

# Mindful Parenting Assessed Further: Psychometric Properties of the Dutch Version of the Interpersonal Mindfulness in Parenting Scale (IM-P)

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**Abstract** Psychometric properties of the Dutch version of the Interpersonal Mindfulness in Parenting Scale (IM-P) were studied in a general population sample of mothers of adolescents ( $n=866$ ) (study 1). A six-factor structure (29 items) emerged using exploratory factor analysis. A main difference from the original IM-P was that aspects of compassion and emotional awareness were separated into different factors for the self and the child, instead of combined into one factor. In a second general population sample of mothers of adolescents ( $n=199$ ), the six-factor structure was confirmed using confirmatory factor analysis (study 2). The proposed 29-item version of the IM-P and its subscales were

shown to have good internal consistencies, apart from the sixth factor. As expected, a high correlation was found with general mindfulness questionnaires (FFMQ and FMI). Furthermore, the IM-P correlated positively as expected with quality of life and optimism and negatively with depression and dysfunctional parenting styles. These expected indications of construct validity were found in study 2, as well as in mothers ( $n=112$ ) of adolescents with type 1 diabetes mellitus (study 3) which was added to examine whether the Dutch version of the IM-P was also valid in a pediatric population. Overall, these three studies present good psychometric properties of the Dutch translation of the first measure of mindful parenting.

**Keywords** IM-P · Mindful parenting · Mindfulness · Adolescents · Diabetes · Meditation · Internal consistency · Construct validity · Psychometric properties

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## Introduction

Mindful parenting is a relatively new extension of mindfulness-based interventions. It has been defined as paying attention to your child and your parenting in a particular way: intentionally, in the present moment, and non-judgmentally (Kabat-Zinn and Kabat-Zinn 1997). Mindfulness allows parents to perceive their children more clearly as they truly are and to act with wisdom and responsiveness, instead of just reacting (Kabat-Zinn and Kabat-Zinn 1997). Although only a few randomized controlled trials are available (e.g., Coatsworth et al. 2010), several recent case and preliminary studies show promising effects of mindful parenting training in parents of children and adolescents with

autism spectrum disorders, attention deficit hyperactivity disorder (ADHD), oppositional defiant disorder, anxiety disorders, and other developmental disabilities (i.e., Bögels et al. 2008, 2010; Singh et al. 2006, 2009; Van der Oord et al. 2011; Van de Weijer-Bergsma et al. 2011). Children's internalizing and externalizing symptoms decreased, aggressive behavior diminished, and attention improved on self-reports, parent-reports, and more objective neuropsychological measures of attention. Furthermore, parents improved on their own goals, quality of life, and reported a large decrease in parenting stress. Most effects occurred directly after training and were maintained at follow-up after 2 months.

Duncan et al. (2009) have proposed a theoretical model of mindful parenting and developed a self-report measure of mindful parenting: the Interpersonal Mindfulness in Parenting (IM-P) scale (Duncan 2007). In an initial validation study of the original ten-item version of the IM-P conducted with  $n=753$  mothers and  $n=523$  fathers a higher-order mindful parenting factor and four first-order factors of mindful parenting were found: (1) present-centered attention in parenting; (2) present-centered emotional awareness in parenting; (3) non-reactivity/low-reactivity in parenting; and (4) non-judgmental acceptance in parenting.

Internal consistencies for the four factors ranged from a correlation of 0.45 for the two items of the Present-Centered Emotional Awareness in Parenting subscale to 0.72 for the IM-P total scale. Preliminary convergent and discriminant validity in relation to mindfulness and other parenting constructs was demonstrated (Duncan 2007). In a pilot randomized controlled trial of their mindfulness enhancement of the Strengthening Families Program: For Parents and Youth 10–14 (Coatsworth et al. 2010), mindful parenting as measured with the ten-item IM-P was shown to mediate effects of the MSFP program on key outcomes related to maternal and youth functioning.

Subsequently, this short version of the IM-P was extended to a 31-item version with five hypothesized subscales corresponding to the five dimensions of mindful parenting proposed by Duncan and colleagues (Duncan et al. 2009): (1) listening with full attention refers to listening to your child with focused attention and awareness of experiences in the present moment (five items); (2) emotional awareness of self and child refers to parents' ability to be aware of emotions within themselves as well as in their child (six items); (3) self-regulation in the parenting relationship refers to parents becoming less reactive to their child's behavior and adopting a style of more calmly selecting a parenting style without immediately reacting (six items); (4) non-judgmental acceptance of self and child refers to the need for parents to become more aware of the (unconscious) expectations they often have of their child's behavior and to gradually learn to adopt a more non-judgmental acceptance of the traits and behaviors of themselves and their child (seven items); and (5) compassion for self and child refers to developing a genuine stance of

caring and compassion for their child as well as for themselves as parents (seven items) (Duncan et al. 2009). They proposed that, through these five practices, parenting, parental well-being, parent-child affection, and child rearing practices improve which in turn will lead to symptom reduction and better child well-being. Based on this model, the current 31-item version of the IM-P was developed which is the focus of the current study.

To our knowledge, the IM-P is currently the only measure worldwide that specifically assesses aspects of mindful parenting instead of general dispositional mindfulness for which many questionnaires are available. Mindful parenting questionnaires with good psychometric properties are needed to determine whether mindfulness skills in parenting do indeed increase after participation in mindful parenting training in clinical and non-clinical populations and to further assess whether this increase mediates the subsequent decrease in psychological or psychiatric symptoms in the child and/or the parent. The main objective of the three presented studies was to assess the psychometric properties of the Dutch version of the IM-P. The IM-P was translated (and back translated) into Dutch by a team of four researchers (highly experienced mindfulness trainers, psychotherapists, and psychologists, of whom one was a native English speaker) in close collaboration with L. Duncan who authorized the final version as used in this study. Mindful parenting in The Netherlands is a rapidly growing field, and general mindfulness questionnaires have already been translated and validated.

The following hypotheses were tested. First, based on the theoretical framework of the IM-P (Duncan et al. 2009), we explored whether the Dutch version of the IM-P would consist of five reliable factors in samples of mothers of adolescents from the general community. Second, we hypothesized to find a positive relationship between the IM-P and the physical, psychological, social, and environmental aspects of quality of life. In addition, we expected the IM-P to correlate positively with emotional well-being, optimism, and with a measure of general mindfulness, demonstrating convergent validity. We further expected negative relationships of the IM-P with measures of depression, general parenting stress, and dysfunctional parenting styles such as over-reactivity, thus providing evidence of discriminant validity. We expected to find these positive and negative correlations in two samples of mothers from the general population as well as in a sample of mothers of adolescents with type 1 diabetes mellitus.

## Study 1

The goal of this first study was to examine the factor structure and the internal consistency of the Dutch version of the IM-P in mothers of adolescents from the general

community. Subsequently, we examined IM-P associations with measures of depression and optimism.

## Method

### Participants and Procedure

This study was part of a larger randomized, controlled study on the effectiveness of a school-based depression prevention program for adolescents (Tak et al. 2012). Of nine participating schools, eight schools gave permission to approach parents of the participating adolescents ( $n=1,232$ ). Parents were invited to participate through a letter including an Internet link which led them to the online questionnaires, which were completed by 914 parents (74.2 %). Gift certificates of 25 Euros were provided by raffle to ten parents selected from among all parents who completed the questionnaire. Most of the questionnaires, 93.9 %, were completed by the biological mother, 4.5 % by the biological father. For comparability with the other studies, this study focused on the mothers only, leaving 866 mothers in total, of whom 99.1 % was the biological mother, and the remaining 0.9 % was a female caretaker in the role of mother. The average age of the mothers was 45 years ( $SD=3.8$ ). On average, the children of these parents (53 % boys) were 12 to 15 years old ( $M=13.3$  years,  $SD=0.60$ ). Ninety-six per cent of the mothers were of Dutch nationality. The IM-P scores (30-item version) were somewhat negatively correlated with age,  $r=-0.092$ ;  $p=0.015$  but were not correlated with educational level (see Table 1),  $r=0.058$ ;  $p=0.107$ .

## Measure

### IM-P

See scale description in the “Introduction.” Scores on the IM-P range from 1=never true to 5=always true where higher (subscale) scores reflect more mindfulness in parenting, including more attention, awareness of self and child, more self-regulation, non-judgmental acceptance of self and child, and more compassion of self and child.

### Beck’s Depression Inventory-II (BDI-II)

Parental depression was measured with the Beck’s Depression Inventory-II (BDI-II) (Beck et al. 1996). The items correspond to the symptoms of depression as listed in the DSM-IV. In this study, a Dutch version of the BDI-II was used, which has been shown to have good psychometric properties (Van der Does 2002). Cronbach’s alpha in the current sample was 0.88.

### Life Orientation Test-Revised (LOT-R)

Optimism was measured with the Life Orientation Test-Revised (LOT-R) (Scheier et al. 1994), which was developed to measure dispositional optimism. The scale has been shown to have acceptable internal consistency (Scheier et al. 1994). Internal consistency in the current sample was good ( $\alpha=0.75$ ).

### Statistical Analyses

The factor structure of the Dutch version of the IM-P was examined using principal axis factoring with Promax rotation. Internal consistency (Cronbach’s alpha) was examined. Pearson correlations with related constructs were calculated to examine construct validity.

## Results

Because of predominantly negative inter-item correlations, item 3 has been excluded from analyses. Indicators showed that the data were suitable for factor analyses (Kaiser–Meyer–Olkin measure of sampling adequacy=0.91; Bartlett’s test of sphericity,  $p<0.001$ ). There were seven eigenvalues larger than 1; however, in the solution with seven factors, the last loaded only on a single item (item 16). Therefore, a six-factor solution was preferred. The rotated factor loadings larger than 0.183, the approximate boundary for significance level 0.01 (Stevens 1996, p.371), are presented in Table 2.

The items comprising these new factors are presented in bold in Table 2. Except for the first factor, the observed structure for the Dutch IM-P is somewhat different from the

**Table 1** Educational level of the three different samples of mothers

	Sample 1 ( $n=866$ )	Sample 2 ( $n=199$ )	Sample 3 ( $n=112$ )
Lower, middle, and higher applied and general secondary education	27.6 %	30.6 %	16.0 %
Intermediate vocational education	24.7 %	20.1 %	49.1 %
Higher vocational education	32.1 %	36.2 %	31.3 %
University	12.2 %	11.1 %	2.7 %
Different types of education or no answer	3.3 %	2.0 %	0.9 %

hypothesized structure proposed by Duncan et al. (2009) for the original 31-item English version of the IM-P due to a separation of child-oriented and parent-oriented items. The first factor, Listening with Full Attention (items 1, 9, 13, 19, and 24), is the same as the first subscale of the original IM-P. Furthermore, we found the following factors and suggest the following subscale names for the Dutch IM-P: Compassion for the Child (items 4, 7, 25, 27, 28, and 31). It contains the three child-oriented items from the Compassion for Self and

Child subscale of the English version and three from the Non-judgmental Acceptance of Self and Child subscale. The third factor was named Non-judgmental Acceptance of Parental Functioning (items 15, 17, 18, 20, 23, and 26) and the items focus on the parent (not) blaming or criticizing oneself for (perceived) mistakes in parenting. Factor four was called Emotional Non-reactivity in Parenting (items 5, 10, 11, 14, and 29). It contains items referring to (not) emotionally responding to the child's behavior, three of which were drawn

**Table 2** Factor loadings of Dutch IM-P items in study 1 ( $n=866$ )

Dutch IM-P subscales							
Item (#)	Original subscale	1	2	3	4	5	6
		LFA	CC	NJAPF	ENRP	EAC	EAS
1. Not listening to child with full attention.	1	<b>0.688</b>	0.266	0.238	0.397	0.272	
9. Rushing through activities with child.	1	<b>0.679</b>	0.334	0.349	0.400	0.313	
13. Distracted while engaged with child.	1	<b>0.721</b>	0.349	0.389	0.464	0.320	
19. Busy thinking, not listening to child.	1	<b>0.772</b>	0.392	0.379	0.466	0.331	
24. Pay attention to child when together.	1	<b>0.659</b>	0.511	0.336	0.391	0.353	0.235
3. Aware of impact of child mood on own mood.	2						
6. Aware of link between own mood and parenting behavior.	2						0.301
11. Emotions affect parenting.	2	0.477	0.351	0.461	<b>0.598</b>	0.378	
12. Unaware of child's feelings.	2	0.376	0.331	0.344	0.412	<b>0.761</b>	
22. Aware of child's worries.	2	0.306	0.327	0.251	0.289	<b>0.723</b>	0.351
30. Aware of child's unspoken feelings.	2	0.346	0.449	0.243	0.315	<b>0.685</b>	0.218
2. When upset with child, notice feelings before acting.	3		0.211				<b>0.523</b>
5. React too quickly to child.	3	0.420	0.313	0.313	<b>0.585</b>	0.260	0.247
8. Calmly tell child how feeling when upset.	3	0.258	0.383		0.278	0.216	<b>0.364</b>
14. Regretting parenting actions when upset.	3	0.412	0.404	0.384	<b>0.674</b>	0.344	0.227
16. Effort to keep emotional balance when upset with child.	3	0.263	0.280		0.358		<b>0.437</b>
29. Emotional reactivity in response to child behavior.	3	0.419	0.438	0.431	<b>0.763</b>	0.309	0.282
4. Nonjudgmental listening to child.	4	0.508	<b>0.528</b>	0.260	0.391	0.322	0.511
7. Nonjudgmental receptivity to child emotion.	4	0.348	<b>0.475</b>		0.330	0.294	0.404
10. Trouble accepting child individuation.	4	0.272	0.193	0.367	<b>0.417</b>	0.254	
18. Acceptance of parenting challenges.	4	0.231	0.225	<b>0.511</b>	0.350	0.218	0.349
21. Non-reactivity in difficult moments with child	4	0.216	0.260	0.208	0.374	0.220	<b>0.451</b>
23. Self-criticism of self as parent.	4	0.308	0.194	<b>0.480</b>	0.329	0.183	
28. Openness to child's point of view.	4	0.354	<b>0.547</b>	0.263	0.376	0.258	0.402
15. Self-critical of parenting mistakes.	5	0.321		<b>0.678</b>	0.358	0.185	
17. Self-blame during challenges with child.	5	0.340	0.224	<b>0.657</b>	0.387	0.248	
20. Forgiving of self when regret parenting actions.	5			<b>0.532</b>	0.202	0.247	0.360
25. Kind to child when upset.	5	0.326	<b>0.711</b>	0.185	0.312	0.299	0.196
26. Self-critical comparison with other parents.	5	0.375	0.314	<b>0.539</b>	0.477	0.352	
27. Caring for child when struggling.	5	0.350	<b>0.754</b>	0.251	0.376	0.341	0.244
31. Patient with child when struggling.	5	0.349	<b>0.720</b>	0.218	0.408	0.365	0.376

Full text of the items of the English IM-P is available from the author (duncanLa@ocim.ucsf.edu). Factors in the original English IM-P: 1=Listening with Full Attention; 2=Emotional Awareness of Self and Child; 3=Self-Regulation in the Parenting Relationship; 4=Non-judgmental Acceptance of Self and Child; 5=Compassion for Self and Child (Duncan et al. 2009). Items comprising the suggested six-factor structure of the Dutch version of the IM-P are presented in boldface: 1=Listening with Full Attention (LFA); 2=Compassion for Child (CC); 3=Non-judgmental Acceptance of Parental Functioning (NJAPF); 4=Emotional Non-reactivity in Parenting (ENRP); 5=Emotional Awareness of Child (EAC); 6=Emotional Awareness of Self (EAS)

from the Self-Regulation in the Parenting Relationship subscale of the English IM-P. The fifth factor was called Emotional Awareness of the Child (items 12, 22, and 30). The items refer to whether the parent is aware of the emotions of the child and are the same three child-oriented items from the Emotional Awareness of Self and Child subscale in the English version. The final factor was Emotional Awareness of Self (items 2, 8, 16, and 21). Item 8 (When I am upset with my child, I calmly tell him/her how I am feeling) has been assigned to this factor (loading of 0.364), although it loaded slightly higher on the second factor (0.383). However, based on the content of being emotionally aware of oneself, and its similarity to other items in this sixth factor, we felt it was more appropriate to include it here instead of with the second factor with items referring to compassion for one's child. Furthermore, item 6 (I am aware of how my moods affect the way I treat my child) has not been included in any of our subscales since loadings on all factors were low.

### Internal Consistency

Internal consistency based on 29 items was good ( $\alpha=0.89$ ). Internal consistencies for the separate subscales were  $\alpha=0.83$  for Listening with Full Attention;  $\alpha=0.78$  for Compassion for the Child;  $\alpha=0.73$  for Non-judgmental Acceptance of Parental Functioning;  $\alpha=0.74$  for Emotional Non-reactivity in Parenting;  $\alpha=0.76$  for Emotional Awareness of the Child;  $\alpha=0.54$  for Emotional Awareness of Self. Average scores per item, IM-P subscale scores, and IM-P total score can be seen in Table 3.

### Construct Validity

Construct validity of the IM-P was investigated by calculating partial correlations (controlled for age due to the significant observed correlation) with measures of depression and optimism (see Table 4).

As expected, the IM-P total score correlated negatively with the BDI-II total score,  $r=-0.333$ ,  $p<0.001$ , and positively with the LOT-R total score,  $r=0.422$ ,  $p<0.001$ . The same applied to all IM-P subscales (see Table 4). A higher score on subscales of the IM-P was related to less reported depression and more optimism in life.

## Discussion

In general, the results of this study support the reliability and validity of the Dutch version of the IM-P. The factor structure we found was somewhat different from the original English IM-P. Overall, roughly the same dimensions of mindful parenting were demonstrated, but some items were combined in subscales, and other items were separated between subscales.

Item 3 was removed (due to negative inter-item correlations), and the following subscales were suggested for the Dutch version: (1) Listening with Full Attention, (2) Compassion for the Child, (3) Non-judgmental Acceptance of Parental Functioning, (4) Emotional Non-reactivity in Parenting, (5) Emotional Awareness of the Child, and (6) Emotional Awareness of Self. Whereas in the hypothesized subscales of the original IM-P, mindfulness issues related to oneself, to one's child, and to the parenting interaction with one's child were combined in three factors: Emotional Awareness of Self and Child, Non-judgmental Acceptance of Self and Child, and Compassion for Self and Child, it seems that, in our observed factor structure, issues related to oneself are separated more from issues related to the child or the parenting relationship. The authors of the English IM-P have several validation studies ongoing, so it has not yet been determined from an empirical perspective whether the five hypothesized factors will hold among U.S. populations. It may be that self-oriented, child-oriented, and relationship-oriented items necessarily fall on different factors even when they share conceptual similarities. Although it is expected that, for example, emotional awareness with self and child may be related, it is our clinical impression that, for example, parents who have received little care as a child or have a traumatic background may have a much easier time feeling compassion and emotional awareness for their child than for themselves. Similarly, parents who have themselves received overly permissive parenting as a child may have an easier time being compassionate and emotionally aware of themselves than of their child. This would explain why Emotional Awareness of Self and Child come out as separate factors of mindful parenting.

Furthermore, this study showed expected positive correlations between the IM-P and optimism. The more optimistic a mother is about her future and the more she expects good things to happen, the more attentive, and mindful the mother is in her parental functioning. These findings are congruent with the association between happiness, positive feelings, and meditation (Hanson and Medius 2009) as well as dispositional mindfulness (i.e., Brown et al. 2011). In addition, higher awareness, attention, self-regulation, non-judgmental acceptance, and compassion for one's child were related to lower self-reports of depression. These findings are consistent with the positive effects of mindfulness-based training found in patients with depression (i.e., Kuyken et al. 2008; Segal et al. 2002) and the previously demonstrated negative relationships between depression and mindfulness measures (i.e., Baer et al. 2008). It is also consistent with one of the working mechanisms of mindful parenting proposed by Bögels et al. (2010). They argued that because depressed mothers' attention is taken up by their repetitive, negative, preoccupied thinking, characteristic to depression, they have less attention to allocate to their child during interaction, and the focus of attention will be more on negative aspects of the child. In line,

**Table 3** Means (SD) of the Dutch version of the IM-P items, subscales, and total score in the samples of study 1, 2, and 3 ( $n=866$ ,  $n=199$ , and  $n=112$ )

Items	Sample 1		Sample 2		Sample 3	
	M	SD	M	SD	M	SD
Item 1	2.63	0.69	2.75	0.63	2.44	0.75
Item 2	3.28	0.91	3.17	0.91	2.79	1.02
Item 4	4.06	0.66	3.92	0.61	3.94	0.70
Item 5	2.93	0.75	3.01	0.73	2.98	0.78
Item 6	3.69	0.83	3.73	0.72	3.46	0.87
Item 7	4.29	0.76	4.07	0.84	4.09	0.90
Item 8	3.50	0.84	3.29	0.83	3.32	0.92
Item 9	2.10	0.74	2.21	0.68	1.96	0.71
Item 10	2.16	0.86	2.24	0.83	2.36	1.04
Item 11	2.30	0.78	2.42	0.76	2.48	0.74
Item 12	2.14	0.76	2.34	0.62	2.28	0.75
Item 13	2.20	0.74	2.45	0.60	2.08	0.69
Item 14	2.20	0.74	2.26	0.71	2.10	0.78
Item 15	2.64	0.98	2.79	0.85	2.82	0.95
Item 16	3.56	0.79	3.52	0.73	3.67	0.74
Item 17	2.44	0.85	2.52	0.75	2.46	0.89
Item 18	3.68	0.77	3.58	0.69	3.60	0.73
Item 19	2.17	0.74	2.35	0.69	2.11	0.68
Item 20	3.20	0.89	3.10	0.78	3.03	0.81
Item 21	3.28	0.77	3.23	0.69	3.15	0.76
Item 22	3.83	0.70	3.68	0.69	3.62	0.69
Item 23	2.79	1.02	2.78	0.87	2.65	0.90
Item 24	4.09	0.61	3.95	0.58	4.02	0.66
Item 25	4.60	0.52	4.55	0.51	4.50	0.52
Item 26	2.17	1.00	2.23	0.88	2.59	1.04
Item 27	4.67	0.53	4.56	0.53	4.59	0.51
Item 28	4.10	0.69	4.02	0.60	4.13	0.57
Item 29	2.19	0.83	2.34	0.80	2.15	0.71
Item 30	3.77	0.69	3.61	0.61	3.58	0.69
Item 31	4.45	0.60	4.25	0.56	4.36	0.54
IM-P1: LFA	18.97	2.71	18.21	2.45	19.43	2.67
IM-P2: CC	26.19	2.61	25.38	2.32	25.60	2.45
IM-P3: NJAPF	20.84	3.59	20.34	2.80	20.10	3.35
IM-P4: ENRP	18.22	2.81	17.73	2.65	17.93	2.67
IM-P5: EAC	11.47	1.77	10.95	1.54	10.92	1.75
IM-P6: EAS	13.63	2.12	13.22	2.14	12.93	2.13
IM-P Total score 29 items	109.29	11.13	105.73	9.23	106.90	9.90

CC Compassion for the Child, EAC Emotional Awareness of the Child, EAS Emotional Awareness of Self, ENRP Emotional Non-reactivity in Parenting, LFA Listening With Full Attention, NJAPF Non-judgmental Acceptance of Parental Functioning

preliminary studies on mindful parenting training have shown that the parents' own internalizing (i.e., depressive) symptoms decrease after training (i.e., Van der Oord et al. 2011).

## Study 2

The goal of this second study was to cross-validate the factor structure as observed in study 1. We further examined the internal consistency and construct validity of the Dutch version of the IM-P in mothers of adolescents from the general community in a second sample. A confirmatory factor analysis (CFA) was performed based on the factor structure found in study 1, and construct validity was investigated by calculating correlations with related constructs such as general mindfulness, quality of life, and parenting stress.

## Method

### Participants and Procedure

The sample consisted of  $n=199$  mothers of adolescents from two high schools. Schools were located in urban and rural areas of The Netherlands. Adolescents were participants in another validation study of mindfulness questionnaires (de Bruin et al. 2011) which was approved by the Institutional Review Board.

Because of comparability with the original IM-P studies, subsequent studies in this article, and to avoid dependence between parents of the same child, only mothers were included in this study. Mothers' mean age was 45.5 years ( $SD=4.0$ ). Education level of this sample can be seen in Table 1. The majority of mothers were of Dutch origin (97 %). Age and education were not correlated with the IM-P total score,  $r=0.05$ ;  $p=0.58$  and  $r=0.05$ ;  $p=0.49$ , respectively.

## Measure

### IM-P

See "Study 1."

### Five-Facet Mindfulness Questionnaire (FFMQ)

The 39-item Five-Facet Mindfulness Questionnaire (FFMQ) (Baer et al. 2006) assesses five domains. Observing ( $\alpha=0.78$ ) measures the tendency to notice or attend to internal and external experiences, such as emotions, cognitions, sights, and smells. Describing ( $\alpha=0.90$ ) measures the tendency to verbally describe and label these experiences. Acting with awareness ( $\alpha=0.87$ ) refers to bringing full awareness to current activity or experiences. Non-judging ( $\alpha=0.82$ ) refers to a non-evaluative stance toward inner experiences. Non-reactivity ( $\alpha=0.79$ ) measures the tendency to allow thoughts and feelings to come and go, without

**Table 4** Partial correlations between the Dutch IM-P subscales, Dutch IM-P total scale (29 items), and other constructs (controlled for age) in a sample of mothers of adolescents from the general population ( $n=866$ , study 1)

Construct	LFA	CC	NJAPF	ENRP	EAC	EAS	IM-P total (29)
Depression (BDI-II)	$r=-0.217$ $p=0.000$	$r=-0.176$ $p=0.000$	$r=-0.362$ $p=0.000$	$r=-0.288$ $p=0.000$	$r=-0.168$ $p=0.000$	$r=-0.173$ $p=0.000$	$r=-0.342$ $p=0.000$
Optimism (LOT-R)	$r=0.211$ $p=0.000$	$r=0.246$ $p=0.000$	$r=0.413$ $p=0.000$	$r=0.333$ $p=0.000$	$r=0.279$ $p=0.000$	$r=0.253$ $p=0.000$	$r=0.417$ $p=0.000$

*BDI-II* Becks Depression Inventory-II, *CC* Compassion for the Child, *EAC* Emotional Awareness of the Child, *EAS* Emotional Awareness of Self, *ENRP* Emotional Non-reactivity in Parenting, *LFA* Listening with Full Attention, *LOT-R* Life Orientation Test-Revised, *NJAPF* Non-judgmental Acceptance of Parental Functioning

getting carried away by them. Construct validity of the FFMQ was extensively assessed in meditating and non-meditating samples, and a five-factor structure was shown in both samples (Baer et al. 2006, 2008). Similar psychometric properties were found for the Dutch version of the FFMQ (de Bruin et al. 2012). Internal consistency of the FFMQ total score in the current sample was good ( $\alpha=0.87$ ).

#### World Health Organization Quality of Life-Short Version (WHOQOL-BREF)

The World Health Organization Quality of Life-Short Version (WHOQOL-BREF) (WHOQOL Group 1998) was developed to enable a brief and accurate assessment of quality of life in routine clinical work, large-scale epidemiological studies, and clinical trials. The Physical health domain ( $\alpha=0.80$ ) covers issues related to pain, sleep, energy, work capacity, and mobility. The Psychological domain ( $\alpha=0.78$ ) includes body image, positive and negative feelings, and self-esteem. The Social relationships domain ( $\alpha=0.71$ ) is related to personal relationships, social support, and sexual activity. And last, the Environment domain ( $\alpha=0.77$ ) covers financial resources, home environment, transport, and health and social care. Reliability and validity are reported to be good (WHOQOL Group 1998). Analyses of internal consistency, item total correlations, discriminant validity, and construct validity through CFA indicated that the WHOQOL-BREF has good to excellent reliability and validity in psychiatric populations (Skevington et al. 2004; Trompenaars et al. 2005).

#### Parenting Scale (PS)

The 30-items Parenting Scale (PS) assesses dysfunctional styles in parenting and has good test–retest reliability ( $r=0.84$ ) and internal consistency ( $\alpha=0.84$  for PS-total score). Construct validity was supported by its relationship with observed parenting behaviors (Arnold et al. 1993). Internal consistencies of the subscales in the current sample were—Laxness ( $\alpha=0.80$ ), Over-reactivity ( $\alpha=0.78$ ), Verbosity ( $\alpha=0.50$ ), and PS-total score ( $\alpha=0.85$ ).

#### Statistical Analyses

A CFA was conducted using LISREL 8.8. Because inspection of the data showed that a normal distribution did not apply, robust diagonally weighted least squares was used. Further analyses were in line with those reported in study 1. Items 3 and 6 were excluded from analyses.

#### Results

In total, 29 items were specified to load on six factors as reported in the results from study 1. All factors were correlated. The fit of the covariance matrix for the six-factor model was reasonably close to the observed covariance matrix—RMSEA=0.054, 90 % CI (0.046, 0.063), comparative fit index (CFI)=0.96, standardized root mean square residual (SRMR)=0.089. As can be expected, the model did not fully fit the observed covariance matrix, Satorra–Bentler scaled  $\chi^2(362)=565.46$ ;  $p<0.001$ . Table 5 displays the item loadings for the CFA, which were all significant ( $p<0.001$ ), except for the loading of item 20.

Internal consistency of the total score based on 29 items was good ( $\alpha=0.85$ ). Internal consistencies for the separate subscales were— $\alpha=0.83$  for Listening with Full Attention;  $\alpha=0.72$  for Compassion for the Child;  $\alpha=0.56$  for Non-judgmental Acceptance of Parental Functioning;  $\alpha=0.74$  for Emotional Non-reactivity in Parenting;  $\alpha=0.72$  for Emotional Awareness of the Child; and  $\alpha=0.60$  for Emotional Awareness of Self. Item-total correlations varied between 0.57 (item 5) and 0.10 (item 20). Overall most subscales show modest but significant inter-correlations (ranging from  $r=0.48$ ;  $p<0.001$  for Emotional Non-reactivity in Parenting with Non-judgmental Acceptance of Parental Functioning, to  $r=0.17$ ;  $p=0.019$  for Emotional Awareness of Self with Listening with Full Attention).

#### Construct Validity

Further construct validity of the Dutch IM-P was examined in study 2 by calculating correlations with measures of over-

**Table 5** Results of CFA for the six-factor solution ( $n=199$ , study 2)

	LFA	CC	NJAPF	ENRP	EAC	EAS
Item 1	0.77	–	–	–	–	–
Item 2	–	–	–	–	–	0.46
Item 4	–	0.70	–	–	–	–
Item 5	–	–	–	0.76	–	–
Item 7	–	0.42	–	–	–	–
Item 8	–	–	–	–	–	0.62
Item 9	0.72	–	–	–	–	–
Item 10	–	–	–	0.44	–	–
Item 11	–	–	–	0.72	–	–
Item 12	–	–	–	–	0.73	–
Item 13	0.76	–	–	–	–	–
Item 14	–	–	–	0.68	–	–
Item 15	–	–	0.56	–	–	–
Item 16	–	–	–	–	–	0.54
Item 17	–	–	0.62	–	–	–
Item 18	–	–	0.52	–	–	–
Item 19	0.92	–	–	–	–	–
Item 20	–	–	0.08	–	–	–
Item 21	–	–	–	–	–	0.67
Item 22	–	–	–	–	0.82	–
Item 23	–	–	0.68	–	–	–
Item 24	0.84	–	–	–	–	–
Item 25	–	0.56	–	–	–	–
Item 26	–	–	0.65	–	–	–
Item 27	–	0.74	–	–	–	–
Item 28	–	0.76	–	–	–	–
Item 29	–	–	–	0.74	–	–
Item 30	–	–	–	–	0.76	–
Item 31	–	0.72	–	–	–	–

Note. The item loadings are based on the completely standardized solutions  
*CC* Compassion for the Child, *EAC* Emotional Awareness of the Child, *EAS* Emotional Awareness of Self, *ENRP* Emotional Non-reactivity in Parenting, *LFA* Listening with Full Attention, *NJAPF* Non-judgmental Acceptance of Parental Functioning

reactivity, laxness, and verbosity in parenting, a general measure of mindfulness, and physical, psychological, social, and environmental aspects of quality of life (see Table 6).

As expected, a negative correlation was found between the IM-P and PS. The IM-P total score correlated negatively with PS-Over-reactivity,  $r=-0.644$ ;  $p<0.001$ , PS-Laxness,  $r=-0.329$ ;  $p<0.001$ , and PS-Verbosity,  $r=-0.268$ ;  $p<0.001$ . Similar findings applied to the IM-P subscale levels (see Table 6). The more mindful a mother reported to be, the less over-reactive she was in her parenting style, the less lax she was, and the less verbosity she used in her parenting style. With respect to correlations with quality of life, the IM-P total score correlated positively,  $p<0.001$ , with all WHOQOL-BREF domains, except for Physical Health,  $r=0.143$ ,

$p=0.052$ . Thus, a higher level of mother reported mindfulness in parenting skills was related to higher quality of life, as was expected. On the subscale level not all correlations were significant. Last, from Table 6, it can be seen that the IM-P total score (29 items) correlated positively,  $p<0.01$ , with all FFMQ subscales.

## Discussion

This study further supports the validity and reliability of the Dutch version of the IM-P. The six-factor structure based on the 29-items version of the IM-P, as obtained in study 1, was sufficiently confirmed in the current sample. Reliability of the 29-item IM-P was high.

Furthermore, this study showed positive overall correlations between the Dutch IM-P and general mindfulness, and different aspects of quality of life, and negative correlations with dysfunctional parenting styles, particularly with parental over-reactivity. Not all facets of general mindfulness were related to all facets of mindful parenting. Some facets seemed to show a large overlap whereas others seemed to be more specific for being mindful with oneself as a parent versus being mindful with one's child or the relationship with one's child. For instance, Non-judgmental Acceptance of Parental Functioning (IM-P) shows a strong relationship with Non-judging (FFMQ). Both factors have items related to non-judgmental acceptance of oneself (as a parent). Listening with Full Attention (IM-P), however, showed no relationship with Observing (FFMQ), indicating that the mothers' ability to observe her own mental or inner states is unrelated to her ability to listen with full attention to her teenager.

Subsequently, the positive relationship between the Dutch IM-P and different aspects of quality of life is in line with previous studies that show positive correlations between general measures of mindfulness and quality of life (i.e., Baer et al. 2008; Brown et al. 2011) and studies demonstrating improvements in quality of life after participation in mindfulness-based interventions (i.e., Baer 2003; Grossman et al. 2004). Being more attentive to your child and more accepting of your own parental functioning is related to a higher sense of psychological, physical, social, and environmental quality of life. It must be noted that this relationship is bidirectional; no predictive conclusions can be drawn from this study.

Lastly, the negative relationship with dysfunctional parenting styles was also as expected. When a mother is using a high rate of verbally aggressive commands, lets her teenager do whatever he/she wants, or is easily angry or frustrated when her teenager misbehaves, this mother is less likely to be aware of the child's feelings or thoughts, or to pause and notice her own feelings before taking action. These findings seem in line with the demonstrated decrease in over-



**Table 6** Correlations between the Dutch IM-P subscales, Dutch IM-P total scale (29 items), and other constructs in a general population sample of mothers of adolescents ( $n=199$ , study 2)

Construct	LFA	CC	NJAPF	ENRP	EAC	EAS	IM-P total (29)
Laxness (PS)	$r=-0.207$ $p=0.005$	$r=-0.322$ $p=0.000$	$r=-0.239$ $p=0.001$	$r=-0.206$ $p=0.005$	$r=-0.209$ $p=0.004$	$r=-0.140$ $p=0.056$	$r=-0.329$ $p=0.000$
Over-reactivity (PS)	$r=-0.278$ $p=0.000$	$r=-0.337$ $p=0.000$	$r=-0.527$ $p=0.000$	$r=-0.640$ $p=0.000$	$r=-0.254$ $p=0.000$	$r=-0.402$ $p=0.000$	$r=-0.644$ $p=0.000$
Verbosity (PS)	$r=-0.102$ $p=0.164$	$r=-0.114$ $p=0.117$	$r=-0.281$ $p=0.000$	$r=-0.240$ $p=0.001$	$r=-0.085$ $p=0.247$	$r=-0.209$ $p=0.004$	$r=-0.268$ $p=0.000$
Parenting Styles Total (PS)	$r=-0.259$ $p=0.001$	$r=-0.338$ $p=0.000$	$r=-0.445$ $p=0.000$	$r=-0.437$ $p=0.000$	$r=-0.289$ $p=0.000$	$r=-0.314$ $p=0.000$	$r=-0.532$ $p=0.000$
Physical health (WHOQOL-BREF)	$r=0.077$ $p=0.291$	$r=0.062$ $p=0.390$	$r=0.255$ $p=0.000$	$r=0.116$ $p=0.113$	$r=0.020$ $p=0.788$	$r=-0.034$ $p=0.642$	$r=0.143$ $p=0.052$
Psycholog. health (WHOQOL-BREF)	$r=0.385$ $p=0.000$	$r=0.202$ $p=0.006$	$r=0.377$ $p=0.000$	$r=0.305$ $p=0.000$	$r=0.265$ $p=0.000$	$r=0.114$ $p=0.120$	$r=0.424$ $p=0.000$
Social relationships (WHOQOL-BREF)	$r=0.302$ $p=0.000$	$r=0.206$ $p=0.004$	$r=0.244$ $p=0.001$	$r=0.264$ $p=0.000$	$r=0.129$ $p=0.075$	$r=0.066$ $p=0.363$	$r=0.313$ $p=0.000$
Environment (WHOQOL-BREF)	$r=0.188$ $p=0.009$	$r=0.133$ $p=0.067$	$r=0.292$ $p=0.000$	$r=0.178$ $p=0.014$	$r=0.088$ $p=0.225$	$r=0.091$ $p=0.208$	$r=0.251$ $p=0.001$
Observing (FFMQ)	$r=0.008$ $p=0.907$	$r=0.239$ $p=0.001$	$r=0.085$ $p=0.246$	$r=0.070$ $p=0.338$	$r=0.071$ $p=0.326$	$r=0.343$ $p=0.000$	$r=0.200$ $p=0.006$
Describing (FFMQ)	$r=0.083$ $p=0.254$	$r=0.338$ $p=0.000$	$r=0.160$ $p=0.027$	$r=0.138$ $p=0.057$	$r=0.390$ $p=0.000$	$r=0.327$ $p=0.000$	$r=0.355$ $p=0.000$
Acting with awareness (FFMQ)	$r=0.574$ $p=0.000$	$r=0.266$ $p=0.000$	$r=0.266$ $p=0.000$	$r=0.424$ $p=0.000$	$r=0.172$ $p=0.016$	$r=0.103$ $p=0.155$	$r=0.474$ $p=0.000$
Non-judging (FFMQ)	$r=0.317$ $p=0.000$	$r=0.053$ $p=0.466$	$r=0.574$ $p=0.000$	$r=0.432$ $p=0.000$	$r=0.244$ $p=0.001$	$r=0.010$ $p=0.893$	$r=0.442$ $p=0.000$
Non-reactivity (FFMQ)	$r=0.011$ $p=0.878$	$r=0.227$ $p=0.002$	$r=0.224$ $p=0.002$	$r=0.205$ $p=0.005$	$r=0.106$ $p=0.144$	$r=0.430$ $p=0.000$	$r=0.304$ $p=0.000$
Mindfulness Total (FFMQ)	$r=0.350$ $p=0.000$	$r=0.386$ $p=0.000$	$r=0.455$ $p=0.000$	$r=0.431$ $p=0.000$	$r=0.347$ $p=0.000$	$r=0.412$ $p=0.000$	$r=0.610$ $p=0.000$

Note. *CC* Compassion for the Child, *EAC* Emotional Awareness of the Child, *EAS* Emotional Awareness of Self, *ENRP* Emotional Non-reactivity in Parenting, *FFMQ* Five Facets Mindfulness Questionnaire, *LFA* Listening with Full Attention, *NJAPF* Non-judgmental Acceptance of Parental Functioning, *PS* Parenting Scale, *WHOQOL-BREF* World Health Organization Quality of Life short version

reactivity after participation in Mindful Parenting training (i.e., Van der Oord et al. 2011).

For future validation studies, we recommend including fathers as well, since they might show their own pattern of mindfulness and mindful parenting skills. Our previous study of the effectiveness of Mindful Parenting training in adolescents with ADHD showed that fathers and mothers can differ in training effects (Van de Weijer-Bergsma et al. 2011). In addition, our study sample was fairly homogeneous regarding ethnicity. Although we included mothers from rural as well as urban areas, it is unclear how these results might differ for mothers with different ethnic backgrounds who possibly face culturally different parenting challenges. Despite these limitations, study 2 strongly supported the reliability and validity of the Dutch IM-P.

### Study 3

In the third study, the Dutch IM-P was administered to mothers of adolescents with type 1 diabetes mellitus. Correlations with different aspects of parenting stress and mindfulness skills in general were calculated. The data from this sample were collected in an online survey in collaboration with the Dutch Diabetes Association (DDA).

### Method

#### Participants and Procedure

Parents were invited to complete the online questionnaire by means of an announcement in the monthly magazine DiaBC.

Two weeks later, the DDA sent a reminder E-mail to its members to invite parents and patients (0–18 years) to participate. As with studies 1 and 2, only mothers of adolescents were included in this study. After mothers gave consent by filling in their E-mail address on a study-specific website, they immediately received a link for the survey. By clicking on the link, mothers directly entered the online survey with several questionnaires. This study was approved by the Ethical Committee of Psychology (Tilburg University). In total,  $n=112$  mothers of adolescents (aged 12–18 years) with type 1 diabetes mellitus filled out the online survey. Educational level of the mothers (see Table 1) was not significantly correlated with IM-P total score (based on 29 items),  $r=0.062$ ;  $p=0.518$ .

## Measure

### IM-P

See Study 1.

### PS

See description of the PS in study 1. In the current sample, internal consistencies were as follows—Laxness ( $\alpha=0.83$ ), Over-reactivity ( $\alpha=0.77$ ), Verbosity ( $\alpha=0.51$ ), and PS-total score ( $\alpha=0.85$ ).

### Freiburg Mindfulness Inventory (FMI)

General mindfulness was measured with the FMI-short version (Walach et al. 2006). The 14 items assess general mindfulness (one sum scale). Scores range from 1=rarely to 4=almost always, with higher scale scores reflecting more mindfulness. The FMI has been shown to be valid and reliable (Walach et al. 2006). Internal consistency of the FMI in the current sample was good ( $\alpha=0.83$ ).

### Statistical Analyses

Correlations were calculated between the IM-P total score, IM-P subscales, the three PS subscales, PS total score, and the FMI total score.

## Results

### Descriptives

Table 3 presents the means and SDs of all items and IM-P total score. Internal consistency based on 29 items was good ( $\alpha=0.85$ ). Internal consistencies for the separate subscales were— $\alpha=0.83$  for Listening with Full Attention;  $\alpha=0.71$

for Compassion for the Child;  $\alpha=0.68$  for Non-judgmental Acceptance of Parental Functioning;  $\alpha=0.71$  for Emotional Non-reactivity in Parenting;  $\alpha=0.76$  for Emotional Awareness of the Child; and  $\alpha=0.45$  for Emotional Awareness of Self.

### Construct Validity

Correlations with measures of general mindfulness, laxness, over-reactivity, and verbosity in parenting styles were calculated (see Table 7).

We found, as expected, that the IM-P total score was positively correlated with general mindfulness (FMI),  $r=0.445$ ,  $p<0.001$ , and negatively correlated with laxness,  $r=-0.332$ ,  $p<0.001$ , over-reactivity,  $r=-0.642$ ,  $p<0.001$ , and verbosity,  $r=-0.282$ ,  $p<0.01$ , in parenting (PS). The PS total score correlated negatively with the IM-P total score,  $r=-0.528$ ,  $p<0.001$ .

## Discussion

Findings in this third study contributed further to the construct validity of the Dutch version of the IM-P, in a population of mothers of adolescents with type 1 diabetes mellitus. Adolescents with type 1 diabetes mellitus have to monitor (several times daily) the blood glucose, administer insulin, regulate food intake, and guard these parameters in conjunction with the level of physical activity (Laffel et al. 2005). Parents and adolescents with type 1 diabetes mellitus share responsibility for the daily management of the diabetes (24 h, 7 days per week). The tasks needed to achieve optimal blood glucose control, however, may interfere with normal and age appropriate behaviors that occur in adolescence (e.g., increase in autonomy, independence-seeking, oppositional behavior, development of peer relations) (Anderson et al. 1999). This interference together with the shared responsibility could negatively affect the parent–adolescent relationship (Anderson et al. 2002). To achieve positive family involvement and interaction around diabetes tasks, a mindful parenting style might be beneficial.

As with mothers of adolescents without a chronic medical disorder, elements of mindful parenting correlated positively with general mindfulness more focused on oneself. As expected, high occurrence of verbal aggression, laxness, and over reactivity in the mother's parenting style was related to the mother being less compassionate to the teenager, listening with less attention, and being less aware of her emotions. These findings correspond to the findings in study 1 (also measured with the PS). Albeit in a smaller sample, with the inclusion of only two measurements for construct validity, this study illustrates that listening with full attention, emotional awareness and compassion of the self and the child, non-

**Table 7** Correlations between the Dutch IM-P subscales, Dutch IM-P total scale (29 items), and other constructs in a sample of mothers of adolescents with type 1 diabetes mellitus ( $n=112$ , sample study 3)

Construct	LFA	CC	NJAPF	ENRP	EAC	EAS	IM-P total (29)
Mindfulness	$r=0.270$	$r=0.160$	$r=0.464$	$r=0.383$	$r=0.156$	$r=0.186$	$r=0.445$
(FMI)	$p=0.004$	$p=0.092$	$p=0.000$	$p=0.000$	$p=0.100$	$p=0.049$	$p=0.000$
Laxness	$r=-0.226$	$r=-0.259$	$r=-0.169$	$r=-0.314$	$r=-0.135$	$r=-0.176$	$r=-0.332$
(PS)	$p=0.016$	$p=0.006$	$p=0.075$	$p=0.001$	$p=0.157$	$p=0.064$	$p=0.000$
Over-reactivity (PS)	$r=-0.496$	$r=-0.535$	$r=-0.334$	$r=-0.592$	$r=-0.129$	$r=-0.345$	$r=-0.642$
	$p=0.000$	$p=0.000$	$p=0.000$	$p=0.000$	$p=0.177$	$p=0.000$	$p=0.000$
Verbosity	$r=-0.216$	$r=-0.061$	$r=-0.285$	$r=-0.321$	$r=-0.059$	$r=-0.054$	$r=-0.282$
(PS)	$p=0.022$	$p=0.524$	$p=0.002$	$p=0.001$	$p=0.539$	$p=0.570$	$p=0.003$
Parenting styles	$r=-0.389$	$r=-0.405$	$r=-0.288$	$r=-0.504$	$r=-0.148$	$r=-0.268$	$r=-0.528$
Total (PS)	$p=0.000$	$p=0.000$	$p=0.002$	$p=0.000$	$p=0.120$	$p=0.004$	$p=0.000$

Note. *CC* Compassion for the Child, *EAC* Emotional Awareness of the Child, *EAS* Emotional Awareness of Self, *ENRP* Emotional Non-reactivity in Parenting, *FMI* Freiburg Mindfulness Inventory, *LFA* Listening with Full Attention, *NJAPF* Non-judgmental Acceptance of Parental Functioning, *PS* Parenting Scale

judgmental acceptance of one's parental functioning, and emotional reactivity in parenting show similar patterns of relations with related constructs in mothers from adolescents with and without a chronic disease and provides initial validation of the use of the IM-P in somatic samples.

## General Discussion

The aim of the three studies presented here was to assess psychometric properties of the Dutch translation of the IM-P in different samples and examine whether theoretical underlying aspects of mindful parenting can be differentiated in the hypothesized factors. We first examined the factor structure, internal consistency, and construct validity of the IM-P in different samples from a general population of mothers. In addition, psychometric properties of the IM-P in a sample of mothers of adolescents with a chronic somatic disorder (type 1 diabetes mellitus) were assessed. Results of the three studies can be summarized along three main lines.

First, the exploratory factor analysis and CFA in the two general population samples of mothers of adolescents showed that the Dutch version of the IM-P has a somewhat different factor structure as compared with the hypothesized structure of the original English IM-P. A six-factor structure (29 items) of the Dutch IM-P was proposed: (1) Listening with Full Attention, (2) Compassion for the Child, (3) Non-judgmental Acceptance of Parental Functioning, (4) Emotional Non-reactivity in Parenting, (5) Emotional Awareness of the Child, and (6) Emotional Awareness of the Self. Reliabilities of this proposed 29-item version of the IM-P were overall good, apart from those on the sixth factor. The main difference from the subscales as proposed by Duncan et al. (2009) seems to be the separation of child-oriented and

self/parent-oriented items on different factors. In the hypothesized structure of the original IM-P, conceptually similar aspects of mindfulness related to oneself, to one's child, and to the parenting interaction were combined in some factors (i.e., Emotional Awareness of Self and Child, Non-judgmental Acceptance of Self and Child). In the factor structure of the IM-P among both Dutch general population samples, aspects of mindful parenting related to the child seemed to differ from aspects of mindful parenting related to oneself as a parent. The explanation for the separation of mindfulness related to child and to oneself as a parent could be that some parents might be able to be compassionate and emotionally aware of their child but not of themselves, for example, because of their own traumas, or vice versa, some may be able to be compassionate and emotionally aware of themselves, but not of their child, for example, because of difficult behavior of the child.

It seems likely and theoretically sound that the concept of mindful parenting is covered by items related specifically to self-oriented, parenting-specific aspects of mindfulness in the parent and by items related to the parent's perceptions of, attitudes toward, and interactions with the child, whereas more general mindfulness questionnaires, such as the FFMQ or FMI, place an emphasis on items exclusively related to mindfulness in oneself as an adult (i.e., attention, awareness, acceptance, non-judging, non-reactivity; Baer et al. 2006; Brown and Ryan 2003). It is therefore important in the study of mindful parenting as a theoretical construct relevant to parenting, as well as in studying the effects of mindful parenting-related interventions, to assess general mindfulness skills as well as the more specific interpersonal aspects of mindfulness in parenting.

The aspect of compassion for oneself and for the child needs special attention, since this is a relatively new facet,

which has not been included in most general mindfulness questionnaires before. Self-compassion can be considered as being kind to oneself when suffering occurs, being mindful of one's experiences, and realizing that suffering does not occur in isolation but is inherent to human nature (Neff 2003a). Self-compassion, as measured with the Self-Compassion Scale (Neff 2003b), mediates both increases in quality of life and decreases in stress after participation in mindfulness-based interventions (Shapiro et al. 2005). Both mindfulness and self-compassion can be considered mediators of the positive outcome effects of meditation or mindfulness practice (Baer et al. 2012). In the context of mindful parenting, it seems the compassion towards one's child that is important but also the compassion for oneself as a parent (Bögels et al. 2010; Duncan et al. 2009). Thus, self-compassion and compassion for one's child should both be assessed when evaluating the effects of mindful parenting interventions.

Second, the construct validity of the IM-P was supported by the positive relationship with a variety of related constructs, such as general mindfulness (particularly aspects of attention and awareness, and non-reactivity), different aspects of quality of life, and optimism. These findings are in line with the finding that mindfulness-based trainings have a positive effect on psychological well-being and quality of life (i.e., Brown and Ryan 2003; Carmody and Baer 2008; Kabat-Zinn 1994; Keng et al. 2011; Segal et al. 2002), the association between meditation and positive feelings and happiness (Hanson and Medius 2009), and the relationship between different measures of mindfulness and happiness or positive affect (Brown et al. 2011).

As expected, mindfulness in parenting was negatively related to depression, parental over-reactivity, parental verbosity, and parental laxness in mothers of adolescents with and without a chronic somatic disorder. These findings are in line with studies showing positive effects of mindfulness-based training in patients with depression (i.e., Kuyken et al. 2008; Segal et al. 2002) and of mindful parenting training on parental over-reactivity in previous studies (i.e., Van der Oord et al. 2011).

In summary, the Dutch version of the IM-P was found to consist of slightly different subscales than its original English counterpart, mainly related to the fact that aspects of being mindful with the child versus with the self-as-parent load on different factors, however, with the same overarching construct of mindful parenting. Reliability and construct validity were demonstrated in different samples. Several directions for future research can be proposed. First, it would be of great interest to compare the factor structure of the IM-P in mothers versus fathers. Second, test-retest reliability of the Dutch IM-P needs to be examined in future research. Third, research is needed to examine whether improvement in mindfulness in parenting measured by the

Dutch IM-P, resulting from mindful parenting training, mediates improvement in parent and child psychopathology, and in parent-child interactions as shown with the short version of the English IM-P by Coatsworth and colleagues (Coatsworth et al. 2010). Furthermore, it would be interesting to compare the effects of Mindful Parenting training with Parent Management training on the IM-P, in order to investigate whether Mindful Parenting training has specific effects on IM-P scores. Finally, more research is needed into the beneficial role of mindful parenting in parenting children with different problems, i.e., medical issues such as type 1 diabetes mellitus versus psychiatric issues such as ADHD.

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