



The Association between Mindful Parenting, and Internalizing and Externalizing Symptoms in Adolescence

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Abstract

Internalizing and externalizing symptoms are common among adolescents, and mindful parenting can play a pivotal role in their prevention. Study 1 explores the association between internalizing and externalizing symptoms and the moderating role of mindful parenting. Study 2 explores the longitudinal association between mindful parenting and externalizing symptoms and whether mindful parenting moderates the longitudinal stability of externalizing symptoms. In Study 1, 420 parents (81.9% mothers) of children aged 12 to 17 ($M = 14$) completed measures of mindful parenting and their children's emotional symptoms and conduct problems. In Study 2, 151 adolescents (65.6% girls) aged 12 to 17 ($M = 13.9$) from Study 1 completed a measure of antisocial behavior two times one year apart. Study 1 found an association between adolescents' emotional symptoms and conduct problems, and this association was moderated by mindful parenting. The association was significant only in adolescents whose parents reported low levels of the mindful parenting factor called "being in the moment with the child." Study 2 found an association between antisocial behavior at Wave 1 and 2, and this longitudinal association was moderated by mindful parenting. The longitudinal relationship was statistically significant exclusively among adolescents whose parents reported low levels of "mindful discipline." Mindful parenting seems to be a protective factor for adolescents' externalizing symptoms. Specifically, "being in the moment with the child" can diminish the association between emotional symptoms and conduct problems, while "mindful discipline" can be beneficial for reducing the stability of antisocial behavior over time.

Keywords Mindful parenting · Internalizing symptoms · Externalizing symptoms · Adolescents · Antisocial behavior

Highlights

- Being in the moment with the child can reduce the association between internalizing and externalizing symptoms in adolescents.
- Practicing mindful discipline can reduce the persistence of adolescents' externalizing symptoms over time.
- Mindful parenting could be a protective factor for adolescents' externalizing symptoms.

Adolescence is a developmental period characterized by biopsychosocial changes that can be detrimental to mental health (Sawyer et al., 2018). The most common symptoms

among adolescents include internalizing (e.g., anxiety, stress, and depressive symptoms) and externalizing symptoms (e.g., conduct problems and delinquent and antisocial behavior) (Farrington, 2009; Graber, 2013; Liu, 2004). Preventing these psychological symptoms in adolescence should be a public health priority since mental health problems in youth are common and have adverse and long-lasting consequences for adolescents, their families, and the education system (Collishaw & Sellers, 2020; Polanczyk et al., 2015).

Parenting plays a crucial role in the mental health of adolescents, hence it is important to study the interaction between children's symptoms and parental variables and

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practices towards their children (Ruiz-Hernández et al., 2018). Researchers have recently shown an increasing interest in examining the relationship between adolescent mental health and mindful parenting (MP) (Parent & DiMarzio, 2021). Mindful parenting is defined 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 their children in their moment-to-moment interaction” (Ahemaitijiang et al., 2021, p. 3). The present study aims to investigate the relationship between mindful parenting and internalizing and externalizing symptoms in adolescents.

Internalizing and Externalizing Symptoms in Adolescence

On the one hand, internalizing symptoms are characterized by inward-directed behaviors and emotional responses, such as anxiety, depression, or mood disorders. On the other hand, externalizing symptoms involve a dysregulation in behavior, including oppositional, aggressive, hyperactive, and inattentive behaviors, such as rule-breaking, conduct problems, and antisocial and delinquent behavior. Both internalizing and externalizing symptoms are common in adolescents, and they have a negative impact and long-term consequences (Essau & de la Torre-Luque, 2021; Farrington, 2009; Liu, 2004; Merikangas et al., 2010). For example, externalizing symptoms in youth increase the risk of problematic drinking in young adulthood (Meque et al., 2019); they predict suicide behavior in youth (Soto-Sanz et al., 2019), and they are associated with impaired social functioning and work incapacity in adulthood (Bongers et al., 2008; Narusyte et al., 2017). Likewise, internalizing symptoms have been linked to adverse outcomes, such as poor academic achievement, unemployment, engagement in criminal activities, suicide attempts, substance abuse, and adult psychological symptoms such as anxiety and depression (Clayborne et al., 2019; Copeland et al., 2020; Orri et al., 2020).

Externalizing and internalizing symptoms often co-occur (Essau & de la Torre-Luque, 2021), with at least three models proposed to explain their association: the *failure model* (Capaldi 1991, 1992; Capaldi & Stoolmiller, 1999; Blain-Arcaro & Vaillancourt, 2017) positing that externalizing symptoms predict internalizing symptoms in boys over time; the *acting out model* (Carlson & Cantwell, 1980; Kofler et al., 2011; Ritakallio et al., 2008; Stalker, 2020), suggesting that internalizing symptoms precede externalizing symptoms over time, and a *reciprocal model* (e.g., Essau et al., 2021; Wolff & Ollensick, 2006), indicating that both internalizing and externalizing symptoms are reciprocal. According to the *acting out model*, adolescents with

internalizing symptoms, such as depression, will engage in antisocial or aggressive behaviors to alleviate their tension and irritability. Several longitudinal studies support this model (Ozkan et al., 2019; Ritakallio et al., 2008; Yu et al., 2018), suggesting that internalizing symptoms can be a risk factor for externalizing symptoms. Since externalizing symptoms are a significant concern for parents, it is important to study which factors can diminish the association between internalizing and externalizing symptoms and also reduce the stability of externalizing symptoms.

Mindful Parenting and Mental Health in Adolescents

Adolescence is a stressful period for many families. Parenting stress and mental health have negative consequences for children, and are related to children’s psychological symptoms, such as conduct and externalizing symptoms (Barroso et al., 2018; de Maat et al., 2021). For example, ineffective parenting practices are associated with childhood conduct disorders and may lead to antisocial behavior from early childhood through adolescence (Patterson et al., 2017). Researchers have become interested in integrating mindfulness into the context of parent-child relationships to reduce parental stress and improve parenting practices. MP was originally described as intentionally bringing an open and nonjudgmental awareness to parenting practices and interactions with the child (Kabat-Zinn & Kabat-Zinn, 1997).

Recent empirical studies support the beneficial role of MP for parents, parent-child communication, and children. These benefits include higher levels of dispositional mindfulness in children (Moreira & Canavarro, 2018b) and parents (Ahemaitijiang et al., 2021; Kil et al., 2021; Orue et al., 2020; Shorey & Ng, 2021); less internalizing, externalizing, and attention problems in children (Emerson et al., 2021; Yang et al., 2021); positive parenting styles (McCaffrey et al., 2017; Moreira & Canavarro, 2017); reduced parental stress (Anand et al., 2021; Moreira & Canavarro, 2018a); and better child-parent relationships and communication (Coatsworth et al., 2018; Lippold et al., 2021; Shorey & Ng, 2021). Moreover, several intervention studies have documented an increase in MP following participation in an MP program, and they indicated that these changes in MP accounted for the reductions in child psychopathology, decreased emotional reactivity in parenting, and less parenting stress following the MP intervention (Chaplin et al., 2021; Emerson et al., 2021; Meppelink et al., 2016). These encouraging findings provided an impetus for more extensive research in the area (Parent & DiMarzio, 2021).

In particular, regarding the impact of MP on externalizing symptoms, several intervention studies documented a reduction in children’s externalizing symptoms following an

MP intervention (Bögels et al., 2014; Emerson et al., 2021). Moreover, one meta-analysis found a small effect of MP interventions on externalizing symptoms (as indicated by a Hedges' g of 0.26), which was explained by a reduction of parental stress (Burgdorf et al., 2019). In addition, some cross-sectional studies reported a negative association between MP and externalizing symptoms, including risk behaviors, substance abuse, and conduct problems in adolescents (Benton et al., 2019; Han et al., 2021; Maglica et al., 2021; Parent et al., 2016; Yang et al., 2021). However, other studies have found no association between MP and externalizing symptoms in adolescents (Anand et al., 2021; Kil et al., 2021; Shorey & Ng, 2021). Furthermore, evidence from longitudinal studies points toward an indirect association between MP and externalizing symptoms, which is mediated by parenting practices and the quality of the parent-child relationship (Parent et al., 2021; Park et al., 2020).

Several theoretical models conceptualize MP. For example, Bögels et al. (2010) suggested several mechanisms through which MP improves the parent-child relationship and the parents' skills. They suggested that MP reduces parental stress, preoccupation, and reactivity, and it prevents the intergenerational transmission of dysfunctional parenting patterns and schemas while improving parents' self-compassion and marital functioning. Similarly, according to Duncan and colleagues (2009), MP has five elements: listening with full attention, nonjudgmental acceptance of self and child, emotional awareness of self and child, self-regulation in the parenting relationship, and compassion for the self and child. More recently, McCaffrey et al. (2017) proposed a two-factor model of MP, comprising *mindful discipline* (a parent-focused facet of MP characterized by non-reactivity in parenting, parenting awareness, and goal-focused parenting) and *being in the moment with the child* (a child-focused facet of MP that includes present-centered attention, empathic understanding of the child, and acceptance).

To sum up, there seems to be an association between MP and externalizing symptoms in adolescence. Although many studies have explored the relationship between MP, externalizing symptoms, and their possible mediating mechanisms, to our knowledge, no study has explored the moderating role of MP in the context of externalizing symptoms. On the one hand, higher levels of MP could reduce the association between internalizing and externalizing symptoms. On the other hand, higher levels of MP could help reduce the temporal stability of externalizing symptoms.

Study Aims and Hypotheses

Regarding the high prevalence and co-occurrence of internalizing and externalizing symptoms in adolescents (Essau

& de la Torre-Luque, 2021; Farrington, 2009; Liu, 2004; Merikangas et al., 2010), and based on the acting out model (Carlson & Cantwell, 1980). Study 1 explores whether MP moderates the association between internalizing symptoms (i.e., emotional symptoms) and externalizing symptoms (i.e., conduct problems). The hypotheses are that (1) internalizing symptoms will be positively related to externalizing symptoms, while MP will be negatively associated with externalizing symptoms, and (2) MP will moderate the association between internalizing and externalizing symptoms. Specifically, adolescents' emotional symptoms will be associated with conduct problems only in those adolescents whose parents have low levels of MP.

Since externalizing symptoms tend to be stable through adolescence (Farrington, 2009), and MP has been associated with externalizing symptoms in cross-sectional studies (Han et al., 2021; Maglica et al., 2021), Study 2 explores whether MP predicts externalizing symptoms (antisocial behavior) over one year and whether MP moderates the stability of antisocial behavior. We hypothesize that: (1) MP will negatively predict antisocial behavior and (2) MP will moderate the stability of antisocial behavior. Concretely, the association of antisocial behavior in Wave 1 (W1) and Wave 2 (W2) will be significant only for those adolescents whose parents have low levels of MP.

The first study gathered data from parents at a single time point, focusing on mindful parenting and parental reports of adolescents' internalizing and externalizing symptoms. The second study collected data from the children of the participants in the first study at two different times: when their parents were taking part and one year later. The adolescent data included a measure of antisocial behavior and utilized the mindful parenting data gathered during the first study.

Study 1

Method

Study design

Study 1 is a cross-sectional, correlational study. The ethical committee of the University of Deusto approved the study in September 2019.

Participants

Two schools were selected from a representative list of schools based on proximity, prior participation in studies, and contacts of researchers and collaborators. The two schools were privately funded, had a similar number of students, and were located in two neighborhoods of Vitoria-Gasteiz with similar socioeconomic levels. Initially, all

parents from Secondary Education (907 parents) from the two schools were invited to participate in the study, and 420 (46.32%) parents agreed to participate. Most participants were mothers (81.9%), and just over half of the children were female (54.3%). Parents' ages ranged from 35 to 60 ($M = 48.03$; $SD = 3.79$), and children's ages ranged from 12 to 17 ($M = 14.04$; $SD = 1.35$). Most participants were biological parents (97.1%), 1% adoptive parents, 0.2% foster parents, and 1.7% did not indicate. We used parental occupation and education to determine participants' socioeconomic status (SES) following the guidelines from the Spanish Society of Epidemiology and the Spanish Society of Family and Community Medicine (2000). SES distribution was as follows: 3.7% low status, 13.8% low-medium status, 27.1% medium status, 46% medium-high status, and 9.4% high status. Regarding educational level, 61.2% of mothers and 46.9% of the fathers completed university or postgraduate studies; 11% of mothers and 16.4% of fathers completed vocational training; 5% of mothers and 7.4% of fathers completed high school; 0.7% of mothers and 0.5% of fathers completed elementary school; 0.5% of mothers and 0.2% of parents did not complete elementary school.

Procedures

Parents from two schools were invited to participate in the study and were contacted through their children. The questionnaires were delivered to the students inside an envelope. Then, those parents who agreed to participate completed the questionnaires, including demographic information, a self-report questionnaire assessing MP, and a questionnaire about their children's externalizing and internalizing symptoms. Some parents brought the completed questionnaires to the school secretary's office, and others had their children deliver them to the tutor in class. As compensation, a voucher was raffled among participants.

Measures

Adolescents' internalizing and externalizing symptoms were reported by parents using the Spanish version of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997; Ortuño-Sierra et al., 2015). The SDQ comprises 25 items divided into five subscales (emotional symptoms, conduct problems, hyperactivity, peer problems, and pro-social behavior). This study includes the five items from the emotional symptoms scale (e.g., "Many worries, often seems worried," "Often unhappy, down-hearted or tearful") and the five items from the conduct problems scale (e.g., "Steals from home, school or elsewhere," "Often has temper tantrums or hot tempers."). Parents were asked to report the frequency with which their children displayed the indicated behaviors in the past six months using a five-item Likert

scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). We computed the mean of each subscale for those participants who reported at least 75% of the items, resulting in scores ranging from 1 to 5, with higher scores indicating a more significant presence of emotional symptoms and conduct problems. In a validation study involving Spanish adolescents, mean scores were 2.43 for emotional problems and 2.07 for conduct problems (Ortuño-Sierra et al., 2015). Previous studies have reported good psychometric properties of the SDQ in Spanish adolescents (Ortuño-Sierra et al., 2015). In this study, Cronbach's alpha was 0.70 for emotional symptoms and 0.67 for conduct problems.

MP was assessed with the Spanish version of the Mindfulness in Parenting Questionnaire (MIPQ; McCaffrey et al., 2017; Orue et al., 2020). The MIPQ includes 28 items corresponding to two dimensions of MP: being in the moment with the child (e.g., "Could you tell how your child felt by looking at him/her?", "Did you carefully listen and tune into your child when you two were talking?") and mindful discipline (e.g., "Did you let your child know why they were being punished?", "Did you take a moment to think before punishing your child?"). Parents were asked to reflect on their parenting and interactions with their children over the last two weeks and consider whether each item was true for them. They used a response scale from 1 (*infrequently*) to 4 (*almost always*). As McCaffrey et al. (2017) suggested, we employed their conversion table to transform the raw scores into standard scores. Standard scores falling between 90 and 110 are considered within the average range, with higher scores denoting higher levels of mindful parenting. The MIPQ has shown good psychometric properties among parents of Spanish adolescents (Orue et al., 2020). In this study, Cronbach's alpha was 0.83 for being in the moment with the child and 0.88 for mindful discipline.

Data analysis

Data were analyzed using IBM SPSS Statistics (Version 26) and R (Version 1.3.1056). Missing values were handled through the SPSS Missing Value Analysis with the Expectation-Maximization Algorithm. There were some missing values in the total scores (0.5% for the emotional symptoms and conduct problems, 6.7% for mindful discipline, and 2.4% for being in the moment with the child) and were missing completely at random (MCAR) as indicated by the Little's MCAR test, $\chi^2(11) = 8.86$, $p = 0.635$. The normality of the variables was assumed when skewness was >2 and kurtosis >7 (Kim, 2013).

To explore whether MP moderates the association between internalizing and externalizing symptoms, hierarchical linear regression was conducted in SPSS. First, predictor variables were converted to z scores. In the first step, the emotional symptoms variable was introduced into

the model; in the second step, the two MP variables were introduced; in the third step, the interaction terms were introduced (MP-being in the moment with the child x emotional symptoms and MP-mindful discipline x emotional symptoms). Then, the significant moderations were tested using the Interactions package in R (Long, 2019). Significance for interaction was set at $\alpha = 0.05$. Significant interactions were explored by simple slopes analysis at ± 1 SD values of the moderator (i.e., MP). Bootstrapped CI ($N = 1000$) and the Johnson–Neyman method were calculated.

Results

Descriptive Statistics

Skewness and kurtosis exploration suggested a normal distribution of all the variables. Table 1 displays the study variables' descriptive statistics and the Pearson correlations between all the study's variables. Emotional symptoms and conduct problems were negatively associated with MP. Emotional symptoms and conduct problems were positively correlated.

Moderation Analysis

Results from the regression analysis are presented in Table 2. Emotional symptoms were positively associated with conduct problems. Only MP-being in the moment with the child was associated with conduct problems when controlling for emotional symptoms. The interaction between MP-being in the moment with the child and emotional symptoms was statistically significant ($B = -0.10$, $p = 0.02$). However, the interaction between MP-mindful discipline and emotional symptoms was not significant ($B = 0.05$, $p = 0.17$). The multiple regression model with the interaction terms was significant, $F(5,414) = 18.76$, $p < 0.01$, with an adjusted R^2 of 0.17.

We conducted a simple slope analysis to test the interaction between MP-being in the moment with the child (1 SD below and 1 SD above the mean) and emotional

symptoms. As Fig. 1 shows, the slope of the association between emotional and conduct problems was significant only in those participants who scored 1 SD below the mean ($B = 0.15$, $t = 5.90$, $p < 0.01$, CI [0.03; 0.26]). It was not significant in those who scored 1 SD above the mean ($B = -0.03$, $t = -0.71$, $p = 0.48$, CI [-0.15; 0.08]). Results from the Johnson–Neyman interval indicated that when MP-being in the moment with the child is outside the interval [0.13, 3.09], the slope of emotional symptoms is $p < 0.05$, and the range of observed values of MP-being in the moment with the child is [-1.81, 3.18].

Discussion of Study 1

Study 1 explored the association between internalizing and externalizing symptoms in adolescents and whether MP moderated this association. The results partially supported our hypothesis. As predicted, there was an association between internalizing and externalizing symptoms. However, only the being in the moment with the child facet of MP was related to externalizing symptoms when controlling for internalizing symptoms. As expected, the association between internalizing symptoms and externalizing symptoms was moderated by MP, but only by the being in the moment with the child facet.

Our results align with previous studies that suggested a co-morbidity between internalizing and externalizing symptoms in adolescents (Essau & de la Torre-Luque, 2021). In addition, based on the acting out model, which suggests that internalizing symptoms are a risk factor for externalizing symptoms, results from this study indicated that the MP facet of being in the moment with the child might counteract the risk factor that internalizing symptoms pose to externalizing symptoms (Kofler et al., 2011). Based on this model, in which negative emotions would lead to externalizing symptoms (Kofler et al., 2011), it could be that adolescents whose parents display higher levels of being in the moment have better strategies for emotion regulation or they have a sense that their parents are present for them and that they can share their feelings with them which will help validate their emotions. Indeed, MP has been associated with better strategies for emotion regulation (Moreira & Cristina Canavarro, 2020), more family satisfaction (Maglica et al., 2021), and better child-parent communication (Lippold et al., 2015, 2021), which can prevent conduct problems from developing in times of emotional distress.

Several reasons might explain why the association between internalizing and externalizing symptoms was moderated by the being in the moment with the child facet of MP. First, it could be that adolescents who suffer internalizing symptoms but feel that their parents are there for them, that they listen without judging, and that they are

Table 1 Descriptive statistics and Pearson correlations between all the Study 1 variables ($N = 420$)

Variables	<i>M</i>	<i>SD</i>	1	2	3
1. MP-being in the moment	102.26	13.12	1		
2. MP-mindful discipline	108.39	15.33	0.73**	1	
3. Emotional symptoms	2.14	0.83	-0.12*	-0.11*	1
4. Conduct problems	1.67	0.64	-0.35**	-0.25**	0.26**

** $p < 0.01$; * $p < 0.05$

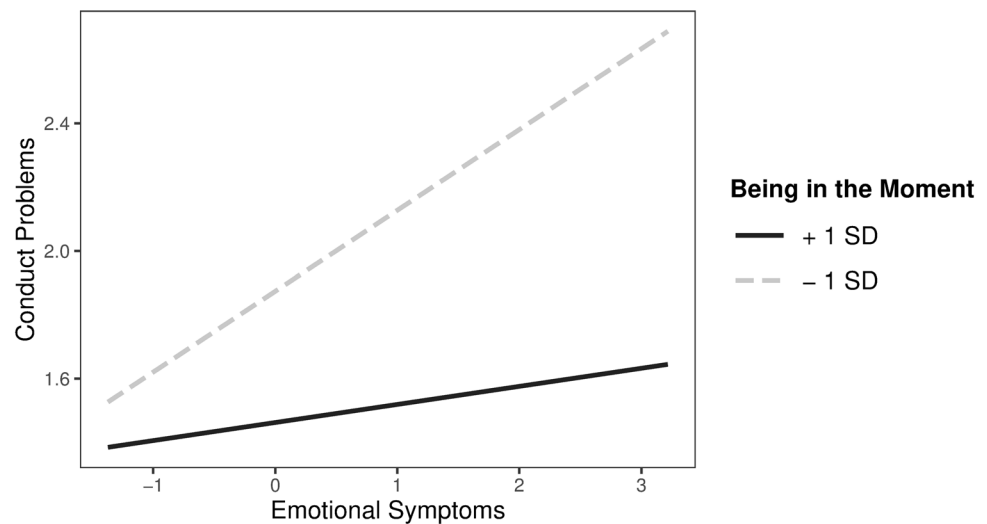
Table 2 Hierarchical regression analysis results for conduct problems with emotional symptoms as a predictor and mindful parenting interaction effects

Variable	<i>B</i>	SE <i>B</i>	β	<i>t</i>	<i>p</i>	95% CI for <i>B</i>	<i>R</i> ²	ΔR^2
Step 1							0.07	0.07**
Emotional symptoms	0.17	0.03	0.27	5.71	<0.001	[-0.11, -0.23]		
Step 2							0.16	0.10**
MP-Being	-0.21	0.04	-0.33	-5.00	<0.001	[-0.30, -0.13]		
MP- Discipline	0.01		0.01	0.22	0.822	[-0.73, 0.09]		
Step 3							0.17	0.01*
MP-Being \times Emotional symptoms	-0.10	0.04	-0.16	-2.43	0.015	[-0.18, -0.02]		
MP-Discipline \times Emotional symptoms	0.05	0.04	0.09	1.37	0.172	[-0.02, 0.13]		

Predictors (Mindful Parenting and Emotional Symptoms) are standardized

CI Confidence interval: lower limit, upper limit

** $p < 0.01$; * $p < 0.05$

Fig. 1 The 'Being in the Moment' facet of mindful parenting as a moderator in the association between children's internalizing and externalizing symptoms

emotionally available and compassionate would not need to regulate their behaviors by engaging in externalizing behaviors. Those adolescents would turn to their parents when they feel bad since they would feel that their parents are there for them. Second, it could be that those parents who display higher levels of being in the moment are more aware of their children's feelings. Consequently, they attune their behavior accordingly, helping their children by providing emotional support even if the adolescents do not explicitly ask for it.

Contrary to expectations, we did not find an association between the mindful discipline facet of MP and parent-reported adolescents' externalizing symptoms when controlling for their internalizing symptoms, nor did we find a moderating role. This facet seems not to play a beneficial role in buffering the association between adolescents' internalizing and externalizing symptoms. As some authors suggested, mindful discipline is a parent-focused facet of MP (McCaffrey et al., 2017), and it could be that, in the face of internalizing symptoms, how parents approach their parenting has

no effect on the association between internalizing and externalizing symptoms. In this vein, the most critical aspect could be that children feel that the parents are present (i.e., being in the moment) independent of how they apply their discipline.

This study has several limitations. First, this was a cross-sectional study, and predictive relationships between internalizing and externalizing symptoms cannot be established. The model was grounded on the acting-out model, which suggests that emotional distress predicts externalizing symptoms. However, additional models should be explored in future longitudinal studies, such as the impact of children's symptoms on their parents. Second, this study relies only on parents' reported adolescent symptoms, and the parents could not be aware of all their children's externalizing and internalizing symptoms. Thus, future studies should also include adolescents' reports. Despite these limitations, results from this study suggest that being in the moment with the child is a beneficial facet of MP that might mitigate the association between internalizing and externalizing symptoms in adolescents.

Study 2

Study Design

This study is a two-wave longitudinal study with a one-year interval between W1 and W2. The ethical committee of the University of Deusto approved the study in September 2019.

Participants

Participants from one of the schools in Study 1 were invited to participate in Study 2, as the other school withdrew for reasons unrelated to the research. Thus, from the sample of parents who participated in Study 1 ($n = 194$), 151 adolescents agreed to participate and provide data at both waves (there were no significant differences between included and excluded participants at W1 variables). That is, the parents provided data at W1, and their children provided data at W1 and W2. At W1, adolescents' ages ranged from 12 to 17 ($M = 13.93$; $SD = 1.18$), and parents' ages ranged from 39 to 59 ($M = 47.85$; $SD = 3.87$). Of the adolescents, 65.6% were girls, and of the parents, 81.2% were mothers. Most participating adolescents' parents were biological parents (98.1%), 0.6% were adoptive parents, and 1.3% did not indicate. Following the Spanish Society of Epidemiology and the Spanish Society of Family and Community Medicine (2000), we used parental occupation and education to determine participants' socioeconomic status (SES). SES distribution was as follows: 3.7% low status, 16.5% low-medium status, 28.4% medium status, 41% medium-high status, and 10.4% high status. Regarding educational level, 62.2% of mothers and 47.7% of the fathers completed university or postgraduate studies; 11.1% of mothers and 16.7% of fathers completed vocational training; 5.1% of mothers and 7.5% of fathers completed high school; 0.7% of mothers and 0.5% of fathers completed elementary school; 0.5% of mothers and 0.2% of parents did not complete elementary school.

Procedures

Data collection from the parents followed the same procedure as in Study 1. Only adolescents whose parents participated in Study 1, had parental consent, and assented to participate were included in Study 2. For both waves, the adolescents completed the questionnaires and demographic information online, in Qualtrics, on their computers in class. To ensure confidentiality and solve potential issues, a researcher from the lab was in the classroom. A unique code was used to match questionnaires from W1 and W2 and the parent-adolescent questionnaires. A voucher (20€) was

raffled among the adolescents who completed the questionnaires.

Measures

MP was assessed with the Spanish version of the Mindfulness In Parenting Questionnaire (MIPQ; McCaffrey et al., 2017; Orue et al., 2020) described in Study 1. For the Study 2 subsample, Cronbach's alpha was 0.83 for being in the moment with the child and 0.89 for mindful discipline.

Antisocial behavior was evaluated with adolescents' Antisocial and Criminal Behavior Scale (Andreu & Peña, 2013). The scale comprises 25 items that evaluate pre-delinquent behavior (e.g., travel on public transport without paying and skipping school), vandalism (e.g., damage and destruction of urban equipment), property offenses (e.g., theft and robbery in different contexts and locations or trespassing on private property), violent behavior (e.g., participation in assaults against persons and possession or use of weapons), and the use of drugs or alcohol drugs (e.g., using or selling drugs and getting drunk). The original scale consisted of dichotomous response options (true/false). To address the potential limitations of dichotomous scales, we used a 5-point scale ranging from 0 (*never*) to 4 (*almost always*). In this scale, adolescents indicated the frequency of their behaviors in the past six months. The scores were calculated as the mean of the items for those participants who had completed at least 75% of the items, with a higher score indicating more delinquent and antisocial behavior. The study has good psychometric properties among Spanish adolescents (Andreu & Peña, 2013). In this study, Cronbach's alphas were 0.89 and 0.83 at W1 and W2, respectively.

Data Analysis

Study 2 data analysis followed the same procedure described in Study 1. Missing values were as follows: 3.9% for mindful discipline; 1.9% for being in the moment with the child; and 0% and 4.5% for antisocial behavior at W1 and W2, respectively. Since missing values were MCAR, as the Little's MCAR test indicated, $\chi^2(24) = 28.18$, $p = 0.252$, and any variable had more than 5% of missing values. As described in Study 1, missing values were handled through the SPSS Missing Values Analysis with the Expectation-Maximization Algorithm.

To explore whether MP predicts externalizing symptoms over one year and moderates the stability of these symptoms, we conducted a hierarchical linear regression model in SPSS. First, predictor variables were converted to z scores. In the first step, antisocial behavior at W1 was introduced into the model; in the second step, the two MP variables were introduced; in the third step, the interaction

terms were introduced (MP-being in the moment with the child x W1 antisocial behavior and MP-mindful discipline x W1 antisocial behavior). Then, the significant moderations were tested using the Interactions package in R (Long, 2019). Significance for interaction was set at $\alpha = 0.05$. Significant interactions were explored by simple slopes analysis at ± 1 *SD* values of the moderator (i.e., MP). Bootstrapped CI ($N = 1000$) and the Jonshon–Neyman method were calculated.

Results

Descriptive Statistics

Skewness and kurtosis exploration suggested a normal distribution for the MP variables and a non-normal negatively skewed pattern for antisocial behavior at W1 and W2. Table 3 displays the study variables' descriptive statistics, the Pearson correlation for the normally distributed variables, and the Spearman correlation for non-normally distributed variables. Antisocial behavior was not significantly associated with MP. There was the stability of antisocial behavior, as indicated by the positive correlation between measures for W1 and W2.

Moderation Analysis

The results from the hierarchical linear regression are presented in Table 4. A significant regression equation was found, $F(5,148) = 14.18$, $p < 0.001$, with an adjusted R^2 of 0.30. MP did not predict antisocial behavior at W2 when controlling for antisocial behavior at W1. However, the interaction between MP-discipline and antisocial behavior at W1 was statistically significant ($B = -0.08$, $p < 0.001$). The interaction between MP-being in the moment with the child and antisocial behavior at W1 was not significant ($B = 0.02$, $p = 0.41$).

Table 3 Descriptive statistics and correlations between all the Study 2 variables ($n = 154$)

Variables	<i>M</i>	<i>SD</i>	1	2	3
1. MP-Being in the moment	107.30	15.14	1		
2. MP-Mindful discipline	101.45	14.02	0.78**	1	
3. Antisocial behavior (W1)	0.16	0.27	-0.15	-0.09	1
4. Antisocial behavior (W2)	0.18	0.24	-0.13	-0.12	0.71**

Pearson correlations are calculated for MP; the rest are Spearman

** $p < 0.01$; * $p < 0.05$

We conducted a simple slope analysis to test the interaction between MP-mindful discipline (1 *SD* below and 1 *SD* above the mean) and antisocial behavior at W1. As Fig. 2 shows, the slope of the association between antisocial behavior at W1 and W2 is significant only in those participants who scored 1 *SD* below the mean in MP-discipline ($B = 0.21$, $t = 6.90$, $p < 0.01$, CI [0.12; 0.30]). It was not significant in those who scored 1 *SD* above the mean ($B = 0.04$, $t = 1.68$, $p = 0.09$, CI [-0.05; 0.14]). Results from the Johnson–Neyman interval indicated that when MP-discipline is outside the interval [0.93, 3.18], the slope of antisocial behavior at W1 is $p < 0.05$, and the range of observed values of MP-discipline is [-2.20, 3.81].

Because the outcome variable was not normally distributed, the sensitivity analysis results were replicated with the square root transformation of the antisocial behavior outcome variable. Results were maintained and are presented in the Supplementary Table 1.

Discussion of Study 2

Study 2 explored whether MP longitudinally predicted adolescents' externalizing symptoms, reported as antisocial behavior, controlled for W1 antisocial behavior, and whether MP moderated the temporal stability of antisocial behavior. Results partially supported the hypothesis. We did not find an association between MP and antisocial behavior at W2, controlling for antisocial behavior at W1. However, our results support the moderating role of MP in the stability of antisocial behavior, but only for the mindful discipline facet of MP. In addition, results align with previous studies suggesting temporal stability of externalizing symptoms (Farrington, 2009). This shows the negative and long-term consequences of these symptoms in adolescents.

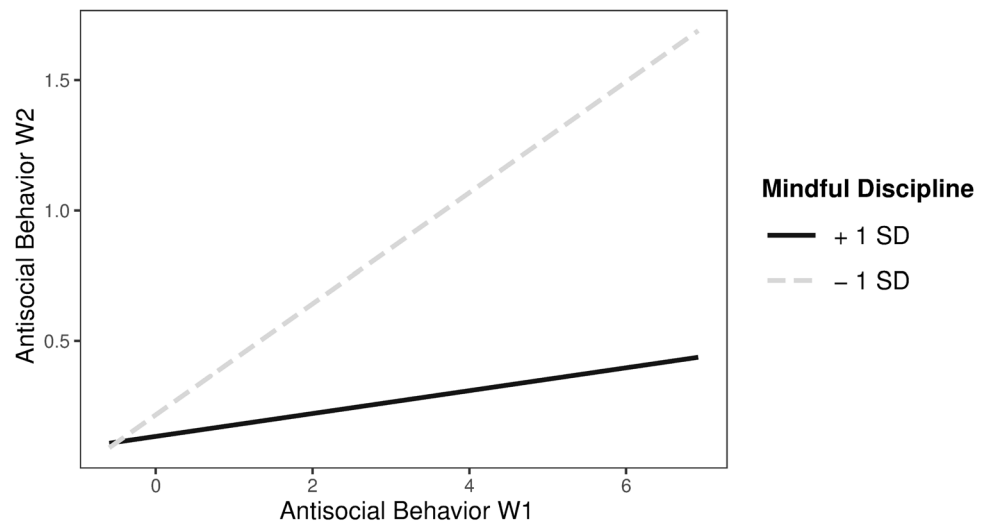
The absence of an association between MP and externalizing symptoms contradicts some previous studies that found an association (Maglica et al., 2021) but is in line with the results of some studies that did not find an association (Han et al., 2021; Kil et al., 2021). Indeed, there is some evidence that suggests that the association between MP and externalizing symptoms could be mediated by other mechanisms, such as parental stress (Burgdorf et al., 2019), parent-child communication (Lippold et al., 2015, 2021), or parental practices (Han et al., 2021). However, we did find a significant interaction between antisocial behavior at W1 and MP. Specifically, mindful discipline moderated the temporal stability of antisocial behavior. Our results suggest that those adolescents whose parents reported lower levels of mindful discipline showed continuity in antisocial behavior for the one year of the study. The being in the moment with the child facet of MP does not seem to have a protective effect in the face of externalizing symptoms.

Table 4 Hierarchical regression analysis results for antisocial and delinquent behavior at Wave 2, predicted by antisocial and delinquent behavior at Wave 1 and mindful parenting and interaction effects

Variable	<i>B</i>	SE <i>B</i>	β	<i>t</i>	<i>p</i>	95% CI for <i>B</i>	<i>R</i> ²	ΔR^2
Step 1							0.24	0.25**
Antisocial behavior (W1)	0.12	0.02	0.50	7.08	<0.001	[0.09, 0.16]		
Step 2							0.24	0.01
MP-Being	0.03	0.03	0.12	1.03	0.304	[-0.3, 0.8]		
MP- Discipline	-0.03	0.03	-0.13	-1.16	0.248	[-0.09, 0.02]		
Step 3							0.30	0.07*
MP-Being \times Antisocial behavior (W1)	0.02	0.03	0.07	0.82	0.412	[-0.03, 0.08]		
MP-Discipline \times Antisocial behavior (W1)	-0.09	0.02	-0.30	-3.74	<0.001	[-0.13, -0.04]		

CI Confidence interval: lower limit, upper limit. Predictors (Mindful Parenting and Antisocial and Delinquent Behaviors at W1) are standardized

** $p < 0.01$; * $p < 0.05$

Fig. 2 The ‘Mindful Discipline’ facet of mindful parenting as a moderator in the temporal stability of children’s externalizing symptoms

Mindful discipline is a parent-focused facet of MP, characterized by emotional awareness of the self, non-reactivity in parenting, and nonjudgmental acceptance of the parenting function. It could be that parents who apply discipline more mindfully, are more aware of themselves, and display a nonreactive and nonjudgmental attitude in their parenting might help children learn and understand why they are being disciplined. This could be positive for coping with externalizing symptoms. For example, as Turpyn and Chaplin (2016) suggested, it could be that parents with high levels of MP are less reactive and more able to regulate their emotional responses in stressful parental situations, and this might be common in the presence of adolescents’ antisocial behavior. Similarly, MP has been associated with consistent discipline and an authoritative parenting style, which incorporates warmth, sensitivity, and the setting of limits. So, it might protect against the development of adolescents’ externalizing symptoms (McCaffrey et al., 2017; Orue et al., 2020; Ruiz-Hernández et al., 2018).

This study is limited in several ways. First, we measured MP only at W1, and according to a recent study, children’s behavior, especially externalizing symptoms, can influence parenting practices and MP (Kil et al., 2021). Therefore, future studies should explore the bidirectional associations between MP and externalizing symptoms, not only the unidirectional association considered in this study. In addition, antisocial behavior was self-reported by adolescents, so that it could be biased. Thus, future studies could also include reports from teachers, peers, and parents.

General Discussion

This research explored the association between MP and internalizing and externalizing symptoms in adolescents. First, we examined whether MP moderated the association between children’s internalizing and externalizing symptoms as reported by their parents. Second, we explored

whether MP longitudinally predicted and moderated the one-year longitudinal association of adolescents' externalizing symptoms (reported as antisocial behavior).

On the one hand, results showed that the being in the moment with the child facet of MP moderated the association between adolescents' internalizing and externalizing symptoms reported by their parents. Specifically, there was an association between adolescents' internalizing and externalizing symptoms only for adolescents whose parents reported low levels of the being in the moment facet of MP. In contrast, there was no such association when parents had a high level of this MP facet. Therefore, being in the moment with the child might protect against developing externalizing symptoms in the presence of internalizing symptoms.

On the other hand, the current study found that the mindful discipline facet of MP moderated the temporal association of adolescents' self-reported antisocial behavior. Notably, there was an association between W1 and W2 antisocial behavior in children of parents who displayed low levels of mindful discipline. In contrast, this association was not significant in children of parents with high levels of mindful discipline. Finally, another important finding was that when parents reported adolescents' symptoms, there was a cross-sectional association between symptoms and MP. However, when adolescents self-reported externalizing symptoms longitudinally, there was no significant association with MP. One possible explanation for these results may be a response bias in adults (since Study 1 included only parent-reported measures).

A significant limitation of these studies is that they did not explore how children's symptoms affect parental mental health and MP or how children perceive their parents' MP. Recent studies (e.g., Bi et al., 2023; Lippold et al., 2021) emphasize the dynamic and bidirectional nature of the relationship between parents and children. Therefore, it is of great interest to study both parent and child variables over time while considering the perspective of both. Another point that could be a limitation is the representativeness of the sample. The participants were from private schools, and not all parents agreed to participate in the study. Although our study aimed to examine a sample from the general population, scores on antisocial behavior were low, and future studies might benefit from exploring other groups where scores on externalizing symptoms are higher, such as court-involved youth.

These studies emphasize the importance of studying child and parent variables together, as the family context plays a pivotal role in shaping children's emotional and behavioral development. As previous studies have shown, family context and practices can significantly affect children's behavioral problems (Ruiz-Hernández et al., 2018),

but they can also have a tremendous protective function. As these studies show, MP can be beneficial, but it is essential to study the different facets of MP concerning the different symptoms of children. In this case, we can conclude that the being in the moment facet might be beneficial in the presence of emotional symptoms and reduce their association with externalizing symptoms. The mindful discipline facet could be beneficial to reduce externalizing symptoms over time.

Data availability

The datasets generated and analyzed during the current study are available in the Open Science Framework (OSF) repository (<https://osf.io/6pz8f/>).

Supplementary information The online version contains supplementary material available at <https://doi.org/10.1007/s10826-023-02704-y>.

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Compliance with Ethical Standards

Conflict of Interest The authors declare no competing interests.

Ethics Approval The Ethics Committee of the University of Deusto approved this study (ETK-1/19-20).

Informed Consent Informed consent was obtained from all parents, and assent was obtained from all adolescent participants.

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