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Association Between Emotional Competence and Adjustment to Preschool: The Mediating Role of Self-Regulation

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Adjustment to preschool in early childhood refers to children's successful adaptation to the preschool environment. Attitudes towards school, and therefore school achievement in the subsequent years, are directly related to the child's adjustment to preschool. Children's emotional competence and self-regulation are two important child-level factors affecting children's adjustment to preschool. This descriptive study aimed to explore whether self-regulation acts as a mediator between emotional competence and the preschool adjustment of children. The mediation model was evaluated using linear and hierarchical regression analyses, along with a Sobel test. A total of 628 children (294 female; 334 male) from Istanbul participated in the study. Teachers (n= 53) who had known the children for at least two months before the study provided data. The study's results indicated that emotional competence and self-regulation are significant predictors of school adjustment. Notably, self-regulation partially mediates the association between emotional competence and preschool adjustment. Consequently, there exists an indirect link between emotional competence and preschool adjustment. The study highlighted the crucial role of self-regulation in mediating the relationship between emotional competence and school adjustment in preschool children. Findings suggested that strong emotional and self-regulation skills facilitate adaptation to preschool, whereas deficiencies in these areas lead to adjustment difficulties.

Introduction

Since preschool is the first step in preparing children for school life (LoCasale-Crouch, Moritz-Rudasill, Sweeney, Chattrabuti, Patton & Pianta, 2012), adjusting to preschool is crucial as it lays the groundwork for children's future educational success. In Türkiye, preschool education focuses on developing emotional and social skills to help children adapt to school settings (Bağçeli Kahraman, 2020). Emotional competence and self-regulation play a significant role in managing social interactions and adapting to structured environments. This study examines whether self-regulation mediates the relationship between emotional

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competence and preschool adjustment in Turkish children, aiming to inform strategies that foster emotional development and effective preschool adjustment.

Adjustment to preschool

Adjustment to preschool encompasses the degree to which children effectively integrate and become accustomed to the preschool environment. Each child's adjustment to school is an individual process that can take various forms. Adjustment should be viewed as a child-specific characteristic comparable to fingerprints that can be different for each child. For some children, it is simple and quick, while it may take considerable time for others. A child with severe adjustment problems in the first days may suddenly get used to school. In some cases, a child can experience no trouble adjusting to preschool after the first few days; however, outside factors can make it challenging to continue adjusting.

The primary indicators of a child's successful adjustment are the child's enjoyment of preschool (friends, teacher), desire to attend preschool regularly, and development in all areas of growth, particularly academic skills (Ramey & Ramey, 1994). Adjustment to preschool has both immediate and lasting effects. In the short term, the children's successful adjustment influences academic, social-emotional, and behavioral competencies (Yeo & Clarke, 2006). In the following years, adjustment impacts school achievement, peer acceptance, and cooperative behavior (Chen, Chen, Li & Wang, 2009). The three-year longitudinal study conducted by McDermott et al. (2016) with more than 2,000 children revealed that adjustment to preschool predicts short- and long-term social and behavioral adjustment. However, emotional competence is associated with school adjustment independently.

Adjustment to preschool and emotional competence

Several researchers (e.g., Bang, 2017; Ladd & Burgess, 2001; Scott-Little, Kagan & Frelow, 2006) emphasize that emotional competence can shape school adjustment. Understanding one's own and other people's emotions, identifying emotions, and appropriately expressing these emotions are all examples of emotional competence (Saarni, 1990). Children's ability to recognize and understand their feelings and the feelings of others and regulate their emotional expressions are prerequisites for dealing with the social and academic demands of the preschool context (Curby, Brown, Bassett & Denham, 2015), thus helping children adjust to preschool (Corcoran, Cheung, Kim & Xie, C, 2018). Emotionally competent children know their own, teachers, and peers' feelings. They express themselves in socially acceptable ways to develop positive, warm, and sincere relationships with their peers and teachers. Their ability to recognize and express emotions gives them an advantage in learning in the preschool environment.

Adjustment to preschool and self-regulation

Another child-related variable that affects children's adjustment to preschool is self-regulation (Neuenschwander, Röthlisberger, Cimeli & Roebbers, 2012). In the broadest sense, self-regulation is a skill required to achieve a goal. It enables monitoring and controlling behaviors, cognition, emotions, and attention to meet social expectations (Blair, 2002; Claussen, Robinson, Kaminski, Charania, Holbrook, So, ... & Boyle, 2021; Moilanen, 2007; Moilanen, 2007; Trommsdorff, 2009). Through self-regulation, children regulate their behaviors in academic and social situations in the school environment (Shonkoff & Phillips, 2000). These children follow instructions, obey rules, pay attention, avoid oppressive behaviors

(McClelland, Cameron, Connor, Farris, Jewkes & Morrison, 2007), resist temptation, control impulses, stand firm in the face of peer pressure, delay gratification (Li, 2021). Self-regulation and academic achievement have a positive relationship at all educational levels (Weis, Heikamp & Trommsdorff, 2013). In preschool, self-regulation is negatively related to internalizing difficulties, peer victimization, and externalizing problems and is positively related to social competence, school engagement, and academic performance (Robson, Allen & Howard, 2020). The association between self-regulation and school adjustment was shown in several studies (Bailey, Duncan, Odgers & Yu, 2017; Sher-Censor, Khafi & Yates, 2016; Şepitçi Sarıbaş & Gültekin Akduman, 2019; Williams, Nicholson, Walker & Berthelsen, 2016).

The interplay between adjustment to preschool, emotional competence, and self-regulation

As highlighted above, both self-regulation and emotional competence are essential for children's successful adaptation to preschool settings, deeply influencing their social, emotional, and academic growth. These interrelated skills enable children to better manage their behavior, emotions, and interactions, forming a strong basis for positive relationships with peers and teachers. Additionally, there is a strong link between self-regulation and emotional competence (Frick & Morris, 2004; National Scientific Council on the Developing Child, 2007). Children with strong emotional competence tend to exhibit better control over their actions and emotions, utilizing their emotional skills to enhance self-regulation (Murray, Rosanbalm, Christopoulos & Hamoudi, 2015). In the research conducted by Korucu and colleagues (2022), they found that self-regulation plays a significant role in predicting academic skills, such as math and early literacy, as well as the social-emotional skills of young children, ultimately contributing to their success in school. Children with strong self-regulation skills tend to adapt to school more easily and demonstrate greater social and emotional competence compared to their peers with weaker self-regulation abilities (Diamond, 2016; Hutchinson, Perry & Shapka, 2021). This underscores the interconnectedness of school adjustment, emotional competence, and self-regulation. In light of the current research, it is evident that there is a compelling necessity for additional studies that delve into the impact of self-regulation and emotional competence on the establishment of children's adjustment to preschool. What makes this research valuable is its exploration of how self-regulation acts as a mediator for emotional competence and school adjustment variables, particularly in the context of preschool settings in Türkiye. Research in Türkiye has increasingly focused on exploring the connection between self-regulation and preschool adjustment, providing critical insights into an essential area of child development. Studies by researchers such as Aksoy (2018), Gülay Ogelman, Saraç, Önder, Abanoz and Akay (2021), Öngören (2021), and Yalçın and Erbil Kaya (2020) have highlighted the role of self-regulation in shaping children's capacity to adapt to preschool settings. These investigations underscore that self-regulation skills are pivotal in influencing children's social, emotional, and academic adaptation as they transition into structured educational environments. However, while this emerging body of work provides valuable perspectives, it also reveals the need for more nuanced exploration, particularly concerning the broader developmental impacts and potential mediating mechanisms through which self-regulation shapes preschool adjustment.

Specific studies illustrate the diverse roles self-regulation plays. For instance, Sezgin, Bilge, Celik and Sevuk, (2023) found that, in children aged 5-6, emotional variability/negativity and emotion regulation partially mediated the relationship between behavioral regulation and socio-emotional adjustment, as well as between social competence and socio-emotional adjustment.



Similarly, Ezmeci, Parpucu, and Akman (2022) demonstrated that self-regulation skills partially mediate the link between social skills and problematic behaviors in preschoolers. Aydoğdu (2022) further identified that self-regulation fully mediates the relationship between peer interactions and preschool adaptation. Collectively, these findings emphasize the multifaceted role of self-regulation in driving various aspects of development during the preschool years.

Despite an increase in studies examining the relationship between self-regulation and school adjustment among preschool-aged children, comprehensive research that concurrently investigates the mediating role of self-regulation on both emotional competence and school adjustment remains limited. Many studies focus on individual relationships and predictive roles, but significant gaps persist in understanding the mediating mechanisms of self-regulation within these complex dynamics. Therefore, emphasizing self-regulation’s mediating role is crucial to illuminating the intricate processes that shape children’s developmental trajectories and adjustment during their preschool years. This manuscript aims to bridge this gap by providing a more integrated analysis of these interconnected variables.

Within the scope of this study, the mediating role of self-regulation on the relationship between emotional competence and school adjustment in young children was investigated. Considering the associations among emotional competence, self-regulation, and school adjustment, it was hypothesized that emotional competence would predict school adjustment. However, this predictive effect would be mediated by self-regulation. To test the hypothesized mediation effect of self-regulation on the relationship between emotional competence and school adjustment of preschoolers, Baron and Kenny’s (1986) four-step procedure for assessing mediation and Sobel’s (1982) test of significance were used. In line with Baron and Kenny (1986), it was hypothesized that,

- (1) Emotional competence (independent variable) would significantly predict school adjustment (dependent variable)
- (2) Emotional competence (independent variable) would significantly predict self-regulation (mediator)
- (3) Self-regulation (mediator) would significantly predict school adjustment (dependent variable)

The predictive effect of emotional competence (independent variable) would diminish or disappear after controlling for self-regulation (mediator). Full mediation would occur if emotional competence no longer influenced school adjustment when controlling self-regulation. Partial mediation would arise if the influence of emotional competence were reduced. Figure 1 shows the summary of the model

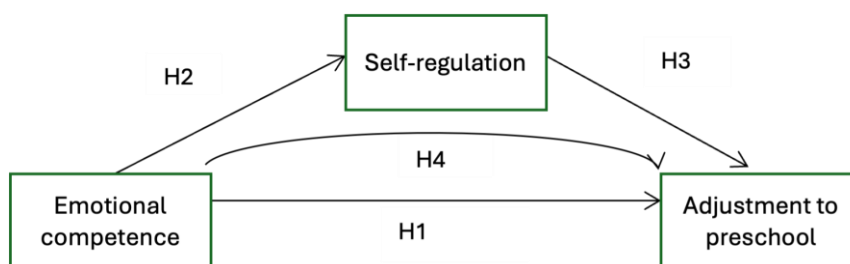


Figure 1: Summary of the research model

Method

This study is explanatory. Explanatory designs are used to reveal associations between two or more variables. In this design, data is collected at one point in time from a single group (Edmonds & Kennedy, 2016). This study aims to reveal the associations between children's emotional competence, self-regulation, and school adjustment. The proposed mediation model was tested using a series of linear regression analyses, hierarchical regression analysis, and a Sobel test of mediation.

Research Sample

The convenience sampling method was used for the selection of the sample. In convenience sampling, researchers collect data through people they are in contact with (Lewin, 2005). In this study, data were collected through preschool teachers (n=53). All the teachers hold a BA in preschool education. Teachers filled out the demographic information form, Social-Emotional Assets and Resiliency Scale for Preschool, and Teacher Rating Scale of School Adjustment for the children with no developmental disorder diagnosis. All teachers had known the children for at least two months before the study. The participants of this study consist of 628 children (294 female; 334 male) aged 60-71 months (M=65.47; SD=3.28) attending preschools in Istanbul. Table 1 shows the demographic information of the participating children.

Table 1. Demographic information for the participating children

		f	%
Gender	Female	294	46,8
	Male	334	53,2
Mother's level of education	High school	60	9,6
	University	568	90,4
Father's level of education	High school	47	7,5
	University	581	92,5
Siblings	Yes	359	43,6
	No	277	56,4
Mother work status	Not working	160	25,6
	Working	168	74,4
Father work status	Working	628	100,0

As Table 1 shows, the children are primarily from highly educated families. Most mothers (%90.5) and fathers (%92.5) held BA degrees.

Data Collection Tools

Social-Emotional Assets and Resiliency Scale for Preschool

Two subscales of the Social-Emotional Assets and Resiliency Scale for Preschool Scale were used to assess children's emotional competence and self-regulation skills. The scale was developed by Ravitch (2013), adapted into Turkish, and standardized for 5-year-olds by Gülay Ogelman et al. (2021). The scale is filled out for each child by the teachers. Teachers rate children on a 4-point Likert (0=Never, 1=Sometimes, 2=Often, 3=Always). In the Turkish form, there are 22 items under four dimensions: Emotion Knowledge/Emotion Expression, Empathy, Self-regulation, and Social Competence subscales.



In this study Emotion Knowledge/Emotion Expression subscale was used to assess children's emotional competence. The subscale consists of six items with a very good internal consistency ($\alpha=.92$). Sample items include "identifies reasons for own feelings (e.g., I'm sad because I lost my toy)" and "describes basic emotions (e.g., happy, sad, surprised, mad) of others (e.g., 'you are happy when teacher smiles)". For the original study, this subscale's internal consistency coefficient was .92. For this study, the internal consistency coefficient for this subscale was .91. For assessing children's self-regulation skills, the Self-Regulation subscale was used. Sample items include "takes responsibility for own actions/behavior when prompted" and "takes turns". The subscale consists of six items with a very good internal consistency ($\alpha=.85$). For this study, the internal consistency coefficient was .83.

Teacher Rating Scale of School Adjustment

The scale was developed by Ladd, Kochenfender, and Coleman (1996) (1996) and adapted into Turkish by Önder and Gülay (2010). Each item is rated on a 3-point Likert as "does not apply," "applies sometimes," and "certainly applies" (Birch & Ladd, 1997). In the Turkish form, there are 27 items under four dimensions, namely, School Liking (5 items), Cooperative Participation (8 items), School Avoidance (5 items), and Self-directiveness (9 items). A total score can be obtained from the scale. The internal consistency for the full scale was acceptable in the original study ($\alpha=.67$). The internal consistency coefficient was .68 for this study.

Data Analysis

All analyses were performed using the SPSS 23.0 statistical package. Data were analyzed via five simple linear regression analyses. Simple linear regression is used to define the relationship between two correlated variables (Büyüköztürk, 2014). Before performing regression analysis, the dataset was also screened for regression analysis assumptions. Kurtosis and skewness values varied between -1 and +1 for all variables. This implies a normal distribution for all variables. Table 2 shows the skewness and kurtosis values for the study variables.

Table 2. Skewness and Kurtosis Values for Study Variables

	Skewness	Kurtosis
School Adjustment	-.99	.53
Self-Regulation	-.41	-.58
Emotional Competence	-.46	-.83

Scatterplots were produced and examined for independent variables. From the scatterplots, the relationship between self-regulation and school adjustment and the relationship between emotional competence and school adjustment could be modeled by a straight line. These results suggested linear relationships between the independent and dependent variables. VIF and tolerance statistics were used to test for multicollinearity. The VIF score was calculated as 1.78, and the tolerance score was .56. To claim no multicollinearity, the VIF score should be below 10 (Hair, Anderson, Tatham, & Black, 1995). The tolerance score should be above .20 (Menard, 1995). These results suggested no multicollinearity. To further investigate multicollinearity, the correlation coefficients among variables were also investigated. Table 3 shows the correlation coefficients among variables.

Table 3. Correlations Among Study Variables

	School Adjustment	Self-Regulation	Emotional Competence
School Adjustment	-	.42*	.33*
Self-Regulation	-	-	.66*

*p < .01

As seen from Table 3, all the correlations are below .80. These results also showed that the study variables are not too highly correlated, suggesting no multicollinearity in the data.

The Durbin-Watson statistic was used to test the independence of residuals. Numerous statistical tests, including Durbin-Watson and Breusch-Godfrey, are employed to examine the independence of residuals. While Durbin-Watson is typically favored for small sample sizes and Breusch-Godfrey for larger ones, it's worth noting that as sample sizes become very large (e.g. when n exceeds 100), the effectiveness of all these tests tends to improve (as observed in Islam & Toor, 2019). Since the study did not include lagged data, the Durbin-Watson statistic was chosen over the Breusch-Godfrey statistics, which is better suited for dynamic models involving lagged data (Rois, Basak, Rahman & Majumder, 2012). The result showed that the Durbin-Watson value is lower than 2 (d=1.572), denoting that the dataset met the assumption of independent errors. The standardized estimated values and standardized residue graphics for datasets were examined visually, and no apparent signs of funneling were detected. This result suggested that the assumption of homoscedasticity has been met. The P-P plot for the regression model was examined to see whether the values of the residuals are normally distributed. No sign of violation was detected. Additionally, Cook's Distance values for all participants were investigated. All values were below 1, suggesting no influential cases are biasing the model. Considering all these values together, it can be said that the dataset is suitable for regression analysis. The level of significance accepted in this study is .01.

Results

This study aimed to reveal whether self-regulation mediates the relationship between emotional competence and school adjustment. Table 4 shows descriptive statistics for study variables.

Table 4. Descriptive Statistics for Study Variables

Variables	Min.	Max.	M	SD
Emotional skills	10.00	24.00	20.34	3.37
Self-regulation	9.00	24.00	19.95	3.27
School adjustment	29.00	49.00	41.98	3.53

N=628

To test the hypothesis, a series of linear regression analyses were conducted. First, Pearson correlation coefficients were computed to assess the linear relationships among study variables. School adjustment was correlated significantly to emotional competence, $r(628) = .33, p < .01$, and to self-regulation, $r(628) = .42, p < .01$. Additionally, there was a significant positive correlation between emotional competence and self-regulation, $r(628) = .66, p < .01$.



A simple linear regression was computed to predict school adjustment based on emotional competence. Table 5 shows the summary of the results.

Table 5. Simple Linear Regression Analysis for Emotional Competence Predicting School Adjustment

Variables	R ²	B	Std. E	β	t	F
Constant		34.90	.81		42.99*	78.33*
Emotion Competence	.11	.35	.04	.33	8.85*	

The results indicated that emotional competence significantly predicted school adjustment [$F(1, 626) = 78,33, p < .01$].

A simple linear regression was computed to predict self-regulation based on emotional competence. Table 6 shows the summary of the results.

Table 6. Simple Linear Regression Analysis for Emotional Competence Predicting Self-Regulation

Variables	R ²	B	Std. E	β	t	F
Constant		6.92	.60		11.57*	488.30*
Emotion Competence	.44	.64	.03	.66	22.10*	

The results indicated that emotional competence significantly predicted self-regulation [$F(1, 626) = 488,30, p < .01$].

A simple linear regression was computed to predict school adjustment based on self-regulation. Table 7 shows the summary of the results. The results indicated that self-regulation significantly predicted school adjustment [$F(1, 626) = 78,33, p < .01$].

Table 7. Simple Linear Regression Analysis for Self-Regulation Predicting School Adjustment

Variables	R ²	B	Std. E	β	t	F
Constant		33.01	.79		41.64*	131.58*
Self-regulation	.17	.45	.04	.42	11.47*	

A two-stage hierarchical regression with school adjustment as the dependent variable was computed to test whether self-regulation mediates the relation between emotional competence and school adjustment. Emotional competence was entered in the first stage, and self-regulation was entered in the second stage. Table 8 shows the results of the hierarchical regression analysis.

Table 8. Hierarchical Regression Analysis for the Prediction of School Adjustment

Variables	R ²	B	Std. E	β	t	F
Stage 1						
Constant		34.90	.812		42.99*	78.33*
Emotion Competence	.11	.35	.039	.33	8.85*	
Stage 2						
Constant		32.29	.86		37.55*	68.41*
Emotion competence	.18	.11	.05	.10	2.12*	
Self-regulation		.38	.05	.35	7.22*	

*p < .01

The results revealed that at stage one, emotional competence contributed significantly to the regression model, $F(1,626) = 78.33, p < .01$. and accounted for 11% of the variation in school adjustment. When self-regulation was included in the second stage, the results revealed that emotional competence and self-regulation contributed significantly to the regression model, $F(2, 625) = 68.411, p < .01$, and accounted for 18% of the variation in school adjustment. However, when self-regulation was entered, the predictive effect of emotional competence on school adjustment decreased ($B = 0.11, p < 0.01$). This result indicated that self-regulation partially mediated the relationship between emotional competence and school adjustment. The Sobel test (Sobel, 1982) was used to assess the mediation model's validity. The Sobel test was chosen over the Bootstrap method due to the data's normal distribution and large sample size. While the Sobel test assumes normality, the Bootstrap method is better for non-normal or smaller samples (Koopman, Howe & Hollenbeck, 2014; Özdil & Kutlu, 2019). The Sobel test confirmed significant mediation ($Z = 2.005, p < 0.05$).

Discussion and Conclusions

This study investigated relationships among preschool children's self-regulation, emotional competence, and school adjustment. Emotional competence positively and significantly correlated with self-regulation and school adjustment. This result indicates that emotional competence is a variable that facilitates the adaptation of young children to preschool. Children who can express their feelings and care about the feelings of others can quickly adapt to the rules and processes at preschool. Similarly, children with problems defining and expressing their feelings and empathy may need help showing interest in preschool, liking it, and wanting to come to preschool. In addition, the mutual relationship between emotional competence and self-regulation skills is vital in emphasizing the interaction among developmental areas. In line with the results, emotional competence can create opportunities for learning and displaying self-regulation skills.

Additionally, self-regulation correlated positively and significantly with school adjustment. Competent self-regulators may have the skills necessary to obey rules and instructions more than their peers who have problems with self-regulation. Thus, they will be able to recognize and adapt to the preschool, teacher, peers, and classroom in a short period of time. Furthermore, the mediating role of self-regulation in the relationship between emotional competence and school adjustment of preschool children was confirmed. According to this result, emotional competence facilitates adjustment to preschool by supporting self-regulation skills. Problems in emotional competence lead to self-regulation problems and thus negatively affect school adjustment. The study's findings revealed that emotional and cognitive development areas may have combined and separate effects on school adjustment.

Emotional competence is closely associated with school adjustment (Mella et al., 2021). Several researchers stated that emotional competence positively affects school adjustment by reducing anxiety, active participation in the education process, positive behaviors towards oneself, peers, and teachers, and increasing the quality of relationships (McClelland et al., 2007; Taylor, Oberle, Durlak & Weissberg, 2017). Additionally, emotionally incompetent expressions such as shyness in preschool children negatively correlate with emotional adaptation and school adjustment (Zhu, Fu, Li, Wu & Yang, 2021). Ladd and Troop Gordon's (2003) four-year longitudinal study showed that preschool anxiety and peer relations problems affect school adjustment in later years. In sum, results from several studies revealed the adverse effects of problems in emotional competence in the preschool period. They underlined the importance of supporting children experiencing difficulties in this domain. Young children need emotional skills for a short and long-term successful academic life. As Yoleri (2020) states, preschool teachers should consider all factors that impact school adjustment to support the adjustment process at school and home.

In the current study, self-regulation independently predicted school adjustment. Self-regulation enables children to learn and follow the classroom rules, pay attention to activities and instructions, and fulfil them. Thus, self-regulation is particularly relevant to school adjustment because it encompasses tasks that enable children to adapt to the classroom and seize learning opportunities (Von Suchodoletz, Trommsdorff, Heikamp, Wieber & Gollwitzer, 2013). Children's self-regulatory skills significantly reduce the conflicts they may experience with their teachers and peers (Eisenberg & Fabes, 1992) and directly affect their adjustment to school. Hutchinson et al. (2021) in their study examining the self-regulation skills of young children in the school environment, stated that the weakness or proficiency in self-regulation provides an advantage or disadvantage for children in their relationships with peers and adults. In other words, self-regulation affects the child on the social level as well as the individual level. According to Brajša-Žganec and Hanzec (2015) and Martins, Veríssimo, and Martins (2016), self-regulation problems may be associated with reactivity, impulsivity, and maladaptive behaviors. In this vein, it can be said that self-regulation can bring about controlling emotions and behaviors and thus facilitate the child's adaptation.

The current study also showed that emotional skills relate to self-regulation through school adjustment. The findings of various studies underscore the critical role that self-regulation plays in linking emotional skills to school adjustment. Research conducted by Hernández, Eisenberg, Valiente, VanSchyndel, Spinrad, Silva, Berger, Diaz, Terrell, Thompson, and Southworth (2016) highlights that emotional skills impact self-regulation, which in turn influences children's learning processes and predicts school success. Similarly, Lengua (2002) found that both emotional competence and self-regulation serve as predictors of school adjustment, whereas deficiencies in these areas lead to adjustment problems. In Lengua's study, self-regulation acted as a mediator between risk and protective factors, emphasizing its integral role in the adjustment process. Moreover, Eisenberg, N., Cumberland, A., Spinrad, Fabes, Shepard, Reiser, Murphy, Losoya and Guthrie, (2001) observed positive associations among emotional competence, self-regulation, and school adjustment, while Denham (2006) demonstrated that childhood emotional competence and self-regulation are linked to academic success, social and behavioral challenges, peer rejection, and even long-term dropout risks. These studies collectively illustrate that self-regulation and emotional competence are foundational in shaping children's school experiences and broader developmental outcomes.

When examining studies from Türkiye, further evidence supports the significance of self-

regulation during the preschool period. Aydoğdu (2022) revealed that self-regulation fully mediates the relationship between peer interactions and school adjustment in preschool children. Sezgin et al. (2023) also highlighted that emotional lability/negativity and emotion regulation partially mediate the relationship between behavioral regulation and socio-emotional adjustment. Their findings indicated that the positive effect of behavioral regulation on socio-emotional adjustment is amplified by lower emotional variability and higher levels of emotion regulation. This suggests that fostering effective emotional regulation strategies can significantly enhance behavioral regulation outcomes.

Research into the mediating role of self-regulation further extends to areas such as language skills and early academic competencies. For instance, a study conducted by Gözüm and Uyanık Aktulun (2021) found significant relationships between language skills, self-regulation, and early academic skills, noting that self-regulation partially mediates the influence of receptive and expressive language abilities on academic success. Similarly, Ezmeci et al. (2022) determined that self-regulation acts as a partial mediator between social skills and problematic behaviors during the preschool years. These findings collectively demonstrate that self-regulation operates as a crucial mediating factor across multiple developmental domains during early childhood.

The integration of these insights illustrates the multifaceted and central role that self-regulation plays in early development. Its influence spans emotional, social, behavioral, and academic contexts, serving as a key factor in promoting positive adjustment and mitigating potential challenges. By focusing on the mediating functions of self-regulation within these contexts, it becomes clear that enhancing these skills in preschool children can have broad and lasting impacts on their developmental trajectories. This discussion underscores the necessity for further comprehensive studies that delve into the complex interplay between self-regulation, emotional competence, and school adjustment, to better support children's holistic development and school readiness.

The findings of this study parallel the findings of the above-mentioned studies. Better emotional skills lead to better self-regulation, and with the help of self-regulatory skills, children can easily adjust to preschool. Considering the opposite, children with weak emotional skills have problems in self-regulation, and thus, inadequate self-regulation leads to adjustment problems. These findings highlight once more how crucial self-regulation is to adjustment in preschool. Although still important, it seems that self-regulation skills in preschool adjustment partly overshadow the role of emotional competence.

As Boyd, Barnett, Bodrova, Leong and Gomby (2005) stated, children need social, emotional, cognitive, and motivational skills to adapt to and succeed at school. In line with the research findings, young children need emotional and self-regulation skills for a successful education in the short and long run. The results of this study and similar studies underscore the importance of supporting young children's emotional and self-regulation skills to adjust to preschool and school in the following years.

Recommendations for practitioners

This study, along with numerous related works, demonstrates that fostering self-regulation skills in preschool-aged children can significantly enhance other areas of their development. This finding carries several practical implications. First and foremost, preschool educators should adopt a comprehensive approach to preschool adjustment, focusing on diverse



developmental areas such as self-regulation and emotional competence. As children are introduced to and integrated within the school environment, creating a sense of belonging, fostering emotional acceptance and expression, and providing strategies for managing behaviors and emotions are all critical elements. This multidimensional approach ensures that school adjustment supports the overall development of children.

The findings emphasize the need for strong support systems within preschool settings, although efforts at the school level alone are not sufficient. The research by Adynski, Propper, Beeber, Gilmore, Zou and Santos (2024) highlights the importance of an interdisciplinary and collaborative approach, involving cooperation among teachers, parents, counselors, and guidance professionals to create a comprehensive framework for enhancing children's development and adjustment to school.

Given the role of self-regulation in preschool adjustment, educators must be equipped with effective strategies to foster these skills. Providing pre-service and in-service training will enable teachers to integrate self-regulation practices into their daily routines. From the start of the preschool year, teachers should include classroom-based and family-oriented activities to help children develop self-regulation skills, thereby facilitating smoother preschool adjustment. Educators should adopt a multifaceted approach to support children both individually and in groups, with a particular emphasis on developing skills such as self-regulation and emotional competence. For example, teaching classroom rules can be linked to discussions about how behaviours affect peers and teachers, incorporating emotional processes and awareness. Activities focusing on impulse control and delayed gratification should also be part of the school adjustment curriculum.

Teachers also play a key role in guiding parents to support self-regulation at home. Regular feedback to families about their child's school adjustment and strategies for nurturing skills such as self-regulation and emotional competence within daily family interactions are critical. Encouraging parents to reinforce these skills through everyday interactions can enhance their children's development. Family engagement initiatives led by teachers can further deepen these efforts. Furthermore, investing in the development of children's emotional skills—such as emotion recognition and expression—helps them become proficient self-regulators, ultimately enhancing their ability to adapt to preschool settings.

Recommendations for researchers

Preschool adjustment plays a pivotal role in shaping children's long-term academic success. Difficulties with school adjustment during the preschool years can lead to challenges in learning and development as children progress through their educational journey. This study highlights the crucial role of emotional competence and self-regulation in this process, suggesting that longitudinal studies could provide deeper insights into how self-regulation mediates relationships over time and how this mediation may vary in different contexts.

The findings from this study, alongside existing literature, underscore the diverse mediating effects of self-regulation in the preschool period. Examining these mediating roles from different perspectives could further enrich the field's understanding of the various factors influencing school adjustment and emotional competence. This suggests that studies focusing on mediation effects across different variables are essential for uncovering the complex interactions that shape children's development. Moreover, such investigations could inform

experimental intervention studies aimed at fostering better outcomes through targeted support strategies.

To enhance the reliability and depth of findings, future studies should incorporate multiple data sources, such as observations, peer and child interviews, and parent perspectives, rather than relying solely on teacher reports. This approach would provide a more comprehensive understanding and bolster the credibility of the results. By capturing diverse perspectives, researchers can more accurately identify the intricate relationships among variables and design effective, evidence-based interventions to support children's emotional and self-regulation skills, ultimately promoting successful school adjustment.

Limitations

This study used teacher observations to assess children's preschool adjustment, emotional competence, and self-regulation. Although it is well known that teacher observations provide an accurate picture of children's abilities, the importance of direct measurements from children must be considered. Thus, in further studies, self-regulation, school adjustment, and emotional competence can be assessed using different data sources, such as child observations and direct assessment of children's skills can support the diversity of findings.

Another limitation of the study is that the children come from highly educated families. Many studies have demonstrated that parent education influences children's self-regulation (Piotrowski, Lapierre & Linebarger, 2013; Van Tetering, De Groot & Jolles, 2018). Hence, it is recommended to incorporate children from families with lower levels of education in further studies.

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Data availability: The data that support the findings of this study are available from the corresponding author upon reasonable request.