different indices of fit were observed: root mean square error of approximation (RMSEA) and the comparative fit index (CFI). For the CFI, values greater than 0.95 reflect excellent fit indices; for the RMSEA, values equal to or smaller than 0.06 reflect good fit indices (Hu & Bentler, 1999).

To evaluate reliability, we calculated Cronbach's alpha coefficients for each scale and McDonald's omega coefficient to assess the reliability of the whole test (McDonald, 1999). We obtained Pearson's r correlations between the IM-P subscales and the parents' dispositional mindfulness to explore the convergent validity of the scale.

Results

The KMO measure of sampling adequacy, 0.89, as well as Bartlett's test of sphericity, $\chi^2(465) = 8863.06$, $p < 0.001$, indicated that the factor analysis was suitable for our data. After parallel analysis of the polychoric correlation matrix, we estimated that the appropriate number of factors to be extracted was 6. The 6-factor model presented a good fit: $\chi^2(294, n = 785) = 327$, $p = 0.08$, RMSEA = 0.024, 90% CI (0.010; 0.050), CFI = 0.99. This structure accounted for 60.09% of the total variance and was very similar to the Portuguese version of the IM-P. The rotated loading matrix is shown in Table 1. Item 11 (emotions affect parenting) loaded 0.28 on the first factor, nonjudgmental acceptance of parenting functioning, and 0.25 on the factor self-regulation in parenting. Considering the content of the item, it was retained in the self-regulation in parenting factor. Item 20 (self-forgiveness when regretting parenting actions) loaded 0.59 in the factor nonjudgmental acceptance of parenting functioning and also above 0.30 (0.37) in the factor emotional awareness of self. Considering its higher factor loading and the content of the item, it was retained in the nonjudgmental acceptance of parenting functioning factor.

As can be seen in Table 2, most of the subscales obtained good McDonald's omega and Cronbach's alpha values. However, both coefficients were quite low for the emotional awareness of the child subscale (0.67), and Cronbach's alpha was poor for the emotional awareness of self subscale (0.49). We could not calculate McDonald's omega for this subscale because it only included two items. Nevertheless, considering that this subscale obtained a very poor Cronbach coefficient, and following the procedure used for the Portuguese version (Moreira & Canavarro, 2017), we decided to exclude the two items that make up this subscale and propose a final structure of 5 factors. McDonald's omega for the total scale was 0.91.

Table 3 presents the correlations between the MP subscales and dispositional mindfulness subscales. As can be

observed, MP factors were all interrelated, and, furthermore, all of them were related to the five dispositional mindfulness dimensions.

Discussion

The main aim of this study was to explore the factor structure of the IM-P in a Spanish sample of parents. The EFA results indicated a 6-factor solution very similar to the solution found in the Portuguese sample (Moreira & Canavarro, 2017). Therefore, it was decided to maintain the designations proposed by those authors. There were two complex items. The first was Item 11 (emotions affect parenting), which in this sample was grouped in the nonjudgmental acceptance of parental functioning factor with a factor loading of 0.40 but also with loads greater than 0.30 in listening with full attention and self-regulation in parenting. Considering the content of the item and the factorial structure of the Portuguese version, it was retained in the self-regulation in parenting factor. Interestingly, there is no agreement on this item, either in the original model (Duncan et al., 2009), where it is part of the emotional awareness of self and child factor, or in the Hong Kong Chinese version (Lo et al., 2018), where it is part of the nonjudgmental acceptance of parental functioning factor. However, in the Dutch version (de Bruin et al., 2014), it is grouped in the emotional nonreactivity in parenting factor, which is similar to the self-regulation in parenting factor proposed by the authors of the Portuguese version and therefore supports the idea that it is part of this factor.

The other complex item was Item 20 (self-forgiveness when regretting parenting actions). In this case, it loaded much higher in the nonjudgmental acceptance of parental functioning factor, and the content is coherent with this factor, so we decided to retain the item in that factor. This item is also part of the nonjudgmental acceptance factor in the Dutch and Portuguese adaptations.

As mentioned, the rest of the structure was identical to the one found in the Portuguese version. This similarity in structure can be explained by the similarities between the Spanish and Portuguese languages, since both are Romance languages. Furthermore, the structure found in this study was also very similar to the one found in the Dutch one. For example, the compassion for the child, listening with full attention, and emotional awareness of the child subscales were the same. However, the self-regulation in parenting factor was divided into two factors in the Dutch version: emotional awareness of self and emotional nonreactivity in parenting. The self-regulation in parenting factor is comparable to self-regulation in the parenting relationship subscale proposed in the original model and measures parents' capacity to regulate their own emotions in the relationship with their child. However, the structure found in Asian countries,

Table 1 Rotated loading matrix of the different versions of the IM-P

	Original	Dutch	Portuguese	Chinese Hong Kong	Chinese Mainland	Korean	NJAPF	CC	LFA	SRP	EAC	EAS
17. Self-blame during challenges with child	CSC	NJAPF	NJAPF	NJAPF	-	NJAPF	0.91					
15. Self-critical of parenting mistakes	CSC	NJAPF	NJAPF	-	-	-	0.87					
23. Self-criticism of self as parent	NJASC	NJAPF	NJAPF	NJAPF	-	NJAPF	0.86					
18. Acceptance of parenting challenges	NJASC	NJAPF	NJAPF	EAP	CA	-	0.63					
26. Self-critical comparison with other parents	CSC	NJAPF	NJAPF	NJAPF	-	NJAPF	0.54					0.37
20. Forgiving of self when regret parenting actions	CSC	NJAPF	NJAPF	EAP	-	-	0.59					
11. Emotions affect parenting	EASC	ENRP	SRP	NJAPF	IFA	INSIG	0.28		0.22	0.25		
10. Trouble accepting child individuation	NJASC	ENRP	NJAPF	-	CA	-	0.37					
25. Kind to child when upset	CSC	CC	CC	CC	CA	-		0.94				
27. Caring for child when struggling	CSC	CC	CC	CC	CA	CC		0.87				
4. Nonjudgmental listening to child	NJASC	CC	CC	-	CA	-		0.54				
28. Openness to child's point of view	NJASC	CC	CC	CC	CA	CC		0.60				
31. Patient with child when struggling	CSC	CC	CC	CC	CA	CC		0.75				
7. Nonjudgmental receptivity to child emotion	NJASC	CC	CC	-	CA	-		0.51				0.32
13. Distracted while engaged with child	LFA	LFA	LFA	LFA	IFA	LFA			0.82			
19. Busy thinking, not listening to child	LFA	LFA	LFA	LFA	IFA	-			0.77			
1. Not listening to child with full attention	LFA	LFA	LFA	LFA	IFA	LFA			0.77			
9. Rushing through activities with child	LFA	LFA	LFA	LFA	IFA	LFA			0.73			
24. Pay attention to child when together	LFA	LFA	LFA	CC	IFA	-			0.70			
21. Nonreactivity in difficult moments with child	NJASC	EAS	SRPR	EAP	SRP	-				0.66		
16. Effort to keep emotional balance when upset with child	SRPR	EAS	SRPR	EAP	CA	ESR				0.69		
29. Emotional reactivity in response to child behavior	SRPR	ENRP	SRPR	NJAPF	-	ESR				0.73		
8. Calmly tell child how feeling when upset	SRPR	EAS	SRPR	EAP	SRP	ESR				0.54		
2. When upset with child, notice feelings before acting	SRPR	EAS	SRPR	EAP	SRP	-				0.44		
14. Regretting parenting actions when upset	SRPR	ENRP	SRPR	NJAPF	IFA	-				0.52		
5. React too quickly to child	SRPR	ENRP	SRPR	-	-	-				0.42		
30. Aware of child's unspoken feelings	EASC	EAC	EAC	CC	EAC	NCF					0.76	
12. Unaware of child's feelings	EASC	EAC	EAC	-	EAC	NCF					0.57	
22. Aware of child's worries	EASC	EAC	EAC	CC	EAC	NCF					0.59	
6. Aware of link between own mood and parenting behavior	EASC	-	-	-	SRP	INSIG						0.42
3. Aware of impact of child mood on own mood	EASC	-	-	-	SRP	INSIG						0.41
Explained variance (%)							28.4	12.1	6.3	5	4.3	4

CSC compassion for self and child, NJASC nonjudgmental acceptance of self and child, LFA listening with full attention, SRPR self-regulation in the parenting relationship, EASC emotional awareness of self and child, ENRP emotional nonreactivity in parenting, ESR emotional self-regulation, NCF noticing child's feelings, NJAPF nonjudgmental acceptance of parenting functioning, EAS emotional awareness of self, CC Compassion for Child, EAC emotional awareness of child, SRP self-regulation in parenting, EAP emotional awareness in parenting, CA Compassion and Acceptance, IFA interacting with full attention, INSIG insight into effect of mood. Loadings lower than absolute 0.30 are omitted except for Item 11

Table 2 Descriptive statistics for the items of the IM-P and reliability analyses in study 1

	Mean (SD)	Cronbach's alpha	McDonald's omega	Normed MSA	Cronbach's alpha if item deleted
Nonjudgmental acceptance of parenting functioning	3.15 (0.76)	0.81	0.82		
Item 17	2.84 (1.13)			0.87	0.78
Item 15	2.49 (1.17)			0.86	0.78
Item 23	3.13 (1.23)			0.91	0.77
Item 18	3.33 (0.93)			0.93	0.80
Item 26	3.38 (1.22)			0.92	0.81
Item 20	2.97 (1.00)			0.85	0.81
Item 10	4.00 (1.07)			0.77	0.83
Compassion for the child	4.38 (0.58)	0.80	0.80		
Item 25	4.60 (0.64)			0.82	0.77
Item 27	4.67 (0.57)			0.80	0.77
Item 4	4.36 (0.75)			0.87	0.77
Item 28	4.25 (0.73)			0.88	0.75
Item 31	4.33 (0.70)			0.91	0.77
Item 7	4.30 (0.77)			0.90	0.78
Listening with full attention	3.47 (0.66)	0.83	0.83		
Item 13	3.56 (0.90)			0.91	0.78
Item 19	3.40 (0.94)			0.93	0.78
Item 1	3.06 (0.85)			0.90	0.80
Item 9	3.51 (0.83)			0.91	0.80
Item 24	3.83 (0.77)			0.92	0.80
Self-regulation in the parenting relationship	3.13 (0.60)	0.79	0.80		
Item 21	2.98 (0.89)			0.92	0.76
Item 16	3.33 (0.82)			0.93	0.76
Item 29	3.02 (0.87)			0.90	0.75
Item 8	3.25 (1.01)			0.92	0.77
Item 2	3.41 (0.92)			0.90	0.79
Item 14	3.21 (1.02)			0.93	0.76
Item 5	2.53 (0.86)			0.93	0.77
Item 11	3.36 (1.05)			0.93	0.77
Emotional awareness of the child	3.92 (0.68)	0.67	0.67		
Item 30	3.96 (0.80)			0.80	0.45
Item 12	3.81 (0.90)			0.89	0.64
Item 22	4.01 (0.93)			0.85	0.58
Emotional awareness of self	3.95 (0.56)	0.49	-		
Item 6	3.87 (0.88)			0.77	-
Item 3	4.17 (0.87)			0.78	-

such as China (Hong Kong and Mainland) and Korea, differs from the structure found in European countries. In these cases, the difference may be due not only to language but also to social and cultural differences related to parenting between Europe and Asian countries (Pinquart, 2021).

The internal consistency of all factors was adequate except for the emotional awareness of the child factor, which was just below the desirable level (0.67), and emotional awareness of self, which obtained a poor Cronbach's alpha (0.49). Interestingly, Items 3 and 6 of this subscale were not

maintained in the Dutch, Portuguese, and Chinese versions, so considering its low reliability in this study, these items were also eliminated, thus yielding a 29-item questionnaire with 5 factors.

As hypothesized, the different MP subscales were related to the five dimensions of dispositional mindfulness measured with the FFMQ. Although all the correlations were significant, it is interesting to determine between which factors the highest correlations were obtained. For example, the nonjudging dimension of the FFMQ correlated the highest

Table 3 Correlations among mindful parenting subscales and dispositional mindfulness dimensions

	1	2	3	4	5	6	7	8	9
1. NJAPF									
2. CC	0.19**								
3. LFA	0.33**	0.38**							
4. SRPR	0.47**	0.47**	0.54**						
5. EAC	0.21**	0.45**	0.33**	0.38**					
6. Observing	0.22**	0.17**	0.28**	0.33**	0.18**				
7. Describing	0.33**	0.22**	0.26**	0.31**	0.27**	0.32**			
8. Acting with awareness	0.33**	0.09*	0.38**	0.23**	0.18**	0.18**	0.39**		
9. Nonjudging	0.59**	0.12**	0.27**	0.31**	0.11**	0.17**	0.35**	0.40**	
10. Nonreactivity	0.47**	0.18**	0.27**	0.38**	0.21**	0.37**	0.44**	0.33**	0.39**

Note. NJAPF nonjudgmental acceptance of parenting functioning, CC compassion for child, LFA listening with full attention, SRPR self-regulation in the parenting relationship, EAC emotional awareness of the child. * $p < 0.05$, ** $p < 0.001$

with the nonjudgmental acceptance of parental functioning factor of the IM-P, which indicates that those parents who have a general nonjudging attitude do not judge their performance as parents, either. The nonreactivity dimension of the FFMQ correlated the highest with self-regulation in parenting, which indicates that women and men who allow thoughts and feelings to come and go, without getting caught up in them, more easily pause before reacting in an interaction with their child. Similarly, the acting with awareness dimension of the FFMQ correlated the highest with listening with full attention, indicating that fathers and mothers with the ability to be in the present moment also have the ability to listen attentively and focus on their children. In conclusion, being aware through paying attention on purpose and nonjudgmentally to the present moment is related to being more attentive to one's child and more accepting of one's own parental functioning, as found in previous studies (de Bruin et al., 2014; Han et al., 2021).

Study 2

The objective of this study was to analyze the appropriateness of the structure found in Study 1 through a CFA in a different sample of Spanish parents. Furthermore, internal consistency was also tested with Cronbach's alphas. Finally, correlations with self-compassion were tested.

Method

Participants

Parents of 795 early adolescents were invited to participate in the study; 471 mothers (59.3% of the 795 mothers invited) and 388 fathers (48.8% of the 795 fathers invited) agreed

to participate. Therefore, the sample consisted of 859 parents (54.8% mothers and 45.2% fathers) between the ages of 30 and 78 ($M = 47.16$; $SD = 5.12$). Of these, 91.2% were Spanish, 7.4% from a Latin American country, 0.8% from a European country, 0.4% Asian, and 0.2% African. Regarding marital status, 76.2% were married, 9.9% were single, 8.2% were divorced, 5% were unmarried partners, and 0.7% were widowed. In addition, 22.2% indicated that they had one child, 61.6% two, 13.1% three, 2.5% four, 0.4% five, and 0.2% six children. Of the offspring, 49.2% were girls.

Procedure

Eleven schools from Biscay (Spain) were randomly selected for this study. Head teachers were contacted to provide them with information about the main objectives and procedures. Four head teachers refused to participate. Then, a letter was sent to parents with which two questionnaires were provided for them to complete: one for the mother and one for the father. In the questionnaire, it was specified that their participation was voluntary, that their responses would be kept confidential, and that they were allowed to stop participating at any time during the process. Once the questionnaires were completed, their children returned the letters with the questionnaires to school, and a week later, a researcher collected them for coding.

Measures

MP was measured using the 31-item Spanish version of the IM-P (Duncan, 2022) described in Study 1. The Spanish adaptation (García-Campayo et al., 2014) of the Self-Compassion Scale—short form (SCS-SF; Raes et al., 2011) was used to analyze parents' traits of self-compassion. This short version is composed of 12 items, which are scored on a 5-point Likert scale ranging from 1 (*almost never*) to 5

(*almost always*). This scale offers six subscales and a total score by summing all items. The Spanish adaptation has shown good psychometric properties in previous studies (Elices et al., 2017). Cronbach's alpha in this study for the overall construct was 0.78.

Data Analyses

A CFA was conducted as a test of the goodness of fit of the model that was built according to the EFA results. The CFA parameters were estimated using the polychoric matrices and asymptotic covariances of the questionnaire items. The statistical program LISREL 10 (Jöreskog & Sörbom, 2018) was used to test the model. Two models were evaluated: (1) a 5 correlated factors model and (2) a second-order factor model, assuming that the dimensions of mindful parenting load on a general mindful parenting factor, with 5 first-order factors and 1 second-order factor. To evaluate the model fit, different indices of fit were observed: χ^2 , RMSEA, CFI, and standardized root mean square residual (SRMR). SRMR values equal to or smaller than 0.08 reflect good fit indices (Hu & Bentler, 1999).

Results

The five correlated factors model presented a little bit low but still acceptable fit: Satorra-Bentler $\chi^2(367, n=859) = 1667, p < 0.001$, RMSEA = 0.064, 90% CI (0.060; 0.067), CFI = 0.94, and SRMR = 0.073. All the factor loadings of the items were statistically different from zero ($t > 1.96$) (Table 4). The second-order model also presented a moderate fit (although a bit lower than desirable): Satorra-Bentler $\chi^2(367, n=859) = 1806, p < 0.001$, RMSEA = 0.067, 90% CI (0.064; 0.070), CFI = 0.93, and SRMR = 0.077. All first-order factors loaded significantly on the general mindful parenting factor. (Standardized factor loadings were 0.62 for the subscale nonjudgmental acceptance of parental functioning, 0.62 for the subscale compassion for the child, 0.73 for the subscale listening with full attention, 0.83 for the subscale self-regulation in parenting, and 0.50 for the subscale for emotional awareness of child.) The difference in the fit of the correlated and hierarchical models was significant ($\Delta\chi^2(5) = 139, p < 0.001$), which means that the fit to the data of the 5 correlated factor model was statically better than that of the one second-order factor.

All the Cronbach's alpha and McDonald's omega coefficients were adequate—specifically, 0.70 (alpha) and 0.72 (omega) for nonjudgmental acceptance of parental functioning, 0.83 and 0.83 for compassion for the child, 0.78 and 0.78 for listening with full attention, 0.76 and 0.77 for self-regulation in parenting, and 0.72 and 0.73 for emotional awareness of the child. Furthermore, Cronbach's alpha for

the total scale of mindful parenting was 0.86, and McDonald's omega was 0.87.

Finally, in order to further assess convergent validity, we examined the correlations between MP subscales and another variable related to MP: parents' self-compassion. The results indicated that self-compassion was correlated with nonjudgmental acceptance of parental functioning ($r = 0.55, p < 0.001$), compassion for the child ($r = 0.27, p < 0.001$), listening with full attention ($r = 0.27, p < 0.001$), self-regulation in parenting ($r = 0.46, p < 0.001$), and emotional awareness of the child ($r = 0.15, p < 0.001$).

Discussion

The results of the second study served to accumulate evidence about the validity and reliability of the Spanish version of the IM-P. The 5-factor structure of the 29-item IM-P found in Study 1 was evaluated through a CFA in the sample of the second study, which obtained adequate goodness of fit indices. A second-order factor model obtained poorer goodness-of-fit but still adequate, indicating that although the use of 5 factors is the most recommended, it is also adequate to use a total score. Likewise, the internal consistency of the 5 factors and of the total scale was adequate.

Furthermore, as found in previous studies (Gouveia et al., 2016), the results showed significant positive relationships between the Spanish IM-P factors and self-compassion. Not surprisingly, the highest correlation was with the factor nonjudgmental acceptance of parenting functioning. This MP factor is composed of items that measure parents' self-criticism concerning their parenting abilities. Self-compassion includes, among other aspects, self-kindness, which refers to being supportive, caring, and understanding, and reduced self-judgment, which refers to harshly criticizing oneself for one's failings and inadequacies. It seems clear that parents who are self-compassionate and not self-critical are also not critical of their parenting behavior.

General Discussion

The principal aim of this study was to evaluate the psychometric properties of the Spanish translation of the IM-P. Through two studies with two different samples, we evaluated its factorial structure, the internal consistency of its subscales, and the convergent validity through the relationships with the dispositional mindfulness subscales of the FFMQ and with self-compassion. The results indicate that the Spanish version of the questionnaire has good psychometric properties.

First, in a sample of mothers and fathers of children from 1 to 8 years old, we carried out an EFA that yielded a

Table 4 Factor loadings of the confirmatory factor analysis (Study 2)

	NJAPF	CC	LFA	SRPR	EAC
Item 17	0.60				
Item 15	0.57				
Item 23	0.73				
Item 18	0.20				
Item 26	0.42				
Item 20	0.52				
Item 10	0.39				
Item 25		0.66			
Item 27		0.70			
Item 4		0.60			
Item 28		0.67			
Item 31		0.75			
Item 7		0.62			
Item 13			0.71		
Item 19			0.68		
Item 1			0.66		
Item 9			0.60		
Item 24			0.57		
Item 21				0.58	
Item 16				0.54	
Item 29				0.74	
Item 8				0.52	
Item 2				0.22	
Item 14				0.62	
Item 5				0.52	
Item 11				0.56	
Item 30					0.78
Item 12					0.54
Item 22					0.73
<i>M (SD)</i>	30.52 (0.61)	40.38 (0.55)	30.76 (0.62)	30.31 (0.56)	30.73 (0.72)

Note. *NJAPF* nonjudgmental acceptance of parenting functioning, *CC* compassion for child, *LFA* listening with full attention, *SRPR* self-regulation in the parenting relationship, *EAC* emotional awareness of the child

structure of six factors. After eliminating a factor made up of 2 items whose reliability was low, we proposed a 29-item questionnaire with 5 factors. A CFA performed on a second sample of mothers and fathers obtained a good fit for the proposed 5-factor structure: (1) nonjudgmental acceptance of parenting functioning, (2) compassion for child, (3) listening with full attention, (4) self-regulation in the parenting relationship, and (5) emotional awareness of self. A hierarchical structure with a single second-order factor called mindful parenting was also tested. The model obtained adequate fit indices though poorer than the five interrelated factor model. These results suggest that the use of the five factors is the most recommended, although it would also be possible to use a single total score. The structure proposed in this study is identical to the one proposed by Moreira and Canavarro (2017) in a Portuguese sample and to the one proposed by de Bruin et al. (2014) in a Dutch sample. However,

it departs from the structures proposed in the Hong Kong Chinese (Lo et al., 2018) and Korean (Kim et al., 2019) versions. These similarities and differences could be due to differences in parenting styles between Western European and Asian countries (Pinquart, 2021). Likewise, the proposed structure is somewhat different from the theoretical model (Duncan et al., 2009), mainly, and as Bruin et al. (2014) indicated, because the results suggest that child-oriented and parent-oriented items belong to different factors. In the model proposed by Duncan et al. (2009), items with similar content are grouped into the same factor regardless of whether they are directed at children, at the self, or at acting as a parent. Instead, the results of the present study, as well as those obtained with the Dutch and Portuguese versions, indicate that the self-related aspects of MP differ from the child-related aspects. Thus, for example, the compassion for self and child factor is proposed in the original model, and

the results of the factorial analysis separate these items into compassion for the child, on the one hand, and nonjudgmental acceptance of parenting functioning, on the other. These results suggest that it is possible that some parents feel compassion for their children but not for their behavior as parents, or vice versa.

Yet all the MP subscales correlated positively and significantly with the dispositional mindfulness dimensions of the parents as well as with their self-compassion. As indicated in the discussions of each study, these relationships are consistent with previous studies (Gouveia et al., 2016; Han et al., 2021; Moreira & Canavarro, 2017; Pan et al., 2019) and indicate that parents who are aware of the present moment, are nonjudging, and are compassionate with themselves also have these traits in their role as parents, in their interaction with their children, and in their attitude toward their children.

Limitations and Future Research

This study has some limitations that should be considered. First, all the measures used were self-reported, so it is likely that the relationships found were affected by this bias. Future studies should also use other reports, such as children's reports. Second, the number of fathers who answered the questionnaire was much lower than the number of mothers, especially in the first study. This prevented us from evaluating the structure in samples of mothers and fathers separately. Future studies should try to increase the number of fathers in order to study the factorial invariance and evaluate whether the relationships with other variables are the same. Third, we were not able to evaluate other psychometric properties, such as test–retest, to analyze the stability of the measure. Fourth, we did not consider the possible training of parents in meditation, MP groups, or similar techniques, and this could be an important variable that future studies should consider. Finally, we should note that we do not report evidence about the linguistic accuracy of the Spanish version of the IM-P questionnaire with respect to the original version of the IM-P and therefore we cannot rule out the possibility that some of the findings of this study could be based on differences caused by the translation of the instrument.

Despite these limitations, we consider the study to support the use of the IM-P questionnaire in Spanish. The psychometric properties found are adequate, and it is therefore a suitable instrument for measuring different dimensions of MP. We believe that this questionnaire can be used both in research, to analyze the relationships with other variables related to both parents and children, and to evaluate the effectiveness of programs aimed at improving the MP capacity of mothers and fathers.

Author Contribution IO: designed the study, conducted the data analyses, and wrote part of the paper. MLI: collaborated with the design, analyses, and writing of the study; revised the manuscript. ERC: collaborated with writing of the study; revised the manuscript. EC: collaborated with the execution of the study, data analyses, and writing; revised the manuscript. All authors approved the final version of the manuscript for submission.

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Data Availability Data are available at <https://osf.io/7bc6t>.

Declarations

Ethics Approval Participation was voluntary and participants were informed that their responses were confidential and would only be read by the research team. The procedure always followed the standards of the Declaration of Helsinki. The Ethics Committee of the University of Deusto approved this study (Ref. ETK-10/19–20).

Informed Consent Parent informed consent was required to participate in the study.

Conflict of Interest The authors declare no competing interests.

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