



# Examining the Mediating Role of Mindful Parenting: A Study on the Relationship Between Parental Emotion Regulation Difficulties and Problem Behaviors of Children with ASD

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Accepted: 21 January 2022

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## Abstract

Parental emotion regulation plays a vital role in the parent–child relationship. This study examines the mediating role of mindful parenting in the relationship between parental emotion regulation difficulties and problem behaviors of children with autism spectrum disorder (ASD). The study was conducted with 273 parents of children with ASD in Istanbul. The study findings revealed a significant yet negative correlation between mindful parenting and emotion regulation difficulty and problem behaviors. The study model highlighted that emotion regulation difficulties significantly predicted mindful parenting and the child’s problem behavior, whereas mindful parenting significantly predicted the child’s problem behavior. Additionally, the study findings indicated that mindful parenting was a partial mediator.

**Keywords** Autism spectrum disorder (ASD) · Parent of child with autism · Emotion regulation difficulty · Mindful parenting · Problem behavior

Being the parent of a child with autism spectrum disorder (ASD) resembles a difficult journey full of interesting and unexpected surprises. In this process, parents learn many new things because of the different characteristics of their children. However, the various difficulties that parents face while raising children deeply affect them emotionally (Ooi et al., 2016). Previous studies have shown that parents of children with ASD experience more stress and anxiety compared with those of children with other disabilities (Akkök et al., 1992; Barroso et al., 2018; Dabrowska & Pisula, 2010; Hayes & Watson, 2013; Johnson et al., 2011; Osborne & Reed, 2010; Pastor-Cerezuela et al., 2021) and that there is a correlation between the problem behaviors of children with ASD and their parents’ stress levels (Beck et al., 2004; Davis & Carter, 2008; Estes et al., 2009). A study from Turkey found that the parents of children with ASD experienced increased depression, anxiety, and stress and decreased psychological resilience as their children exhibited more problem behaviors (Mustafaoglu Çiçek, 2019).

In other words, while the challenging behaviors of children with ASD negatively affect the emotional well-being of their parents (Seymour et al., 2013), the emotional state of the parents affects their children’s behavior (Ooi et al., 2016). In short, considering the parent–child relationship to be a reciprocal process, while the behaviors of the children affect the parents, the emotional states and behaviors of the parents may affect the behaviors of the children with ASD.

## Problem Behaviors of Children with ASD

ASD is characterized by significant difficulties with social communication skills and restricted repetitive behavior patterns and interests (American Psychiatric Association, 2013). Repetitive behaviors of children with ASD negatively affect their interactions with their parents (Wilke et al., 2012), while the temper tantrums, self-harming behaviors (Dominick et al., 2007), and problem behaviors of these children that make it difficult for them to adapt to their surroundings, which may negatively affect parents. Children with ASD often experience difficulties in being understood by their parents because of their sensory sensitivities (Leekam et al., 2007; Stewart et al., 2009), repetitive behaviors and interests (American Psychiatric Association, 2013; Losh

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et al., 2009) and serious deficiencies in verbal and nonverbal communication as well as social interaction skills (Baron-Cohen, 2008; Dodd, 2005; Lubetsky et al., 2011; Whitaker et al., 1998; Wing, 2012). Establishing a relationship with children with ASD, understanding their various behaviors, and addressing their behavioral problems can also be emotionally challenging for parents. On the other hand, it can be said that the ability of parents to regulate their own emotions is important in their relations with their children.

## Parental Emotion Regulation Difficulties and Problem Behaviors of Children with ASD

Emotion regulation (ER) skills enable individuals to control and manage their emotions in the face of negative situations (Garnefski et al., 2001). Difficulty in emotion regulation (DER) is the inability of an individual to adequately regulate their emotions (Cole et al., 1994), control impulses while experiencing negative emotions, and exhibit goal-oriented behaviors (Gratz & Roemer, 2004). It has been reported that children with ASD exhibit problem behaviors because they have difficulty with emotion regulation when they are in stressful situations or overstimulated (Konstantareas & Stewart, 2006); therefore, they cannot use their ER skills (Jahromi et al., 2012). Further, parents of children with ASD reported that their children have difficulty using appropriate ER strategies and often exhibited maladaptive behaviors (Samson, Hardan, et al., 2015; Samson, Wells, et al., 2015).

Accordingly, parents of children with ASD may find it difficult to control their emotions because of their children's unstable and varying moods and maladaptive behaviors. Seymour et al. (2013) suggested that this might contribute to parental burnout and cause parents to use ER strategies less, thus leading to an increase in parental stress. According to the data of a study conducted with the parents of children with ASD (251 mothers and 147 fathers) in Turkey, the tendency of psychological re-planning and positive review of the situation also increased based on the parents' cognitive ER methods; it has been observed that the level of psychological resilience decreased as their tendency to catastrophize the situation increased (Mustafaoğlu Cicek, 2019). Conversely, it was stated that ER mediates the relationship between parents' stress and mindful parenting (MP) behaviors (Carreras et al., 2019). Additionally, previous studies have noted that the parents of children with ASD use various strategies to regulate their emotions (Dabrowska & Pisula, 2010; Hastings et al., 2005; Lai et al., 2015) and prefer more sensitive, more flexible, and simpler strategies while communicating with their children (Guo et al., 2017; Hirschler-Guttenberg et al., 2015; Ostfeld-Etzion et al., 2015).

Considering that the parent-child relationship is a dynamic interaction and that a relationship prevails between

the parents' behaviors and the problem behaviors of the children with ASD (Lengua & Kovacs, 2005), parents of children with ASD may benefit from regulating their emotions. However, the resistance of children with ASD to changes and their hypersensitivity (Fisher et al., 2019) as well as their bursts of problem behavior can cause parents to feel constantly on the alert, which is both physically and emotionally exhausting. Thus, it may be difficult for parents to adjust their emotions in the face of sudden problem behaviors of their children. In a study conducted in Turkey, it was observed that the difficulties in regulating emotions for the parents of children with ASD were higher compared to the parents of children without ASD (Naz, 2019). It is believed that MP can aid parents in regulating their emotions, thereby enabling them to interact positively with their children and address their problem behaviors.

## MP, ER Difficulties, Problem Behaviors of Children with ASD

MP is defined by Kabat-Zinn and Kabat-Zinn (1997) as parents paying full attention to their children in a conscious and nonjudgmental manner and considering their needs, regardless of the situation at a given moment (cited in Beer et al., 2013), thereby enabling parents to better interact with their children. MP includes the dimensions of listening to the child with full attention, nonjudgmental acceptance of one's self and the child, emotional awareness of oneself and the child, self-regulation, and showing compassion for oneself and the child (Duncan et al., 2009a). Additionally, MP enables individuals to correctly interpret the situation happening at a given moment, allows them to be more flexible (Duncan et al., 2009a), and helps them be more accepting (Duncan et al., 2009b) by being less reactive in terms of physical, cognitive, and emotional behaviors. This aspect aids in establishing a more harmonious and positive relationship between the parent and the child with ASD (Benn et al., 2012). When parents are open and nonjudgmental in their interaction with their children, it allows both the parties to develop (Bögels et al., 2010) and enables parents to give fewer negative reactions and be more objective in their interactions with their children (Bögels et al., 2008).

Previous studies have shown that negative emotional expressions by parents, harsh behaviors, and inconsistent disciplinary approach are often correlated with regard to emotion dysregulation in children with ASD (Chang et al., 2003; Duncombe et al., 2012). Conversely, parents' efforts to emotionally support their children, be sensitive to their emotions, and exhibit positive behaviors (Hoffman et al., 2006) play a significantly positive role. Additionally, parents' understanding of their children's emotional cues and their ability to react appropriately significantly affects the

parent–child relationship (Stansbury & Zimmermann, 1999). In studies conducted in Turkey, it has been found that mothers of children with ASD exhibit more directive and less responsive interactive behaviors compared to mothers of children with normal development. However, in terms of interaction, it has been found that mothers of children with ASD have warmer interactions (physical contact, smile, effort to stimulate activity, love words, kissing, hugging, etc. and enjoying the interaction) with their children (Diken, 2012; Doğan et al., 2016). Another study found that Turkish mothers of children with severe ASD exhibited low levels of sensitivity behaviors, occasionally considered their children’s interests and behaviors, and had limited ability in terms of observing their children’s behaviors (Töret et al., 2015).

MP has a significant role in enhancing the ability of parents of children with ASD to contain their anger toward their children in order to be less emotionally reactive toward their children’s behaviors and to help them establish a close and intimate relationship with their children (Coatsworth et al., 2010; de Bruin et al., 2014; Lippold et al., 2015). Additionally, parents can regulate their emotions and improve their problem-solving abilities via acts such as listening, raising awareness of their child’s internal reactions, and giving calm responses in line with MP practices (Benn et al., 2012). While MP may help parents control their emotions and strengthen their ER skills, it may also have a positive effect on their children’s behavior.

## Current Study

Parents can develop an intimate relationship with their children by treating them more calmly and consistently through MP practices. MP contributes toward establishing a positive parent–child relationship and alleviating parents’ stress. Additionally, MP allows parents to be aware of their own and their children’s emotions. This emotional awareness enables parents to respond appropriately to their children’s problem behaviors in a more calm and conscious manner, rather than exhibit reactive and habitual responses (Duncan et al., 2009b). When children with ASD exhibit problematic behaviors, such as harming themselves, others, or things; giving a strong reaction to changes in their routine; maladaptation (Fouse & Wheeler, 1997; Simons & Oishi, 1987); temper tantrums and inability to control their negative emotions, parents may worry about these behaviors and get angry and give reactive responses, thus making them less patient and attentive (Bögels et al., 2010). If parents treat their children in a mindful manner and control their emotions, they will be able to address their children’s problem behaviors more easily. In light of this assumption, this study examines the mediating role of MP in the relationship

between parental ER difficulties and the problem behaviors of children with ASD. The proposed model is illustrated in Fig. 1.

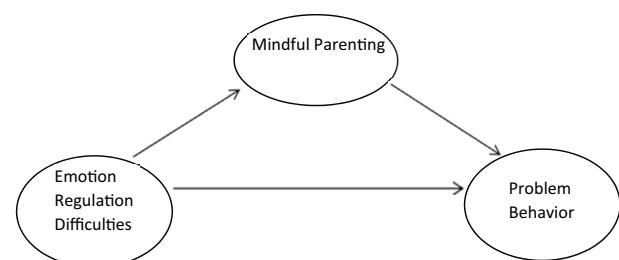
Further, answers to the following questions were sought to achieve the study aim: (1) Is there a significant correlation between emotional regulation (ER) difficulties of parents, mindful parenting (MP) levels, and problem behaviors of children with ASD? (2) Is the theoretical model developed to reveal the mediating role of the MP variable in the relationship between ER difficulties of parents and their children’s problem behaviors adequate?

## Method

In this section, participants, procedure, measures and data analysis are explained. Confirmatory factor analysis is used to determine whether a scale has a similar structure in a group different from the group in which it was developed (DiStefano & Hess, 2005). Therefore, at the first stage of the study, a confirmatory factor analysis was performed by collecting data from 150 people to determine whether the Problem Behavior Scale developed for children with normal development between the ages of 3 and 6 could be used for children with ASD. Then path analysis was performed to reveal the mediator role of the MP variable in the relationship between parents’ ER difficulties and their children’s problem behaviors.

## Participants

During the first stage of the study, a confirmatory factor analysis was performed by collecting data from 150 individuals to determine whether the Problem Behavior Scale could also be used for children with ASD aged 3–6 years. Of those who completed the form, 124 (82.7%) were mothers and 24 (16%) were fathers, while 2 (1.3%) did not wish to specify. Of the participants, 30 (20%) had daughters and 113 (75.3%) had sons. There were 7 (4.7%) participants who did not wish to specify the gender of their child. Additionally, 273 people participated in the study group for the path



**Fig. 1** Mediating role of mindful parenting in the relationship between emotion regulation difficulties and problem behavior

analysis, which was conducted to reveal the mediator role of the MP variable in the relationship between ER difficulties of parents and their children's problem behaviors. Of those who completed the form, 221 (81%) were mothers and 45 (16.5%) were fathers, while 7 (2.6%) did not wish to specify. The participants were over the age of 20.

Moreover, 61.5% of the group were aged between 31 and 40, 59.7% were high school and undergraduate degree holders, and 69.6% belonged to the middle-income level. Of these participants, 51 (18.7%) had daughters and 205 (75.1%) had sons [Note: Autism is more common in boys than girls and a male-to-female ratio of 3:1 (Loomes et al., 2017) or 4:1 (Tubío-Fungueiriño et al., 2021)]. There were 17 (6.2%) participants who did not wish to specify the gender of their child.

## Procedure

To collect the research data, 23 special education and rehabilitation centers in Istanbul where children with ASD between the ages of 3 and 6 receive education were contacted. After the researcher went to these institutions and provided information about the research work, she obtained permission from the authorities in the institutions to contact the parents who wanted to participate in the study voluntarily and to make an appointment. Verbal/written permissions were obtained by meeting each parent who wanted to participate in the research with pre-determined appointment times, which was conducted at the institutions that the parents attended. Then, the parents who participated in the study filled out the forms used for measurement, and these forms were delivered to the researcher (which took about 30–40 min). Prior to data collection, an ethics committee approval was obtained from the Scientific Research and Publication Ethics Board of Marmara University Institute of Educational Sciences. In this study, a cross-sectional correlational design was used to examine the mediating role of the MP variable concerning the relationship between ER difficulties of parents of children with ASD and their children's problem behaviors.

## Measures

### Problem Behavior Scale

This is a subscale of the Preschool and Kindergarten Behavior Scale (PKBS-2), which was developed by Merrell (1995) and revised in 2003. Additionally, a norm determination study was conducted with 3,317 children aged 3–6 years. The validity and reliability study of the scale, which comprises two independent scales—the Social Skills Scale and Problem Behavior Scale for Turkish children—was conducted by Alisinanoğlu and Özbey (2009). First, exploratory

factor analysis was performed, and then, confirmatory factor analysis was performed. The factor analysis revealed a four-factor structure for the problem behaviors scale; these factors were externalizing problems (EP), internalizing problems (IP), antisocial (AS), and self-centered (SC). The Cronbach's alpha reliability coefficients were found to be between 0.72 and 0.95. The reliability coefficient of the overall Problem Behavior Scale was found to be 0.96.

### Difficulties in Emotion Regulation Scale (DERS)

This scale was developed by Gratz and Roemer (2004) to determine the level of difficulties in ER and it comprises 36 items with 6 subscales. After the scale was adapted into Turkish and tested for validity and reliability by Rugancı (2008), Rugancı and Gençöz (2010) revised and finalized the scale with 35 items. According to the factor analysis, these subscales include lack of emotional *awareness* (F), lack of emotional *clarity* (C), *non-acceptance* of negative emotions (N), lack of *strategy* building (S), lack of control over *impulsive* behaviors (I), and the inability to behave in accordance with *goals* under negative emotions (G). The Cronbach's alpha reliability coefficients of the subscales were between 0.75 and 0.90. The reliability coefficient of the overall scale was 0.94. The Brief Symptom Inventory scale (adapted into Turkish by Şahin & Durak, 1994) was used by Rugancı and Gençöz (2010) to determine concurrent validity during the adaptation phase of the Course Scale into Turkish. The correlation coefficient between the two scales was 0.62. In the criterion validity study, it was observed that all measures of the Course Scale could significantly distinguish participants with "high psychological distress" from those with "low psychological distress."

### The Mindfulness in Parenting Questionnaire (MIPQ)

Developed by McCaffrey et al. (2017), this scale comprises 24 items. The Turkish adaptation of the scale was performed by Gördesli et al. (2018). The factor analysis revealed a two-factor structure for the scale, namely, parental self-efficacy and being in the moment with the child. The Cronbach's alpha reliability coefficient was 0.73 and 0.83 for the subscales and 0.87 for the overall scale. To examine convergent validity, the relationships of MIPQ with the Mindful Attention Awareness Scale (MAAS) and the Parent–Child Communication Scale (PCCS) were investigated. While the relationships of MAAS with the subscales (Parental self-efficacy and Being in the moment) and the total score of MIPQ were slightly significant ( $r_{ps-MAAS} = 0.29$ ,  $r_{bm-MAAS} = 0.23$ ,  $r_{MIPQ-MAAS} = 0.29$ ;  $p < 0.05$ ), there were moderate positive correlations between MIPQ and PCCS ( $r = 0.59$ ;  $p < 0.05$ ).

## Data Analysis

Experts working with children with ASD (two academicians from the special education department, two psychologists, and one special education teacher) have indicated that the items of the Problem Behavior Scale, which is the subscale of the PKBS-2, are suitable to be used with 3–6-year-old children with ASD. In accordance with the expert opinions, confirmatory factor analysis was performed to examine whether the Problem Behavior Scale for students with ASD had a similar structure. The analysis revealed that the scale was suitable for students with ASD. The obtained data were organized using SPSS 21, and univariate and multivariate outliers were examined. AMOS 26 was used for confirmatory factor and path analyses. In all, 3 of the 153 data collected for confirmatory factor analysis were removed from the data set upon being detected as univariate outliers, and the analysis continued with the remaining 150 data. To assess the fit between the theoretical model and the data, fit indices of the estimated model were calculated. The fit-calculated indices showed that the root mean squared error of approximation (RMSEA) and the normed fit index (NFI) values did not correspond with the criteria for fit, and other fit indices corresponded narrowly. Therefore, in line with the expert opinions and modifications made after confirmatory factor analysis, modifications were made for error variances between Items 3 and 5; 7 and 8; 14 and 16; and 17 and 18. Table 1 shows the fit indices of the first and last models with modifications.

As observed in Table 1, the goodness-of-fit results revealed that the values of the final model showed acceptable and good fits. In the model, RMSEA, the root mean square residuals (RMR), and the standardized root mean square residual (SRMR) values showed good fit, while  $\chi^2/df$ , the comparative fit index (CFI), and NFI showed a good fit (Çokluk et al., 2012). Examination of Akaike's information criterion (AIC) and the expected cross-validation index (ECVI) values in turn revealed that the final model had a

better fit because of lower indices. After the modifications, the four-factor structure of the scale was found significant at 0.05 ( $t > 1.96$ ,  $p < 0.05$ ), and error variances were different from 0. The four-factor structure of the scale and factor loadings is presented in Fig. 2. Figure 2 reveals that the correlation coefficients between latent and observed variables ranged from 0.32 to 0.79 for the EP subscale, 0.63 to 0.80 for the IP subscale, 0.36 to 0.83 for the AS subscale, and 0.58 to 0.73 for the SC subscale. Therefore, the factor loadings of the scale ranged from 0.32 to 0.83. These findings suggest that the Problem Behavior Scale is applicable to students with ASD.

## Results

The findings obtained vis-à-vis the purposes of the research are presented below. Table 2 shows whether there is a significant correlation between the scores of the difficulties in ER, problem behavior, and MP scales, the determination of which the study was first aimed at.

As seen in Table 2, there was a moderate positive correlation between the problem behavior and the ER difficulty variables ( $r = 0.39$ ;  $p < 0.01$ ). This finding suggests that children exhibit more problem behaviors when their parents experience high levels of ER difficulty. There was a low, negative, and significant correlation between the MP variable (the mediating variable) and the ER difficulty and problem behavior variables ( $r = -0.26$ ,  $r = -0.25$ ;  $p < 0.01$ , respectively).

In the first tested model, the ER difficulty variable was the exogenous variable, and the problem behavior variable was the endogenous variable. The difference between the standardized path coefficients of the ER difficulty variable and the problem behavior variable was found to be significant ( $\beta = 0.43$ ,  $p < 0.05$ ). This aspect suggests that the ER difficulty variable significantly predicted the problem behavior variable. The findings of the analysis are

**Table 1** Fit indices of the confirmatory factor analysis model

	First model	Last model	Criteria for a good fit	Criteria for an acceptable fit
$\chi^2$	837.37	635.49		
df	318	312		
$\chi^2/df$	2.63	2.03	$\leq 3$	$3 < \chi^2/df \leq 5$
RMSEA	.10	.08	$\leq .05$	$.05 < RMSEA \leq .08$
CFI	.92	.95	$\geq .95$	$.90 \leq CFI < .95$
RMR	.07	.07	$\leq .05$	$.05 < RMR \leq .08$
SRMR	.08	.08	$\leq .05$	$.05 < SRMR \leq .08$
NFI	.88	.90	$\geq .95$	$.90 \leq NFI < .95$
AIC	957.37	767.49		
ECVI	6.43	5.15		

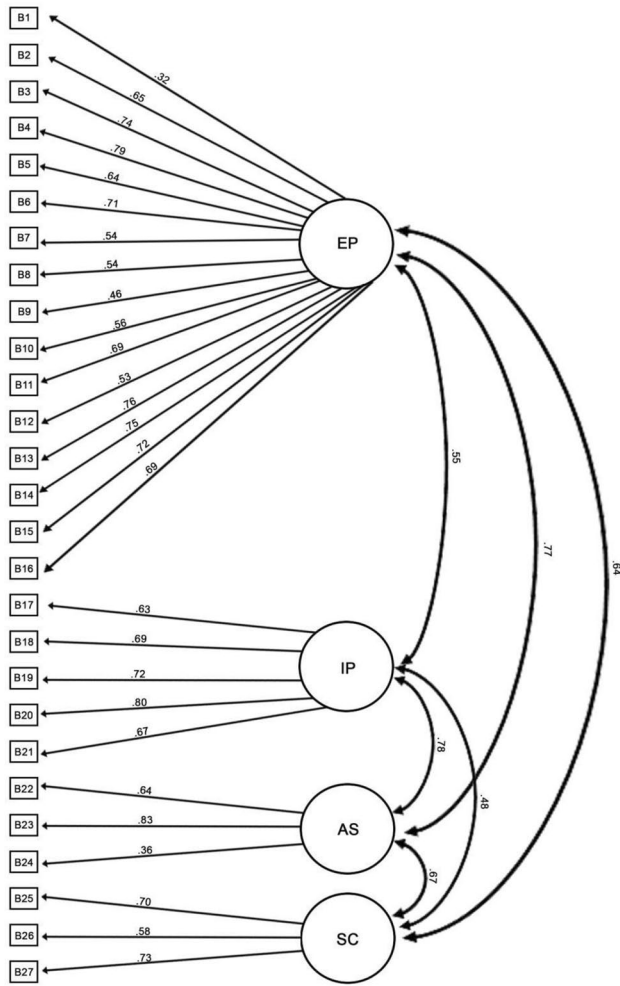


Fig. 2 Factor loadings of the four-factor structure of the problem behavior scale obtained after the confirmatory factor analysis

Table 2 Mean, standard deviation, and correlation values for research variables

	M	SD	1	2	3
1. Difficulties in emotion regulation	82.90	20.66	-		
2. Problem behavior	54.74	14.95	.39**	-	
3. Mindful parenting	73.12	11.48	-.26**	-.26**	-

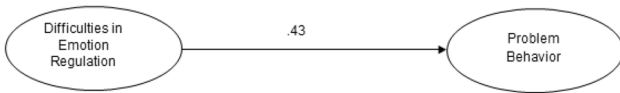


Fig. 3 Theoretical model 1

Table 3 Findings of fit indices related to theoretical model 1

Fit indices	Theoretical model	Criteria for a good fit	Criteria for an acceptable fit
$\chi^2$	69.90		
df	33		
$\chi^2/df$	2.11	$\leq 3$	$3 < \chi^2/df \leq 5$
RMSEA	.06	$\leq .05$	$.05 < RMSEA \leq .08$
AGFI	.92	$\geq .95$	$.90 < AGFI \leq .95$
GFI	.95	$\geq .95$	$.90 \leq GFI < .95$
CFI	.97	$\geq .95$	$.90 \leq CFI < .95$
NFI	.95	$\geq .95$	$.90 \leq NFI < .95$

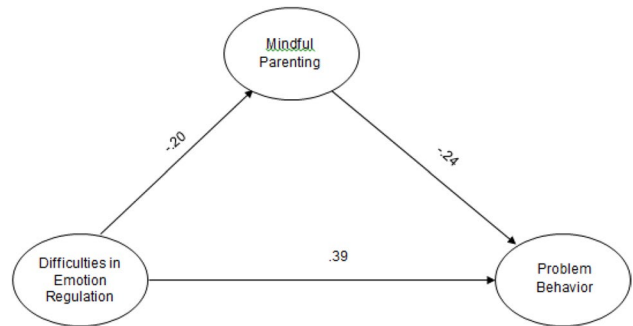


Fig. 4 Theoretical model 2

Table 4 Findings of fit indices for model 2

Fit indices	Theoretical model	Criteria for a good fit	Criteria for an acceptable fit
$\chi^2$	126.34		
df	50		
$\chi^2/df$	2.53	$\leq 3$	$3 < \chi^2/df \leq 5$
RMSEA	.07	$\leq .05$	$.05 < RMSEA \leq .08$
AGFI	.89	$\geq .95$	$.90 < AGFI \leq .95$
GFI	.93	$\geq .95$	$.90 \leq GFI < .95$
CFI	.95	$\geq .95$	$.90 \leq CFI < .95$
NFI	.92	$\geq .95$	$.90 \leq NFI < .95$

presented in Fig. 3 and Table 3. The goodness-of-fit statistics in Table 3 reveal that the values showed acceptable and good fits.

In the model,  $\chi^2/df$ , GFI, and CFI showed a good fit, while RMSEA, AGFI and NFI showed an acceptable fit (Çokluk et al., 2012). The theoretical model developed to reveal the mediating role of the MP variable in the context of the relationship between the ER difficulty variable and the problem behavior variable was tested through path analysis. The results of the analysis are presented in Fig. 4 and Table 4.

The goodness-of-fit test results in Table 4 reveal that the values showed a good fit. In the model,  $\chi^2/df$  and CFI showed a good fit, while RMSEA, AGFI, GFI, and NFI showed an acceptable fit (Çokluk et al., 2012). As observed in the results of the mediation model, difficulties in ER significantly predicted MP and problem behavior, while MP significantly predicted problem behavior ( $\beta = -198$ ,  $\beta = 0.386$ ,  $\beta = -238$ ;  $p < 0.05$ , respectively). The standardized indirect effect of ER difficulties on problem behavior was calculated to be 0.04, with a standardized total effect of 0.43. When the confidence intervals were estimated using the bootstrapping technique, the confidence interval of the standardized indirect effect of ER difficulty on problem behavior was found to be 0.01, 0.11;  $p < 0.05$ ; the confidence interval of the standard indirect effect was found to be 0.23, 0.50;  $p < 0.05$ ; and the confidence interval of the standard direct effect was found to be 0.30, 0.54;  $p < 0.05$ . All these effects were significant. These results show that MP was a significant predictor in partially mediating the effects between ER difficulties and problem behavior.

## Discussion

This study examines the mediating role of the MP variable in the context of the relationship between the ER difficulties of parents of children with ASD and the problem behaviors of their children. The analyses conducted within the scope of this study revealed that there was a positive medium-level correlation between the ER difficulty variable and the problem behavior variable and that the ER difficulty variable significantly predicted the problem behavior variable. This finding suggests that when parents of children with ASD have increased levels of DER, their children exhibit more problem behaviors. Given that the parents' emotions and behaviors affect the behaviors of their children (Zhou & Yi, 2014), parents' ER can make it difficult to manage problem behaviors in their children. Previous studies have demonstrated that parental ER plays an important role in the parent–child relationship (Bariola et al., 2011, 2012), coping with parental stress, the behaviors of parents toward their children (Hu et al., 2019; Shaffer & Obradović, 2017).

Parenting a child with ASD is often associated with reduced quality of life, high stress, depression, and anxiety due to the ongoing nature of care (Cachia et al., 2016). Therefore, parents likely find it difficult to control their emotions. In such cases, it may be difficult for them to show the required patience and understanding to address problem behaviors. They may also experience difficulties in implementing core strategies (disregarding negative behavior, creating alternatives, reinforcing positive behaviors, etc.) to help their children develop positive behaviors. Furthermore, reports have suggested that children with ASD experience

difficulties in regulating their emotions (Berkovits et al., 2017; Mazefsky et al., 2014; Samson et al., 2014) and that the inadequate regulation of emotions can lead to maladaptive behavior and problems with social interactions (Mazefsky, 2015; Mazefsky & White, 2014).

However parental ER can play a key role in parents' interaction with their children and the management of problem behaviors exhibited by their children. Parent who can play an important role in regulating their children's emotion can act as a balancer against their children's emotional state, and can react appropriately to the maladaptive behavior exhibited by their children. Previous studies have reported that parents' facilitating appropriate and consistent responses shape their children's ER skills (Rutherford et al., 2015), that parents of children with ASD have an important role in the emotional development of their children (Gulsrud et al., 2010; Ting & Weiss, 2017), and that parents' increased awareness of themselves leads to the acquisition of adaptive behaviors by their children (Gottman et al., 1996).

This study found a low negative correlation between the MP variable, which is the mediating variable of this study, and the ER difficulty and problem behavior variables. This finding shows that when parents adopt a mindful approach, they experience less ER difficulty, and their children exhibit fewer problem behaviors. In other words, when they listen to their children with ASD in a fully focused manner, direct all their attention to their children, and try to increase their awareness regarding both their emotions and their children's, they become more sensitive and patient with their children. Sensitivity, being understanding, and the ability to regulate reactions in the context of MP help parents regulate their emotions. MP allows parents to focus solely on their children and their behavior at a given moment, thus enabling them to approach their children with nonjudgmental acceptance. This nonjudgmental acceptance, in turn, enables parents to regulate their emotions independently from other previous experiences and emotions. Thus, parents can actually hear out their children, understand their needs, and interact positively with them.

Further, parents have difficulties in understanding the hidden meaning behind their children's expressions and distinguishing them owing to a lack of emotion (Samson, Hardan, et al., 2015; Samson, Wells, et al., 2015). Therefore, parents of children with ASD need to approach their children more sensitively and attentively. It was reported in a relevant study that a mindfulness training program conducted with the parents of children exhibiting problem behaviors in early childhood helped parents understand their children's needs from their children's tone of voice, gestures, and body language and be more attentive to their children by listening to them with full attention (Srivastava et al., 2011). Additionally, it was noted in previous studies performed with the participation of parents of children with ASD that mindfulness-based

interventions positively impact children's behaviors and help parents feel better (Cachia et al., 2016; Carmody & Baer, 2008), improve the quality of their relationship with their children (Duncan, 2007) and decrease the number of problem behaviors exhibited by their children (Bluth & Wahler, 2011; Singh et al., 2006a, 2006b, 2007, 2010). In brief, parents' mindfulness is likely to positively contribute to their children's behaviors and their ER.

In this study, the theoretical model developed to reveal the mediating role of MP in the context of the relationship between the ER difficulties and problem behavior was tested through path analysis, and the results demonstrated that the ER difficulty variable significantly predicted the MP variable and the problem behavior variable, while the MP variable significantly predicted the problem behavior variable. It was further established that the effect of the ER difficulty variable on the problem behavior variable partially ensues from the MP variable. Similarly, previous studies reported that the emotional state of the parents of children with ASD affects their children emotionally and behaviorally and may trigger problem behaviors (Chang et al., 2003; Zhou & Yi, 2014), while parental emotional support is effective in alleviating the externalizing problem behavior (Wilson et al., 2013). It was further reported that children with ASD exhibit fewer problem behaviors when the approach of their parents is mindful (Beer et al., 2013; Bluth & Wahler, 2011).

Further, MP contributes to the fostering of a positive parent-child relationship and the reduction of parental stress. Additionally, in the parent-child relationship, which is dynamic, MP enables parents to behave more flexibly and helps them find solutions to problems more easily (Duncan et al., 2009b). Previous studies also reported that MP enables parents to determine parenting goals by getting rid of negative emotions, such as self-judgment and judging their children's behaviors (Dumas, 2005). Furthermore, when family members learn how to manage their emotions by focusing on the present and staying in the moment, positive developments will occur in familial relationships (Harnett & Dawe, 2012). Consequently, it can be said that MP should be considered while examining the relationship between parental ER difficulties and their children's problem behaviors. Additionally, if parents interact with their children through mindful parenting, they may be more satisfied with parent-child interaction. Therefore, MP can be considered important not only for parents with children with ASD but also for many parents.

### Suggestions for Future Research and Limitations of the Study

The study demonstrated that the MP variable had a partial mediating role, suggesting that another variable may mediate the relationship between ER difficulty and problem behavior.

Future studies may examine the mediating role of other variables. Additionally, this study examined the ER skills only of the parents. However, future studies may consider examining the ER levels of children with ASD. It is further recommended to investigate the effects of MP training on parents of children with ASD and their children in Turkey.

MP is also known to produce positive results in the adolescent-parent emotional relationship (Lippold et al., 2015). Therefore, examining the effects of MP training on parents in Turkey who have children with ASD at different developmental stages (early childhood, adolescence, etc.) is recommended. Additionally, psychological support services can be offered to the parents of children with ASD to regulate their emotions, and the effects of parents on the behaviors of their children with ASD can be investigated. In studies conducted in Turkey, parents of children with ASD use faith-based coping methods, such as thinking that God is testing them with this situation, that they will be rewarded in the face of the difficulties that ASD brings (Güleç-Aslan et al., 2014), and that their outlook on life has changed (increased empathy, tolerance, and patience) (Mustafaoğlu Çiçek, 2019). In this context, the relationship between religious beliefs and ER and MP can be investigated in future research. Furthermore, considering the broader autistic phenotype (Broader Autistic Phenotype), future studies are suggested to examine the role of the broad autism phenotype in parents' ER difficulties and parental awareness.

The concept of MP is new in Turkey and has not yet been researched in the studies on parents of children with autism. In this study, the parents were contacted to discuss their current state, but the worldwide pandemic posed serious difficulties in data collection. Therefore, the size of data presented in the study is one of its limitations. Similar studies can be conducted on a larger sample and by collecting more data in the post-pandemic period. Additionally, the fact that participating parents have not received any training in MP is one of the limitations of this study. It is also known that children with ASD experience serious difficulties in ER skills, which negatively affect their parents. In this study, the lack of addressing the ER difficulties of children with ASD can be considered another limitation.

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