



How parents assist children's emotion regulation in Turkey: The Turkish adaptation of the parental assistance with child emotion regulation (PACER) questionnaire

F. Cansu Pala¹ · Ceren Gökdağ² · Dilara Özsoy¹ · Zeynep Şen Hastaoğlu¹

Accepted: 15 September 2022

© The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2022

Abstract

Parents play a critical role in emotional socialization and the development of emotion regulation during childhood. The tools to measure how parents assist children's emotion regulation are very limited. The Parental Assistance with Child Emotion Regulation (PACER) Questionnaire is a novel scale developed for this purpose with excellent psychometric properties. The aim of this study is to adapt the PACER to Turkish and investigate its psychometric properties in the Turkish cultural setting. The data were collected from 700 parents who have children aged birth to 17 years. In addition to the PACER, participants filled out some scales about their own beliefs and behaviors, also their children's psychological symptoms. We confirmed the original ten-factor structures of the PACER in a Turkish sample and the measurement invariance supported the PACER's structure across subgroups. The high internal consistencies of factors were achieved; however, the test-retest reliability was lower than expected. The factors of maladaptive emotion regulation strategies (e.g., rumination, expressive suppression, avoidance) were positively associated with parents' own emotion regulation deficit, symptoms, and child's symptoms, while others (e.g., reappraisal, problem-solving) were negatively associated with them. Overall, our results suggest that the Turkish version of the PACER is a psychometrically valid and reliable measurement to assess how parents support their children to regulate their emotions. We believe that this adaptation allows the scale to be used in developmental and clinical psychology studies and will pave the way for cross-cultural studies.

Keywords Emotion regulation · Parent emotion socialization · Parent-child relationships · PACER · Parental assistance · Emotion socialization assessment

Self-regulation is the ability to control behavior and emotion in a situation-specific manner (Bronson, 2000). Controlling or modifying emotions is a vital part of self-regulation, and

yet how children gain a grasp of their feelings and manage to monitor them is not fully understood (Cole et al., 2004). As children age, they become better at regulating their feelings by suppressing or masking them as they start to understand how their expressions might affect others (Saarni, 1984). This ability may be due to the increased self-awareness of emotion-inducing events and possibly unwanted outcomes of not regulated actions. The significant inter-relations between expression, regulation, and understanding of emotion indicate a unified competence (Denham et al., 2003). Emotion regulation changes across development, from seeking a soother in infancy to self-soothing in toddlerhood (Atkinson et al., 2021). Adapting emotional reactions to social and cultural norms becomes the central theme of childhood (Thompson, 1994). The assistance of caregivers is critical and has its effects throughout life on the development of emotion regulation (Calkins & Hill, 2007). Thus,

✉ F. Cansu Pala
cansu.pala@ege.edu.tr

Ceren Gökdağ
ceren.gokdag@cbu.edu.tr

Dilara Özsoy
dilaraozsoy@yahoo.com

Zeynep Şen Hastaoğlu
zeynepshenastaoglu@gmail.com

¹ Department of Psychology, Ege University, Bornova, Izmir, Turkey

² Department of Psychology, Manisa Celal Bayar University, Manisa, Turkey

it is necessary to examine the role of parents. This research aimed to adapt a novel and comprehensive scale developed by Cohodes et al. (2021) into Turkish, which is used to examine how parents assist their children in regulating their emotions.

Emotion regulation involves cognitive, behavioral, and social processes (Thompson, 1994) and has continuing effects on individuals' lives, from well-being and mental health to interpersonal relationships (De France & Hollenstein, 2019; Gross & John, 2003; Kraiss et al., 2020; Scheibe et al., 2015). Any deficit and difficulties are associated with broad indices of social nonfunctioning with internalizing and externalizing psychopathology symptoms (*see*, Zeman et al., 2006). The healthy development of emotion regulation is required for individuals' psychological status, and the adverse effects of not being able to regulate emotions may last a lifetime (Gross, 2001; Zimmermann & Iwanski, 2014). The role of caregivers, often the parents, might determine the development of emotion regulation processes. According to Gross (2014), contextual features of social components affect the development of emotion regulation, along with neurobiological features and temperament. The extended process of Gross' model (1998; 2015) presents a range of emotion regulation strategies in which each has different consequences when applied to a situation. The levels of emotional reactivity were explained through the situation, attention, appraisal, and response. The strategies may entail selecting and modifying a situation, deployment of attention, cognitive change, and adjustment of responses. When the individuals aim to regulate their own emotions, that is intrinsic emotion regulation. The way a parent aids their child in regulating emotions falls under extrinsic emotion regulation, which contains both down- and up-regulation of positive and negative emotional states. For example, a parent helping a child end an exciting singing at bedtime would be constituted as a down-regulation of a positive state. Extrinsic emotion regulation could be claimed as a form of emotional socialization.

The main concerns of the emotion socialization processes are the family climate in which the child grows up and how the caregiver approaches and aids the child in regulating their emotions (Morris et al., 2017). Parents may influence emotion regulation development by providing a positive family environment and being a model for their children, by showing them how to regulate their emotions, and directly intervening in their behavior (Morris et al., 2007). Emotion socialization includes three processes: parents' conversations with children about emotions, expressing their own emotions, and reactions to their children's emotions (Eisenberg et al., 1998). By observing how their parents experience their own emotions, children learn to recognize and regulate their own and others' emotions (Eisenberg et al., 1998).

Preschool children whose parents display more positive emotional expressions have better emotional understanding (Denham & Kochanoff, 2002; Eisenberg et al., 2003) and emotion regulation performances (Denham & Grout, 1993).

Parents' reactions to children's emotions are divided into supportive and non-supportive responses. Supportive reactions positively affect children's emotional competence, whereas non-supportive reactions have negative consequences such as a lack of emotional regulation on the child's part (Eisenberg et al., 1998). Parents' supportive responses include helping the child who experiences negative feelings feel better (emotion-focused responses), behaving that encourages the child to express their emotions (reactions that promote the expression of emotions), and helping to solve the problem causing the specific feeling (problem-focused responses), including their behavior. Unsupportive parental reactions include the parent responding to the child's negative feelings with anxiety and focusing on the child's distress rather than the child's needs (parental distress), criticizing, downplaying, or ignoring the child's emotional reactions (i.e., minimizing emotions), and threatening with punishment to control negative emotions. It also includes dysfunctional (punitive) emotional socialization, such as getting angry at the child and telling the child that "you are acting like a baby".

Regarding the contributing factors to a child's emotion regulation, we should consider parents' ability to regulate their emotions, culture and whether it is a mother or a father in the role of emotion socializer. Few studies have examined the associations between the child's and parent's emotional regulation skills. For parents to be an effective and sufficient emotional socialization tool for their children, they should be able to regulate their own emotions effectively (Bariola et al., 2011). The parent's emotion regulation strategies are a modal for children and contribute to the quality of parenting (Hajal & Paley, 2020). According to Meyer et al. (2014), parents' beliefs about emotion socialization strategies and children's self-regulation influence their socialization strategies and mediate the relationship between parental representations and children's emotion regulation. Another factor to remember is that the parents' beliefs about children's emotions are sensitive to the cultural context, given the knowledge that emotion and their expressions are learned and modeled through society, culture, and language (Trommsdorff & Cole, 2011). Since this study aims to adapt a measure to a new cultural setting, the effects of culture and environment on parents' beliefs about children's emotions must be considered. Certain values regarding emotions may differ between *Western* and *Eastern* or *Industrialized* and *Rural* cultural settings (Markus & Kitayama, 1991; Kağıtçıbaşı, 1999, 2002). When expressing one's inner states, showing anger and pride can be much more

acceptable in a culture where autonomy and assertiveness are valuable (Kitayama et al., 2006), whereas Turkish mothers allow their children's sadness over the expression of anger (Çorapçı, 2012). Such differences in parental emotion socialization require any measurement or application to be adapted well to a specific cultural setting which is one of the main purposes of this study. In addition to culture, whether mothers and fathers differ regarding their emotion socialization styles should be taken into account. Because mothers preferred positive emotion socialization strategies such as 'support' compared to the fathers' 'distraction', which is a negative strategy (İnce & Ersay, 2022; Wong et al., 2009).

Despite the stress on parents' reactions to their children's emotional experiences, the self-report scales in the literature to measure parents' reactions to children's emotional processes are limited in literature and even more limited in their Turkish adaptations (Çorapçı et al., 2012; Rothenberg et al., 2019). Among the very few is the "Coping with Children's Negative Emotions" (CCNES; Fabes et al., 1990, 2002), which consists of 12 scenarios in which children experience anger, sadness, fear, embarrassment, and disappointment. While three subscales (problem-focused response, emotion-focused response, and expressive encouragement expression) are conceptualized as supportive reactions, others (minimization reaction, punitive reaction, and distress reaction) are conceptualized as non-supportive reactions. Despite being widely used, it is mostly based on negative emotions and does not provide detailed information on a child's contributions to emotion regulation. The fact that the scenarios are mostly suitable for preschool children narrows its usage to a specific age group and leaves older children out. "Parents' Beliefs about Children's Emotions Questionnaire" (PBACE; Halberstadt et al., 2013) is another measurement with 33 items to assess the parents' beliefs about their children's emotions. This scale also has a limited audience of 4–10 years old children's parents and does not provide information about the emotion regulation process but only beliefs related to emotion. "Emotion Socialization Strategies Subscale" (ESSS; O'Neal & Magai, 2005) aims to measure parents' emotional socialization behaviors with children 11–14 years old. The scale included items containing five emotional socialization behaviors of parents for four different emotional states (anger, sadness, fear, and extreme joy). ESSS differs from CCNES in that it measures the parent's ability to socialize positive emotions.

According to Cohodes et al. (2021), although there are measurements to evaluate parents' beliefs and behaviors in various ways, a measurement specific to the parental support in emotion regulation processes with a wide range of ages is still required. To accomplish this, "Parental Assistance with Child Emotion Regulation (PACER) Questionnaire", was designed to measure how parents assist children's

employment of emotion regulation strategies for negative emotions, with 50 items and ten subscales. The PACER is above cultural influences compared to the Emotion Regulation Checklist (Shields & Cicchetti, 1998). The PACER has relevant questions to all ages and sexes, the factor structure remained similar despite the division of the scores for children below the age of 8 and above. This makes the PACER suitable for a wider age range with excellent internal consistencies. It is also worth mentioning that the PACER is suitable for parents and applicable to other caregivers with similar psychometric properties (Mancini et al., 2022). Due to the limited number of emotion socialization and regulation scales, the Turkish adaption of the PACER would be most beneficial. In conclusion, this study aimed to translate the PACER into Turkish and examine its psychometric properties in a Turkish-speaking parents sample. The first hypothesis of our study is that (H_1) the 10-factor structure of the original questionnaire will be replicated using a Turkish version and its measurement invariance across subgroups will be acceptable. The second hypothesis is that (H_2) the internal consistencies and test-retest reliability coefficients of the PACER will be good in a Turkish sample. The third hypothesis about convergent validity is that (H_3) the emotion regulation strategies obtained from the Turkish version of the PACER are associated with some scales aiming to measure coping strategies, beliefs, difficulties in emotion regulation, and psychological distress of parents, also the child's psychological symptoms.

Method

Participants

A total of 700 parents aged 21 to 63 years ($M=39.10$, $SD=7.45$; 82% mother) completed the PACER. Half of them had university graduates, while 20% of them were high school graduates. They answered the PACER with one of their children (target child). Target children were between birth and 17 years old ($M=8.37$, $SD=5.25$; 50% girls). 19% of the participants did not fill out other measurements. Therefore, the sample used for convergent validity consisted of 569 parents ($M_{age}=39.42$, $SD_{age}=7.50$; 81% mother). Their target children ages ranged between birth and 17 years old ($M=8.65$, $SD=5.28$; 48% female). Finally, participants who volunteered to receive the re-test phase via providing their emails in the first step was approached. Only the volunteers were sent the retest version and 74 parents ($M_{age}=39.26$, $SD_{age}=8.45$; 81% mother) self-selected to complete the PACER for the second time. Detailed demographic information about these samples were given in Table 1.

Table 1 Demographic information of all parents in the samples

	Test Sample (<i>N</i> = 700)	Convergent Validity Sample (<i>N</i> = 569)	Test-Retest Sample (<i>N</i> = 74)
Parent demographic variables			
Age			
Min-Max	21–63	21–59	22–59
Mean ± SD	39.10 ± 7.45	39.42 ± 7.50	39.26 ± 8.45
Median	38	39	39
Sex			
Female	573 (82%)	462 (81.2%)	60 (81.1%)
Male	127 (18%)	107 (18.8%)	14 (18.9%)
Education Level			
Primary school	33 (4.7%)	27 (4.7%)	1 (1.4%)
Middle school	28 (4%)	21 (3.7%)	2 (2.7%)
High school	138 (19.7%)	119 (20.9%)	6 (8.1%)
University	350 (50%)	290 (51%)	37 (50%)
Master	111 (15.9%)	85 (14.9%)	21 (28.4%)
PhD.	40 (5.7%)	27 (4.7%)	7 (9.5%)
Economic Status			
Very low	10 (1.4%)	7 (1.2%)	2 (2.7%)
Low	60 (8.6%)	46 (8.1%)	6 (8.1%)
Moderate	531 (75.9%)	434 (76.3%)	55 (74.3%)
High	97 (13.9%)	81 (14.2%)	11 (14.9%)
Very high	2 (0.3%)	1 (0.2%)	0
Marital Status			
Married	649 (92.7%)	526 (92.4%)	68 (91.9%)
Single	1 (0.1%)	1 (0.2%)	0
Separated/divorced	42 (6%)	35 (6.2%)	4 (5.4%)
Widowed	4 (0.6%)	3 (0.5%)	0
Partnered	1 (0.1%)	1 (0.2%)	0
Other	3 (0.4%)	3 (0.5%)	2 (2.7%)
Number of Children			
Min-Max	1–5	1–5	1–3
Mean ± SD	1.70 ± 0.77	1.70 ± 0.74	1.51 ± 0.63
Median	2	2	1
Parenting arrangement			
Co-parenting with spouse/partner	618 (88.3%)	504 (88.6%)	66 (89.2%)
Co-parenting with former spouse/partner	26 (3.7%)	21 (3.7%)	2 (2.7%)
Co-parenting with other adults	25 (3.6%)	18 (3.2%)	0
Single parenting	24 (3.4%)	20 (3.5%)	4 (5.4%)
Other	7 (1%)	6 (1.1%)	2 (2.7%)
Target child demographic variables			
Age			
Min-Max	0–17	0–17	0–17
Mean ± SD	8.37 ± 5.25	8.65 ± 5.28	8.05 ± 5.38
Median	8	8	6
Sex			
Female	348 (49.7%)	274 (48.2%)	31 (41.9%)
Male	352 (50.3%)	295 (51.8%)	43 (58.1%)
Adopted			
No	696 (99.4%)	569 (100%)	74 (100%)
Yes	2 (0.3%)	0	0
Other	2 (0.3%)	0	0
Physical Illness/Problem			
No	679 (97%)	553 (97.2%)	74 (100%)
Yes	21 (3%)	16 (2.8%)	0
Psychological Illness/Problem			
No	670 (95.7%)	545 (95.8%)	71 (95.9%)
Yes	30 (4.3%)	24 (4.2%)	3 (4.1%)

Measurements

In this study, we used some measurements to test the concurrent validity of the PACER in addition to the demographic information form and the PACER. Information about these measurements was given below.

Parental Assistance with Child Emotion Regulation Questionnaire (PACER). This scale was developed by Cohodes et al. (2021) to evaluate how/with which strategies parents who have a child between birth and 17 years old assist their children to regulate their emotions. It is composed of 50 items rated on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*). The PACER gives the scores of 10 factors about different emotion regulation strategies. Each factor consists of 5 items. Lower scores indicate a lower frequency, or absence, of parents-implemented behaviors that help the target child's emotion regulation strategy, while higher scores indicate a higher engagement in behaviors that provide help for the targeted emotion regulation strategy. In the original study, the PACER demonstrated excellent internal reliability (ranged from 0.89 to 0.96), test-retest reliability (ranged from 0.49 to 0.73), and good convergent validity with related variables (Cohodes et al., 2021). Moreover, a recent study demonstrated that the PACER is a valid and reliable assessment of caregiver-applied emotion regulation strategies support for children under 5 years of age (Mancini et al., 2022).

Coping with Children's Negative Emotions Scale (CCNES). This scale was developed by Fabes et al. (2002) to evaluate different parental coping responses in response to young children's negative emotions. The CCNES consists of 12 questions. For each question, a hypothetical scenario is presented in which the respondent's child feels upset. Utilizing a 5-point scale ranging from 1 (*I never do this*) to 5 (*I definitely do this*), the parent was asked to rate the likelihood of responding to the scenario in each of the six possible ways. These subscales reflect six qualitatively different responses to children's negative emotional expressions: Problem-Focused Reactions, Emotion-Focused actions, Expressive Encouragement, Minimization Reactions, Punitive Reactions, and Distress Reactions. The internal reliability for the subscale of CCNES estimates ranged from 0.69 to 0.85. We used the Turkish form of the CCNES (Çorapçı & Yağmurlu, 2008). The internal reliability for the subscale of CCNES estimates ranged from 0.63 for the to 0.85. In the current study, the correlations between CCNES scores and the PACER scores were calculated to test the convergent validity of the PACER.

Parents' Beliefs about Children's Emotions Questionnaire (PBACE). This scale was developed by Halberstadt et al., to evaluate the beliefs of parents about the emotions of their children between the ages of 4–10. The scale has 33

items on a 6-point Likert-type scale (*I strongly disagree* to *I strongly agree*) and has seven subscales. These subscales are Cost of Positivity, Value of Anger, Manipulation, Control, Parent Knowledge, Autonomy, and Stability. In the original study, the internal consistencies were between 0.57 and 0.83. We used the Turkish form of the PBACE (Işık-Uslu & Turan, 2017). The internal consistencies in this version were between 0.68 and 0.75. In the current study, the correlations between PBACE scores and the PACER scores were calculated to test the convergent validity of the PACER.

Emotion Regulation Checklist (ERC). This scale was developed by Shields and Cicchetti (1998) to measure the level of expression or control of positive and negative emotions in different situations. The scale consists of 24 items on a 4-point Likert-type scale (*rarely-almost never* to *always*) and has two subscales. These subscales are lability-negativity and regulation. The lability-negativity subscale consists of items related to reactivity, arousal, anger dysregulation, and emotion lability, while the emotion regulation subscale consists of items related to the socially appropriate expression of emotion and empathy. In the original study, the internal consistencies were 0.96 for the negativity subscale and 0.83 for the emotion regulation subscale. We used the Turkish form of the ERC (Kapçı et al., 2009). The internal consistencies in this version were above 0.84. In the current study, the correlations between ERC scores and the PACER scores were calculated to test the convergent validity of the PACER.

Strengths and Difficulties Questionnaire (SDQ). This scale was developed by Goodman (1997) to screen the behavioral and emotional problems of children and adolescents aged 4–18. The scale consists of 25 items on a 3-point Likert-type scale (*not true*, *somewhat true*, and *certainly true*) and has five subscales. The scale consists of five subscales. These subscales are emotional problems, behavioral problems, hyperactivity, peer problems, and social behavior. The total difficulty score is obtained from the total score of the first four subscale scores. In the original study, the internal consistencies were between 0.37 and 0.84. We used the Turkish form of the SDQ (Güvenir et al., 2008). The internal consistencies in this version were between 0.57 and 0.85. In the current study, the correlations between SDQ scores and the PACER scores were calculated to test the convergent validity of the PACER.

Difficulties in Emotion Regulation Scale-16 (DERS-16). This scale is a 16-item short form of the original DERS (Gratz & Roemer, 2004). The DERS-16 (Bjureberg et al., 2016) measures individuals' emotion dysregulation and negative experiences in the emotion regulation process. It comprises five subscales and a total score. It had good psychometric properties ($\alpha=0.92$, test-retest $r=.85$ for total score) in the original study. We used the Turkish version of

DERS-16 (Yiğit & Yiğit, 2019). The internal consistencies in this version ranged between 0.78 and 0.92. We used only the total score of DERS-16 in the current study to test the convergent validity of the PACER.

Depression Anxiety Stress Scale-21 (DASS-21). This scale was developed by Henry and Crawford (2005) to measure individuals' depression, anxiety, and stress symptoms. It is a short version of the original DASS (Lovibond & Lovibond, 1995). This short version has 21 items on a 4-point Likert-type scale and has three subscales and a total score representing psychological distress. The higher scores reflect the severe symptoms. In the original study, the internal consistencies were between 0.82 and 0.93. We used the Turkish form of the DASS (Sarıçam, 2018). The internal consistencies in this version were above 0.77. In the current study, the correlations between DASS-21 scores and the PACER scores were calculated to test the convergent validity of the PACER.

Procedure

We obtained all required permissions from the corresponding author of the PACER and the ethics committee at the first author's institution. In the translation phase, items were separately translated into Turkish by authors. Next, each translation was viewed by the authors, and for each item, the translation that best reflected the original meaning was reached. Thirdly, a five-person team of psychologists and linguists, fluent in both languages, evaluated the clarity and equivalence of the Turkish items. After we reviewed these evaluations and the team's recommendations, we made some changes to the items and went to the back-translation phase. Two psychologists, fluent in both languages, performed back translation of the final form. The similarity of the back-translation was reviewed by the PACER's corresponding author and their team. Lastly, after some modifications, the scale reached its final version.

The data collection was online via *Qualtrics* and continued for the last four months of 2021. Participants were reached through social media platforms. In the online survey, participants first read the informed consent form, answered the demographic information form, and the PACER. Then other measurement tools were presented in a counterbalanced order. The procedure took about 30 min. The participants who volunteered to participate in the test-retest phase signed up their emails, so we resent the PACER to them after a month.

Data analysis

We tested the structural validity of the PACER in Turkish with confirmatory factor analysis (CFA) via AMOS 21. In

this analysis, the original 10-factor model and an alternative (one-factor) model were run and compared. The model fit was evaluated based on several criteria: i) the ratio of χ^2 to degrees of freedom below 3, ii) Comparative Fit Index (CFI) above .95 (above .90 acceptable), iii) Standardized Root-Mean-Square Residual (SRMR) equal to or less than .08, iv) root mean square error of approximation (RMSEA) below .06, v) small values in Akaike information criterion (AIC) (Byrne, 2013; Hu & Bentler, 1999; Schreiber et al., 2006). In addition to CFA, we conducted multiple-group CFAs to test the measurement invariance of the PACER by target child sex (female [$n = 348$] vs. male [$n = 352$]) and target child age (≤ 8 years [$n = 371$] vs. > 8 years [$n = 329$] using median split). In these multiple-group CFAs, four models were compared: unconstrained (configural), measurement weights, structural covariances, and measurement residuals. For model comparison, the change of CFI value of .01 was used considering Cheung and Rensvold's (2002) suggestion and as used in the original study of the PACER (Cohodes et al., 2021).

We used SPSS 25 for convergent validity (calculating Pearson correlations between PACER's scores and other related measurements), internal consistencies (using Cronbach's alpha), and test re-test reliability (calculating Pearson correlations between baseline PACER's scores and the 1-month retest [$n = 74$]).

Results

Structure validity

We run a series of CFAs to test the factor validity of the PACER in Turkish. Results indicated that the original 10-factor model was good fit to the data ($\chi^2(1130) = 3349.58$, $p < .001$, $\chi^2/df = 2.96$, CFI = 0.92, SRMR = 0.06, RMSEA = 0.053 [90% CI = 0.051 – 0.055], AIC = 3639.58), and better than one-factor model ($\chi^2(1175) = 17032.62$, $p < .001$, $\chi^2/df = 14.50$, CFI = 0.42, SRMR = 0.14, RMSEA = 0.139 [90% CI = 0.137 – 0.141], AIC = 17232.62). Two models were also significantly different from each other ($\Delta\chi^2(45) = 13683.04$, $p < .001$). Ten-factor model confirmed the multidimensional structure of PACER. In this model, the factor loadings were between 0.49 and 0.93 with significant levels of $p < .001$. The factor loadings and descriptive statistics of items were presented in Table 2. Moreover, the correlation coefficients between factors were shown in Table 3.

The measurement invariance of the PACER according to the child's sex and age was tested by considering factor loadings, factor variances and covariances, and error variances. As can be seen in Table 4, according to the unconstrained model, the changes in CFI in the models were less than 0.01

Table 2 Standardized factor loadings in 10-factor model of PACER.

Factor Names and Items	Factor Loadings	M	SD	Skewness	Kurtosis
Behavioral Disengagement					
Item 1	0.80	6.02	1.51	-1.76	2.56
Item 2	0.85	5.98	1.53	-1.74	2.52
Item 3	0.82	6.01	1.49	-1.73	2.52
Item 4	0.83	5.98	1.46	-1.63	2.34
Item 5	0.76	5.76	1.6	-1.33	1.06
Problem-Solving					
Item 6	0.80	6.29	1.23	-2.37	6.18
Item 7	0.87	6.23	1.25	-2.07	4.69
Item 8	0.88	6.26	1.22	-2.23	5.55
Item 9	0.82	6.17	1.28	-1.92	3.9
Item 10	0.81	6.24	1.23	-2.24	5.75
Social Support Search					
Item 11	0.79	6.01	1.41	-1.66	2.59
Item 12	0.84	5.55	1.67	-1.09	0.47
Item 13	0.85	5.84	1.48	-1.37	1.48
Item 14	0.79	5.47	1.69	-1.00	0.19
Item 15	0.69	5.93	1.43	-1.51	2.06
Rumination					
Item 16	0.77	3.37	2.16	0.33	-1.27
Item 17	0.86	2.92	2.09	0.69	-0.88
Item 18	0.72	3.98	2.05	-0.05	-1.19
Item 19	0.87	2.86	2.01	0.69	-0.79
Item 20	0.80	3.23	2.11	0.45	-1.14
Distraction					
Item 21	0.80	5.95	1.45	-1.62	2.36
Item 22	0.88	5.89	1.48	-1.56	2.09
Item 23	0.90	5.91	1.44	-1.51	1.91
Item 24	0.93	5.86	1.47	-1.51	1.92
Item 25	0.82	5.78	1.55	-1.42	1.54
Reappraisal					
Item 26	0.82	6.19	1.25	-1.98	4.23
Item 27	0.86	6.27	1.22	-2.16	5.14
Item 28	0.90	6.11	1.32	-1.76	3.01
Item 29	0.79	5.92	1.43	-1.54	2.15
Item 30	0.82	5.97	1.4	-1.58	2.28
Acceptance					
Item 31	0.72	5.8	1.57	-1.47	1.68
Item 32	0.82	5.46	1.75	-1.13	0.48
Item 33	0.77	5.46	1.72	-1.10	0.53
Item 34	0.78	5.67	1.66	-1.33	1.10
Item 35	0.74	5.65	1.62	-1.25	0.93
Expressive Suppression					
Item 36	0.68	3.04	2.10	0.60	-0.98
Item 37	0.87	2.34	1.87	1.24	0.36
Item 38	0.88	2.59	1.94	0.97	-0.27
Item 39	0.90	2.37	1.83	1.19	0.33
Item 40	0.88	2.42	1.91	1.16	0.11
Venting					
Item 41	0.49	5.74	1.52	-1.23	0.99
Item 42	0.60	6.18	1.27	-1.99	4.30
Item 43	0.65	5.19	1.73	-0.74	-0.18
Item 44	0.87	5.72	1.53	-1.2	0.87
Item 45	0.80	5.63	1.55	-1.16	0.92

Table 2 (continued)

Factor Names and Items	Factor Loadings	M	SD	Skewness	Kurtosis
Avoidance					
Item 46	0.76	5.14	1.84	-0.75	-0.39
Item 47	0.86	5.11	1.81	-0.72	-0.38
Item 48	0.78	4.66	1.91	-0.37	-0.86
Item 49	0.90	5.12	1.80	-0.69	-0.44
Item 50	0.89	5.15	1.86	-0.76	-0.44

Table 3 Intercorrelations among the factors of PACER.

	2	3	4	5	6	7	8	9	10
1. Behavioral Disengagement	0.70**	0.52**	0.05	0.65**	0.54**	0.26**	0.07	0.33**	0.43**
2. Problem-Solving	-	0.67**	0.05	0.55**	0.66**	0.40**	-0.05	0.44**	0.34**
3. Social Support Search		-	0.19**	0.47**	0.51**	0.36**	0.07	0.44**	0.35**
4. Rumination			-	0.02	0.05	0.20**	0.36**	0.17**	0.08*
5. Distraction				-	0.62**	0.23**	0.10**	0.32**	0.52**
6. Reappraisal					-	0.46**	-0.04	0.45**	0.34**
7. Acceptance						-	-0.06	0.48**	0.06
8. Expressive Suppression							-	-0.09*	0.29**
9. Venting								-	0.18**
10. Avoidance									-

* $p < .05$ ** $p < .01$ **Table 4** Fit indexes from measurement invariance testing across child sex and age

Models	χ^2 (df)	χ^2 /df	CFI	RMSEA (90% CI)	SRMR
Child sex					
1. Unconstrained (Configural)	5078.72 (2260)	2.48	0.900	0.042 (0.041 -0.044)	0.063
2. Measurement Weights	5124.42 (2300)	2.23	0.899	0.042 (0.040 -0.043)	0.065
3. Structural Covariances	5188.22 (2355)	2.20	0.899	0.042 (0.040 -0.043)	0.067
4. Measurement Residuals	5418.43 (2405)	2.25	0.893	0.042 (0.041 -0.044)	0.069
Child age					
1. Unconstrained (Configural)	5179.66 (2260)	2.29	0.896	0.043 (0.041 -0.045)	0.058
2. Measurement Weights	5249.59 (2300)	2.28	0.895	0.043 (0.040 -0.044)	0.057
3. Structural Covariances	5424.58 (2355)	2.30	0.891	0.043 (0.042 -0.045)	0.074
4. Measurement Residuals	5781.70 (2405)	2.40	0.880	0.045 (0.043 -0.046)	0.072

Note. All χ^2 values were significant at the level of $p < .001$.

for both child's sex and age. Therefore, the measurement model of the PACER ensured configural, measurement, and structural invariance across the child's sex and age.

Internal consistencies and test-retest reliability

Internal consistencies and test-retest coefficients of the factor scores of the PACER were presented in Table 5. All Cronbach's alphas were good or excellent ranging between

0.81 and 0.94. One-month test-retest results indicated the moderately stability of PACER's scores. Except for the problem-solving subscale, all test-retest correlation coefficients were significant and above 0.36.

Table 5 represented the PACER's scores obtained from mothers, fathers, and also from parents of female and male children. In general, the pattern of means was the same. Yet, conducted a series of independent sample t-tests showed that fathers used more distraction ($t(698)=2.08, p=.04$), expressive suppression ($t(698)=3.28, p=.001$), and avoidance ($t(698)=4.48, p<.001$) than mothers, while mothers used more acceptance than fathers ($t(698)=3.43, p=.001$). There were no significant differences regarding other strategies (all t 's < 1.96). Analyzes based on the gender of the children showed that the only significant difference was in the acceptance score. Parents of male children used more acceptance strategies than parents of female children ($t(698)=2.61, p=.009$).

Convergent validity

Correlation coefficients between the PACER scores and other measurements were presented in Table 6. The results generally supported the PACER's convergent validity. There were expected associations between parental assistance scores obtained from the PACER and the CCNES. Especially expressive encouragement score, emotion- and problem-focused reactions scores of the CCNES were positively correlated with adaptive scores of the PACER (e.g., behavioral disengagement, social support search, reappraisal).

Table 5 Descriptive statistics and reliability coefficients of the PACER.

	Total sample (<i>N</i> = 700)			Test-Retest <i>r</i> (<i>n</i> = 74)	Mothers (<i>n</i> = 573)		Fathers (<i>n</i> = 127)		Parent of female children (<i>n</i> = 348)		Parent of male children (<i>n</i> = 352)	
	<i>M</i>	<i>SD</i>	α		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Behavioral Disengagement	5.95	1.29	.91	.48***	5.93	1.30	6.09	1.25	5.95	1.27	5.96	1.31
2. Problem-Solving	6.24	1.09	.93	.16	6.23	1.12	6.31	0.95	6.23	1.09	6.26	1.10
3. Social Support Search	5.77	1.29	.89	.36**	5.77	1.29	5.76	1.28	5.75	1.20	5.79	1.37
4. Rumination	3.28	1.77	.91	.66***	3.25	1.73	3.41	1.93	3.16	1.71	3.39	1.82
5. Distraction	5.88	1.32	.94	.54***	5.83	1.36	6.10	1.12	5.89	1.32	5.88	1.32
6. Reappraisal	6.10	1.15	.92	.48***	6.10	1.14	6.08	1.21	6.11	1.11	6.09	1.20
7. Acceptance	5.61	1.36	.88	.56***	5.70	1.32	5.24	1.48	5.48	1.43	5.75	1.28
8. Expressive Suppression	2.56	1.69	.92	.38**	2.46	1.66	3.00	1.76	2.52	1.63	2.59	1.76
9. Venting	5.70	1.15	.81	.53***	5.72	1.13	5.57	1.25	5.68	1.10	5.72	1.19
10. Avoidance	5.04	1.61	.92	.56***	4.92	1.62	5.61	1.41	5.11	1.57	4.97	1.65

** $p < .01$ *** $p < .001$

Furthermore, parental assistance with more maladaptive strategies (e.g., expressive suppression, avoidance) obtained from the PACER, was associated with more negative, non-supportive, and punitive parental beliefs about their child's emotions and behaviors.

Parents with the PACER's scores reflecting high maladaptive regulation strategies (e.g., rumination, expressive suppression) and low adaptive regulation strategies (e.g., problem-solving, acceptance, venting) were more likely to report more negative responses to poorer child emotion regulation and higher levels of child psychopathology.

The results showed that there were some significant associations between the emotion regulation strategies parents use for their children and their own emotion regulation difficulties. It was observed that as their own difficulties increased, parents used rumination and suppression for their children more, and they used reappraisal and problem-solving less. Moreover, there were negative relationships between parents' general psychological distress and the PACER's problem-solving, evaluation, and acceptance scores, and a positive relationship with suppression and rumination sub-dimensions.

Discussion

The critical role of parents in emotional socialization and the development of emotion regulation during childhood has been mentioned in the introduction. Despite its importance, the number of measurement tools that assess how parents assist children's emotion regulation is extremely small. The existing scales do not provide sufficient and comprehensive information. Cohodes et al.'s (2021) new measurement tool validated its excellent psychometric properties in this regard. Thus, this study aimed to adapt the PACER to Turkish and to investigate its psychometric properties in

that particular cultural setting. Our results indicated that the Turkish version of the PACER can be used as a valid and reliable measurement to assess how parents assist their children to regulate their emotions. The data collected from a sample of Turkish-speaking parents confirmed the ten-factor structure of its Turkish version. Moreover, we confirmed its measurement invariance across the age and sex of the target child. The PACER's factors including various emotion regulation strategies and parental support had high internal reliability. Some factors such as rumination, and expressive suppression were positively associated with parents' own emotion regulation deficit, psychological symptoms, and child's symptoms, while others (e.g., reappraisal, problem-solving) were negatively associated with them.

The Turkish version of the PACER replicated the original 10-factor structure rather than the one-factor solution. Therefore, we can say that the PACER assesses how parents assist their children in regulating emotions with 10 different emotion regulation strategies. The factor loadings of the Turkish form were very similar to those of the original form (Cohodes et al., 2021). Moreover, we reached higher factor loadings than those obtained from the research conducted on caregivers of children younger than 5 years old (Mancini et al., 2022). However, this was not the case for the *venting* dimension. Although within the acceptable limits, the lowest factor loadings belonged to venting dimension items, and this was in line with Mancini et al. (2022)'s findings. The analysis of measurement invariance demonstrated that the factor structure of the PACER was similar across the age and gender of the target child. These results indicate that the scale can be used as a valid measure, so the H_1 of the current study was supported. In addition, the internal consistencies of the factors were quite high. Cronbach's alpha reliability coefficients of *social support*, *acceptance*, and *venting* factors were good, while the others were excellent. Test-retest results indicated the stability of the use of strategies

Table 6 Pearson correlations between the PACER and other measurements

	α	Behavioral Disengagement	Problem-Solving	Social Support Search	Rumination	Distraction	Reappraisal	Acceptance	Expressive Suppression	Venting	Avoidance
Child Age		-.03	-.07	-.07	-.06	.08	.04	-.13**	.14**	-.09*	.19**
Parent Age		-.04	-.02	-.05	-.07	.06	.06	-.17**	.10*	-.12**	.17**
CCNES											
Distress	.68	-.04	-.10*	-.02	.10*	-.01	-.07	-.15**	.27**	-.12**	.14**
Punitive	.86	.01	-.09*	.03	.19**	.03	-.07	-.09*	.44**	-.07	.20**
Minimizing	.85	.14**	.03	.10*	.15**	.22**	.09*	-.09*	.41**	-.06	.36**
Expressive Encouragement	.88	.06	.15**	.23**	.07	.06	.15**	.42**	-.23**	.35**	-.07
Emotion-Focused	.87	.34**	.24**	.23**	-.12**	.48**	.29**	.14**	-.06	.24**	.30**
Problem-Focused	.82	.20**	.27**	.29**	-.10*	.24**	.28**	.29**	-.20**	.32**	.14**
PBACE											
Cost of Positivity	.67	.13**	.04	.04	.04	.14**	.08	-.07	.28**	-.05	.25**
Value of Anger	.75	-.07	.04	.05	.08	-.14**	-.01	.19**	-.04	.13**	-.17**
Manipulation	.74	.22**	.12**	.04	-.11*	.24**	.14**	-.11*	.09*	-.01	.20**
Control	.78	.05	.01	.01	.16**	.11*	.04	-.02	.28**	-.04	.16**
Parental know	.01	.16**	.16**	.13**	.02	.13**	.12**	.11**	-.11**	.13**	-.01
Autonomy	.81	-.01	-.06	-.13**	.12**	.02	.04	.03	.29**	-.05	.08
Stability	.64	.06	-.01	.01	.10*	.07	.02	-.09*	.26**	-.04	.19**
Total Score	.86	.10*	.04	.01	.11**	.11*	.09*	.01	.28**	.01	.16**
ERC											
Lability/Negativity	.78	-.05	-.08*	.02	.12**	-.09*	-.15**	-.02	.17**	-.04	-.03
Emotional Regulation	.66	-.09*	-.18**	-.16**	.07	-.03	-.17**	-.21**	.23**	-.20**	.02
Total Score	.79	-.08	-.15**	-.06	.12	-.08	-.19**	-.12**	.23**	-.12**	-.01
SDQ											
Hyperactivity	.68	-.01	-.02	.03	.05	-.04	-.10*	-.01	.08	-.02	.02
Conduct Problems	.60	-.17**	-.21**	-.10**	.11*	-.15**	-.20**	-.06	.14**	-.09*	-.03
Emotional Symptoms	.72	-.09*	-.14**	-.04	.11*	-.01	-.14**	-.13**	.24**	-.11*	.11**
Peer Problems	.47	-.05	-.11**	-.02	.18**	-.02	-.11*	-.04	.30**	-.05	.05
Prosocial Behaviors	.74	.14**	.19**	.13**	-.07	.11**	.17**	.04	-.12**	.10*	.09*
Total Deviance/Difficulties	.81	-.11*	-.16**	-.04	.13**	-.07	-.19**	-.09	.24**	-.10*	.05
DERS-16											
Total Score	.93	-.10*	-.11**	.05	.13**	-.08	-.13**	-.08	.22**	-.03	.06
DASS-21											
Depression	.87	-.09*	-.12**	-.02	.09*	-.06	-.15**	-.10*	.14**	-.08	.03
Anxiety	.84	-.02	-.08	.04	.11**	-.03	-.10*	-.10*	.19**	-.09*	.07

Table 6 (continued)

	α	PACER									
		Behavioral Disengagement	Problem-Solving	Social Support Search	Rumination	Distraction	Reappraisal	Acceptance	Expressive Suppression	Venting	Avoidance
Stress	.81	-.06	-.13**	.02	.07	-.05	-.13**	-.14**	.12**	-.08	.01
General Distress	.94	-.06	-.20**	.01	.10*	-.05	-.14**	-.12**	.16**	-.09*	.04

* $p < .05$ ** $p < .01$ $N = 569$

Note. CCNES: Coping with Children's Negative Emotions Scale, PBACE: Parents' Beliefs about Children's Emotions Questionnaire, ERC: Emotion Regulation Checklist, SDQ: Strengths and Difficulties Questionnaire, DERS: Difficulties in Emotion Regulation Scale, DASS: Depression Anxiety Stress Scale

as measured by PACER. The one-month retest results of the factors, except for the problem-solving, were parallel to those in the original study (Cohodes et al., 2021) but slightly lower than theirs. These findings can be explained by the difference between the time interval of the original study (a week) and ours (a month). The frequency of use of some strategies may have changed in a month. The target children of the parents in the retest sample were younger and early childhood is a period of rapid change in nature, so the parents may have changed their form of support and assistance during that time. In conclusion, we can say that our results partially supported the H_2 .

Comparison results among parents showed that fathers tended to use maladaptive strategies more (e.g., distraction, expressive suppression, and avoidance). These results are consistent with previous findings that mothers give more supportive responses, express more emotions, and accept emotions more in the emotion socialization process (Wong et al., 2009). Indeed, it is known that women use more emotion regulation strategies in general and adaptive ones more than men (Nolen-Hoeksema, 2012). This pattern seems to emerge similarly in parenting processes. Mothers use more acceptance and less distraction, suppression, and avoidance than fathers in the process of supporting their children's emotional regulation. It should be noted that there is no such difference in all strategies. Moreover, there are some interactions between parenting support, children's characteristics, and cultural differences in emotion socialization (Friedlmeier et al., 2011; Wong et al., 2009). Future studies should investigate these interactions and cultural differences via this novel questionnaire.

Pearson correlation results in the current study indicated the PACER's convergent validity, which means that the H_3 of the study is supported. The adaptive strategies obtained from the PACER were positively correlated with the scores obtained from the CCNES, indicating supportive responses in emotion socialization. *Rumination*, *expressive suppression*, and *avoidance* scores of the PACER were positively correlated with unsupportive scores of the CCNES. Cohodes et al. (2021) reported similar findings but used only emotion-focused reactions obtained from the CCNES. Therefore, the current study extended this finding and demonstrated the concurrent validity of other factors of the PACER. The Turkish version of the CCNES has some limitations such as having relatively poor psychometric properties, and scenarios are not suitable for all ages. We suggest that the use of the PACER might be a better choice to measure parental assistance and support both in emotion regulation and socialization processes.

Furthermore, the Turkish version of the PACER was associated with parents' beliefs about children's emotions. Increased negative beliefs about children's emotions (less

supportive in emotional socialization) were associated with an increase in the expressive suppression subscale of the PACER. Parents with these beliefs support their children not to show their emotions. There are adverse effects of suppressed emotions on psychological problems (Brenning et al., 2022; Compas et al., 2017), and the parents' use of suppression strategy with the contribution of such negative beliefs might be a vulnerability factor for childhood psychopathologies. This interaction affects the emotion recognition processes of the child negatively (Castro, Halberstadt, Lozada, & Craig et al., 2015) because emotion recognition is one of the risk factors for internalizing and externalizing disorders (e.g., Castro et al., 2018; Dede et al., 2021; Jaffee, 2017).

As parents have more difficulties regulating their own emotions, they tend to use more expressive suppression in assisting their children. Thus, relationships among the PACER's expressive suppression subscale and parents' own emotion regulation deficits and general psychological distress (depression, anxiety, and stress symptoms) are prominent. The associations between parents' level of psychological distress and increase in suppression, and decreases in problem-solving and reappraisal strategies require our attention. Breaux et al. (2016) similarly demonstrated that mothers who reported greater anxiety and depression, substance use, and borderline personality symptoms were more likely to exhibit non-supportive reactions in the emotional socialization process. These indicate that intergenerational transmission is possible for emotion regulation. The distal risk factors for parental psychopathology may also disrupt the parental assistance and eventually interfere with the child's emotion regulation which leads to emotional symptoms. This argument was supported by the finding of the relationship of PACER's factors with the target child's emotion regulation and psychopathology. In future studies, using the PACER in cross-sectional and/or longitudinal designs investigating the connections between emotion regulation and psychopathology in parent-child interactions might strengthen our understanding of the intergenerational transmission of the subject.

One of the limitations of this study was that our sample included mothers predominantly despite the large sample size. This imbalance prevented us from analyzing the parents separately. There is a need to replicate the findings in samples with equal numbers of mothers and fathers. Secondly, most parents had a target child without any psychiatric diagnosis. Comparing studies with clinical samples can provide more extensive information on the subject. Thirdly, the online data collection method, although specifically stated, may have led to the possibility that participants answered the PACER for children other than the target child. Lastly, we collected the data during the COVID-19 pandemic, which should have increased some parents' concerns and

sensitivities and may have affected their answers. Although our study generally supported the concurrent validity of the Turkish version of the PACER, we could not utilize the Emotion-Related Parenting Styles Self-Test (Hakim-Larson et al., 2006), which had strong correlations with the PACER in the original study (Cohodes et al., 2021), due to absence of its Turkish version. Therefore, the PACER can be used instead of the aforementioned scale for research in Turkey.

In conclusion, despite the limitations, our study was the first one that investigated the psychometric properties of the PACER in a different language. The large sample size of this study and the balanced gender distribution of the target child were the strengths of our study. With the confirmation of the validity and reliability of the Turkish version of the PACER, researchers will have access to parental socialization and assistance measurement. Knowing the role of parents in the children's emotion regulation processes and how it plays a role in the child's socio-emotional development and well-being will improve our theoretical understanding and will also be beneficial for practitioners who take preventive and interventive actions in the understanding of the issue of child and adolescent mental health. Finally, the findings in the Turkish context will contribute to international emotion regulation literature and allow for future cross-cultural research.

Acknowledgements The authors would like to thank Dr. Dylan Gee for their cooperation from the beginning and their contribution through the adaptation.

Authorship contribution statement All authors contributed significantly to this study and to the preparation of this manuscript. Study concept and design: All authors. Acquisition, analysis, or interpretation of data: The first and second authors. Drafting the manuscript: All authors. Critical revision of the manuscript for important intellectual content: All authors. Statistical analysis: The second author.

Funding This study was not funded by any agency.

Conflict of interest On behalf of all authors, the corresponding author state that there is no conflict of interest.

Data Availability The datasets generated and/or analyzed during the current study and the Turkish version of the PACER are available from the OSF link (<https://osf.io/sez85/>).

Declarations We declare that this manuscript is original, has not been published before. And it is not currently being considered for another publication. The study obtained ethics approval form Ege University (Protocol Number: 938; approved at 28.04.2021). All authors approved the final version of the manuscript and agree with its submission to the journal.

Disclosure statement Authors report there are no competing interests to declare.

Conflict of interest On behalf of all authors, the corresponding author state that there is no conflict of interest.

Ethics approval The Ege University Scientific Research and Publication Ethics Committee granted the relevant approval for this study (Protocol Number: 938; approved at 28.04.2021). All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committees and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent Informed consent was obtained from all individual participants.

References

- Atkinson, N. H., Jean, A. D., & Stack, D. M. (2021). Emotion regulation from infancy to toddlerhood: Individual and group trajectories of full-term and very-low-birthweight preterm infants. *Infancy, 26*(4), 570–595.
- Bariola, E., Gullone, E., & Hughes, E. K. (2011). Child and adolescent emotion regulation: The role of parental emotion regulation and expression. *Clinical Child and Family Psychology Review, 14*(2), 198–212.
- Bjureberg, J., Ljótsson, B., Tull, M. T., Hedman, E., Sahlin, H., Lundh, L. G., Bjärehed, J., DiLillo, D., Messman-Moore, T., Gumpert, C. H., & Gratz, K. L. (2016). Development and validation of a brief version of the difficulties in emotion regulation scale: the DERS-16. *Journal of Psychopathology and Behavioral Assessment, 38*(2), 284–296.
- Breaux, R. P., Harvey, E. A., & Lugo-Candelas, C. I. (2016). The role of parent psychopathology in emotion socialization. *Journal of abnormal child psychology, 44*(4), 731–743.
- Brenning, K., Soenens, B., Vansteenkiste, M., De Clercq, B., & Antrop, I. (2022). Emotion regulation as a transdiagnostic risk factor for (non) clinical adolescents' internalizing and externalizing psychopathology: Investigating the intervening role of psychological need experiences. *Child Psychiatry & Human Development, 53*(1), 124–136.
- Bronson, M. B. (2000). *Self-Regulation in Early Childhood: Nature and Nurture*. New York: Guilford.
- Byrne, B. M. (2013). *Structural equation modeling with Mplus: Basic concepts, applications, and programming*. Routledge.
- Calkins, S. D., & Hill, A. (2007). Caregiver influences on emerging emotion regulation. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 229–248). The Guilford Press.
- Castro, V. L., Cooke, A. N., Halberstadt, A. G., & Garrett-Peters, P. (2018). Bidirectional linkages between emotion recognition and problem behaviors in elementary school children. *Journal of Nonverbal Behavior, 42*(2), 155–178.
- Castro, V. L., Halberstadt, A. G., Lozada, F. T., & Craig, A. B. (2015). Parents' emotion-related beliefs, behaviours, and skills predict children's recognition of emotion. *Infant and Child Development, 24*(1), 1–22.
- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling, 9*(2), 233–255.
- Cohodes, E. M., Preece, D. A., McCauley, S., Rogers, M. K., Gross, J. J., & Gee, D. G. (2021). Development and Validation of the Parental Assistance with Child Emotion Regulation (PACER) Questionnaire. *Research on Child and Adolescent Psychopathology, 50*, 1–16.
- Cole, P. M., Martin, S. E., & Dennis, T. A. (2004). Emotion regulation as a scientific construct: Methodological challenges and directions for child development research. *Child Development, 75*(2), 317–333.
- Compas, B. E., Jaser, S. S., Bettis, A. H., Watson, K. H., Gruhn, M. A., Dunbar, J. P., & Thigpen, J. C. (2017). Coping, emotion regulation, and psychopathology in childhood and adolescence: A meta-analysis and narrative review. *Psychological Bulletin, 143*(9), 939–991. <https://doi.org/10.1037/bul0000110>
- Çorapçı, F., & Yağmurlu, B. (2008). Psychometric evaluation of the Coping with Children's Negative Emotions scale. In *15th National Psychology Congress. Istanbul, Turkey*
- Çorapçı, F., Aksan, N., & Yağmurlu, B. (2012). Socialization of Turkish children's emotions: Do different emotions elicit different responses? *Global Studies of Childhood, 2*(2), 106–116.
- Çorapçı, F. (2012). Ailede duygu sosyalleştirme süreci ve çocuğun sosyoduygusal gelişimi. *Ana babalık: kuram ve araştırma, 271–294*.
- De France, K., & Hollenstein, T. (2019). Emotion regulation and relations to well-being across the lifespan. *Developmental Psychology, 55*(8), 1768–1774.
- Dede, B., Delk, L., & White, B. A. (2021). Relationships between facial emotion recognition, internalizing symptoms, and social problems in young children. *Personality and Individual Differences, 171*, 110448. <https://doi.org/10.1016/j.paid.2020.110448>
- Denham, S. A., & Grout, L. (1993). Socialization of emotion: Pathway to preschoolers' emotional and social competence. *Journal of Nonverbal Behavior, 17*(3), 205–227. <https://doi.org/10.1007/BF00986120>
- Denham, S. A., & Kochanoff, A. (2002). “Why is she crying?”: Children's understanding of emotion from preschool to preadolescence. In L. F. Barrett, & P. Salovey (Eds.), *The wisdom in feeling: Psychological processes in emotional intelligence* (pp. 239–270). The Guilford Press.
- Denham, S. A., Blair, K. A., DeMulder, E., Levitas, J., Sawyer, K., Auerbach-Major, S., & Queenan, P. (2003). Preschool emotional competence: Pathway to social competence? *Child Development, 74*(1), 238–256.
- Eisenberg, N., Cumberland, A., & Spinrad, T. L. (1998). Parental socialization of emotion. *Psychological Inquiry, 9*, 241–273. https://doi.org/10.1207/s15327965pli0904_1
- Eisenberg, N., Valiente, C., Morris, A. S., Fabes, R. A., Cumberland, A., Reiser, M., Gershoff, E. T., Shepard, S. A., & Losoya, S. (2003). Longitudinal relations among parental emotional expressivity, children's regulation, and quality of socioemotional functioning. *Developmental Psychology, 39*(1), 3–19. <https://doi.org/10.1037/0012-1649.39.1.3>
- Fabes, R. A., Eisenberg, N., & Bernzweig, J. (1990). *Coping with negative emotions scale (CCNES): Description and scoring*. Tempe, AZ: Arizona State University.
- Fabes, R. A., Poulin, R. E., Eisenberg, N., & Madden-Derdich, D. A. (2002). The Coping with Children's Negative Emotions Scale (CCNES): Psychometric properties and relations with children's emotional competence. *Marriage & Family Review, 34*(3–4), 285–310. https://doi.org/10.1300/J002v34n03_05
- Friedlmeier, W., Corapci, F., & Cole, P. M. (2011). Emotion socialization in cross-cultural perspective. *Social and Personality Psychology Compass, 5*(7), 410–427.
- Goodman, R. (1997). The Strengths and Difficulties Questionnaire: a research note. *Journal of Child Psychology and Psychiatry, 38*(5), 581–586.
- Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment, 26*(1), 41–54.
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology, 2*(3), 271–299.
- Gross, J. J. (2001). Emotion regulation in adulthood: Timing is everything. *Current Directions in Psychological Science, 10*(6), 214–219.

- Gross, J. J. (2014). Emotion regulation: Conceptual and empirical foundations. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 3–20). The Guilford Press.
- Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry*, 26(1), 1–26.
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85(2), 348–362.
- Güvenir, T., Özbek, A., Baykara, B., Arkar, H., Şentürk, B., & İncekaş, S. (2008). Güçler ve güçlükler anketi'nin (gga) Türkçe uyarlamasının psikometrik özellikleri. *Turkish Journal of Child and Adolescent Mental Health*, 15(2), 65–74.
- Hajal, N. J., & Paley, B. (2020). Parental emotion and emotion regulation: A critical target of study for research and intervention to promote child emotion socialization. *Developmental Psychology*, 56(3), 403–417. <https://doi.org/10.1037/dev0000864>
- Hakim-Larson, J., Parker, A., Lee, C., Goodwin, J., & Voelker, S. (2006). Measuring parental meta-emotion: Psychometric properties of the emotion-related parenting styles self-test. *Early Education and Development*, 17(2), 229–251.
- Halberstadt, A. G., Dunsmore, J. C., Bryant Jr, A., Parker, A. E., Beale, K. S., & Thompson, J. A. (2013). Development and validation of the parents' beliefs about children's emotions questionnaire. *Psychological Assessment*, 25(4), 1195–1210. <https://doi.org/10.1037/a0033695>
- Henry, J. D., & Crawford, J. R. (2005). The short-form version of the Depression Anxiety Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *British Journal of Clinical Psychology*, 44(2), 227–239.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55.
- İnce, S., & Ersay, E. (2022). Okul öncesi dönem çocuğuna sahip anne ve babaların duyu sosyalleştirme davranışlarının incelenmesi Investigation of emotional socialization behaviors of parents with preschool children. *Gelişim ve Psikoloji Dergisi*, 3(5), 1–17.
- Işık Uslu, A. E., & Turan, F. (2017). Parents' Beliefs about Children's Emotions Questionnaire (PBACE): Adaptation to Turkish, Validity and Reliability Study. I. Koleva & G. Duman (Eds.) In *Educational Research and Practice*. St. Kliment Ohridski University Press.
- Jaffee, S. R. (2017). Child maltreatment and risk for psychopathology in childhood and adulthood. *Annual Review of Clinical Psychology*, 13(1), 525–551.
- Kağıtçıbaşı, C. (1999). The model of family change: A rejoinder. *International Journal of Psychology*, 34(1), 15–17.
- Kağıtçıbaşı, C. (2002). A model of family change in cultural context. *Online Readings in Psychology and Culture*, 6(3), 2307–0919.
- Kapçı, E. G., Uslu, R., Akgün, E., & Acer, D. (2009). İlköğretim çağı çocuklarında duyu ayarlama: Bir ölçek uyarlama çalışması ve duyu ayarlamaya ilişkili etmenlerin belirlenmesi. *Çocuk ve Gençlik Ruh Sağlığı Dergisi*, 16(1), 13–20.
- Kitayama, S., Mesquita, B., & Karasawa, M. (2006). Cultural affordances and emotional experience: socially engaging and disengaging emotions in Japan and the United States. *Journal of Personality and Social Psychology*, 91(5), 890.
- Kraiss, J. T., Peter, M., Moskowitz, J. T., & Bohlmeijer, E. T. (2020). The relationship between emotion regulation and well-being in patients with mental disorders: A meta-analysis. *Comprehensive Psychiatry*, 102, 152189.
- Mancini, V. O., Heritage, B. J., Preece, D., Cohodes, E. M., Gross, J. J., Gee, D. G., & Finlay-Jones, A. (2022). How Caregivers Support Children's Emotion Regulation: Construct Validation of the Parental Assistance With Child Emotion Regulation (PACER) Questionnaire. *Assessment*, 1–12. <https://doi.org/10.1177/10731911221082708>
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98(2), 224–253. <https://doi.org/10.1037/0033-295X.98.2.224>
- Meyer, S., Raikes, H. A., Virmani, E. A., Waters, S., & Thompson, R. A. (2014). Parent emotion representations and the socialization of emotion regulation in the family. *International Journal of Behavioral Development*, 38(2), 164–173.
- Morris, A. S., Houlterberg, B. J., Criss, M. M., & Bosler, C. D. (2017). Family context and psychopathology: The mediating role of children's emotion regulation. In L. C. Centifanti, & D. M. Williams (Eds.), *The Wiley handbook of developmental psychopathology* (pp. 365–389). Wiley Blackwell. <https://doi.org/10.1002/9781118554470.ch18>
- Morris, A. S., Silk, J. S., Steinberg, L., Myers, S. S., & Robinson, L. R. (2007). The role of the family context in the development of emotion regulation. *Social Development*, 16(2), 361–388.
- Nolen-Hoeksema, S. (2012). Emotion regulation and psychopathology: The role of gender. *Annual Review of Clinical Psychology*, 8(1), 161–187.
- O'Neal, C. R., & Magai, C. (2005). Do parents respond in different ways when children feel different emotions? The emotional context of parenting. *Development and Psychopathology*, 17(2), 467–487.
- Rothenberg, W. A., Weinstein, A., Dandes, E. A., & Jent, J. F. (2019). Improving child emotion regulation: Effects of parent-child interaction-therapy and emotion socialization strategies. *Journal of Child and Family Studies*, 28(3), 720–731.
- Saarni, C. (1984). An observational study of children's attempts to monitor their expressive behavior. *Child Development*, 44(4), 1504–1513.
- Sarıçam, H. (2018). The psychometric properties of Turkish version of Depression Anxiety Stress Scale-21 (DASS-21) in health control and clinical samples. *Bilişsel Davranışçı Psikoterapi ve Araştırmalar Dergisi*, 7(1), 19–30.
- Scheibe, S., Sheppes, G., & Staudinger, U. M. (2015). Distract or reappraise? Age-related differences in emotion-regulation choice. *Emotion*, 15(6), 677–681. <https://doi.org/10.1037/a0039246>
- Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A., & King, J. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review. *The Journal of Educational Research*, 99(6), 323–338.
- Shields, A., & Cicchetti, D. (1998). Reactive aggression among maltreated children: The contributions of attention and emotion dysregulation. *Journal of Clinical Child Psychology*, 27(4), 381–395.
- Thompson, R. A. (1994). Emotion regulation: A theme in search of definition. *Monographs of The Society for Research in Child Development*, 25–52.
- Trommsdorff, G., & Cole, P. M. (2011). Emotion, self-regulation, and social behavior in cultural contexts. In X. Chen, & K. H. Rubin (Eds.), *Socioemotional development in cultural context* (pp. 131–163). The Guilford Press.
- Wong, M. S., McElwain, N. L., & Halberstadt, A. G. (2009). Parent, family, and child characteristics: associations with mother-and father-reported emotion socialization practices. *Journal of Family Psychology*, 23(4), 452.

- Zeman, J., Cassano, M., Perry-Parrish, C., & Stegall, S. (2006). Emotion regulation in children and adolescents. *Journal of Developmental & Behavioral Pediatrics, 27*(2), 155–168.
- Zimmermann, P., & Iwanski, A. (2014). Emotion regulation from early adolescence to emerging adulthood and middle adulthood: Age differences, gender differences, and emotion-specific developmental variations. *International Journal of Behavioral Development, 38*(2), 182–194.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Springer Nature or its licensor holds exclusive rights to this article under a publishing agreement with the author(s) or other rightsholder(s); author self-archiving of the accepted manuscript version of this article is solely governed by the terms of such publishing agreement and applicable law.