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Effectiveness of Play-Based Intervention on Emotional Intelligence and Peer Interaction in Children

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A B S T R A C T

Objective: This study aimed to investigate the effectiveness of a structured play-based intervention program in improving emotional intelligence and peer interaction among children.

Methods and Materials: A randomized controlled trial was conducted with 30 children aged 6 to 10 years from primary schools in Turkey. Participants were randomly assigned to an experimental group (n = 15) that received a ten-session play-based intervention or a control group (n = 15) that received no intervention. The intervention was designed to enhance emotional recognition, regulation, empathy, and cooperative behaviors through experiential activities such as storytelling, role-play, and group games. Emotional intelligence was assessed using the Emotional Quotient Inventory: Youth Version (EQ-i:YV), and peer interaction was measured using the Penn Interactive Peer Play Scale (PIPPS). Measurements were conducted at three stages: pretest, posttest, and five-month follow-up. Data were analyzed using repeated measures ANOVA and Bonferroni post-hoc tests in SPSS-27.

Findings: The results showed significant improvements in both emotional intelligence and peer interaction in the experimental group compared to the control group over time. For emotional intelligence, repeated measures ANOVA indicated a significant time by group interaction effect, $F(2, 56) = 29.74$, $p < .001$, $\eta^2 = .51$. A similar significant interaction was observed for peer interaction, $F(2, 56) = 25.47$, $p < .001$, $\eta^2 = .48$. Bonferroni post-hoc tests revealed that improvements from pretest to posttest were significant and sustained at follow-up for both variables ($p < .001$), while the control group showed no significant changes.

Conclusion: The findings suggest that play-based interventions are an effective and sustainable method for enhancing emotional and social competencies in children and can be integrated into educational settings to support psychological development.

Keywords: *play-based intervention; emotional intelligence; peer interaction; children; randomized controlled trial; social-emotional development*

1. Introduction

In increasingly diverse and multicultural contexts, however, children are often exposed to conflicting emotional and social expectations, particularly those from immigrant or bicultural families. Acculturative stress—defined as the psychological impact of adapting to a new culture—has emerged as a significant risk factor affecting children's socioemotional development (Park & Bayne, 2024). Children living in multicultural environments often absorb the stress experienced by their parents or caretakers, especially when those caretakers struggle with cultural adjustment or integration (Ramirez et al., 2023). Studies have shown that parental acculturative stress negatively correlates with parenting self-efficacy and perceived parental support, both of which are protective factors in a child's emotional adjustment (Park & Bayne, 2024). Moreover, emotional tension at home can impair the transmission of emotional literacy, placing children at a disadvantage in peer contexts.

Play-based interventions offer a promising strategy to counteract such challenges. These interventions provide a culturally adaptable, child-centered framework that enhances emotional awareness and fosters social integration. Through imaginative and cooperative play, children can express emotions safely, practice empathy, and learn prosocial behaviors. The naturalistic and experiential nature of play makes it an especially suitable modality for children who may otherwise be overwhelmed by formal instruction or linguistic barriers. Importantly, play also serves as a universal language across cultures, allowing it to bridge diverse emotional experiences and promote intercultural understanding (Ra, 2023). In this regard, emotional education through play can act as a buffer against both individual and familial stress arising from acculturation.

The role of acculturative stress on children's emotional and social outcomes is well-documented. Children of immigrant or multicultural families often internalize the conflicts and pressures experienced by their parents. For instance, exposure to parental stress related to discrimination, economic insecurity, or language barriers has been associated with emotional dysregulation and poor peer relationships in youth (Le & Huyen-Nguyen, 2024). Moreover, acculturative stress may impair parental modeling of emotion regulation, limiting the child's opportunities to learn these skills through observation and interaction (Mathews, 2018). A longitudinal study highlighted that adolescents from families experiencing high acculturative stress reported significantly higher levels of emotional and behavioral difficulties, emphasizing the intergenerational transmission of stress within immigrant households (Lorenzo-Blanco et al., 2016).

Acculturation is not inherently negative; rather, the challenges arise when individuals or families are forced to adopt maladaptive strategies, such as marginalization or forced assimilation. Research indicates that integration—the ability to maintain cultural heritage while engaging with the host culture—is the most adaptive strategy and is linked to lower stress and better mental health outcomes (Behara et al., 2018). However, this integration process requires strong social support systems and culturally responsive interventions, which are often lacking, particularly in school environments. A study examining acculturative stress in international student populations found that emotional well-being was significantly enhanced when support systems were in place to promote both cultural retention and social engagement (Lee, 2024).

Children, unlike adults, often lack the verbal sophistication to express complex emotional states or seek support proactively. Consequently, emotional distress in children may manifest through social withdrawal, aggression, or difficulties in peer relationships (Salas-Wright et al., 2015). Given these challenges, play-based interventions present a valuable alternative for engaging children at their developmental level. The use of play as a therapeutic and educational tool allows facilitators to model emotional competencies and coach social behaviors in a way that is both intuitive and non-threatening. Prior studies have shown that structured play activities significantly enhance emotion recognition, empathy, and cooperative behavior among children (Jin & Choi, 2023).

In addition, play-based interventions may provide a buffer against the biological impacts of chronic stress. Research on the cortisol awakening response found that higher levels of acculturative stress were associated with dysregulated cortisol patterns in children, potentially affecting long-term health and behavior (García et al., 2017). Emotional education through play could therefore not only improve psychological functioning but also modulate physiological stress responses, contributing to holistic child development. In support of this, studies have indicated that play-based group work can increase emotional resilience and social functioning among children from marginalized or transitional backgrounds (Reyes et al., 2018; Serafica et al., 2019).

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Peer interaction is equally essential to emotional development, and it serves as a real-time feedback loop through which children test and refine their emotional skills. Positive peer interactions are linked to higher self-esteem, better conflict resolution skills, and a stronger sense of belonging (Tian et al., 2019). Conversely, peer rejection or social isolation can exacerbate emotional problems, creating a cycle of maladjustment. Children who struggle to interpret social cues or express themselves constructively are more likely to experience peer difficulties, highlighting the need for early intervention. A play-based approach allows these children to practice interaction in a structured environment, receive immediate feedback, and learn corrective behaviors in a supportive setting (Talwar et al., 2022).

Research on emotional intelligence has consistently demonstrated that emotional competencies in childhood are predictive of long-term outcomes, including academic performance, mental health, and social integration (Driscoll & Torres, 2022). Emotional intelligence is not fixed but can be nurtured through targeted interventions, particularly when integrated into the child's daily experiences. A brief longitudinal study confirmed that even short-term emotional competence interventions can lead to sustained improvements in emotional regulation and reductions in internalizing symptoms (Driscoll & Torres, 2020). Furthermore, the cultural adaptability of play allows such interventions to be customized for diverse populations, ensuring broader applicability and relevance.

The school setting plays a crucial role in this process, acting as a microcosm of the larger cultural environment. In multicultural societies such as Turkey, where increasing numbers of children come from diverse cultural backgrounds, schools must evolve into emotionally inclusive spaces. Yet, schools often lack the resources or training to provide culturally sensitive emotional education. A recent qualitative study on Korean international students revealed that a lack of emotional and social support contributed significantly to feelings of alienation and maladjustment (Ra, 2023). Parallel findings among Latino and Asian populations in the U.S. and Europe suggest that culturally incongruent school practices contribute to the reproduction of stress and emotional disconnection in minority youth (Archuleta, 2015; Hansen et al., 2018; Raju, 2023).

In this context, a structured play-based intervention offers a dual advantage: it equips children with emotional and social tools while also fostering an inclusive group experience that reflects mutual respect and understanding. These interventions, when designed with cultural competence in mind, can reduce the emotional toll of acculturation and promote resilience. A growing body of evidence supports the effectiveness of play-based programs in improving both emotional intelligence and social functioning, making them ideal for diverse educational settings (Ertl et al., 2019; Romero & Piña-Watson, 2017). By encouraging emotional awareness and peer collaboration, such interventions can contribute to healthier child development and more cohesive multicultural communities. The present study aims to evaluate the effectiveness of a structured play-based intervention program in enhancing emotional intelligence and peer interaction among children in Turkey, with specific attention to its applicability in culturally diverse populations.

2. Methods and Materials

2.1. Study Design and Participants

This study was conducted using a randomized controlled trial (RCT) design to examine the effectiveness of a play-based intervention on emotional intelligence and peer interaction in children. Participants were selected through purposive sampling from primary schools in Turkey, and a total of 30 children aged between 6 and 10 years who met the inclusion criteria were recruited for the study. Participants were randomly assigned to either the experimental group (n = 15) or the control group (n = 15) using a random number generator. Inclusion criteria included the ability to participate in group activities, no diagnosed developmental disorders, and parental consent. The experimental group participated in a ten-session play-based intervention program, while the control group received no intervention during the study period. Follow-up data were collected five months after the completion of the intervention to assess the sustainability of the outcomes.

2.2. Measures

2.2.1. Emotional Intelligence

To assess emotional intelligence in children, the Emotional Quotient Inventory: Youth Version (EQ-i:YV) developed by Bar-On and Parker in 2000 was employed. This standardized tool is designed for use with children and adolescents aged 7 to 18 years and consists of 60 items rated on a 4-point Likert scale ranging from "Very seldom true of me" to "Very often true of me." The EQ-i:YV includes the following subscales: Intrapersonal, Interpersonal, Stress

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Management, Adaptability, and General Mood, which together provide a comprehensive measure of emotional functioning. Higher scores indicate stronger emotional intelligence skills. The validity and reliability of the EQ-i:YV have been confirmed in various studies across diverse populations, showing strong internal consistency (Cronbach's alpha ranging from 0.69 to 0.85) and construct validity, making it a robust tool for emotional assessment in developmental research.

2.2.2. Peer Interaction

Peer interaction in children was measured using the Penn Interactive Peer Play Scale (PIPPS), developed by Fantuzzo, Manz, and McDermott in 1998. The PIPPS is a teacher-report instrument specifically designed to evaluate the quality of peer play behaviors among preschool and early elementary school children. It includes 32 items grouped into three subscales: Play Interaction (positive engagement with peers), Play Disruption (aggressive or antisocial behavior), and Play Disconnection (withdrawn behavior or difficulty engaging). Items are rated on a 4-point scale from "Never" to "Always," with higher scores on the Play Interaction subscale indicating more positive peer relationships. The scale has demonstrated good psychometric properties, with high internal consistency (Cronbach's alpha above 0.80 for all subscales) and strong evidence for both construct and concurrent validity in multiple validation studies, supporting its use in developmental and intervention research.

2.3. Intervention

2.3.1. Play-Based Intervention

The play-based intervention was designed to enhance emotional intelligence and peer interaction in children through structured, developmentally appropriate activities rooted in therapeutic and educational play. The intervention consisted of ten 60-minute sessions conducted weekly in small groups of 6 to 8 children aged 6–10 years. Each session was guided by a trained facilitator and integrated a blend of storytelling, role-playing, art-based tasks, cooperative games, and reflective discussion. The sessions progressed from emotional awareness to interpersonal skill-building, gradually increasing in complexity and interpersonal engagement. The protocol was grounded in social-emotional learning theory and emphasized experiential learning and peer collaboration to foster emotional growth and social competence.

Session 1: Establishing Safety and Group Rules

The first session focused on building rapport and creating a safe, inclusive space. Children were introduced to the group format, the facilitator, and each other through name games and collaborative activities. Group rules such as listening, respect, and turn-taking were co-created with the children to encourage ownership. The session included a short puppet play about friendship and ended with drawing "happy group faces" to reinforce positive group feelings.

Session 2: Identifying Basic Emotions

This session aimed to help children recognize and label basic emotions such as happiness, sadness, anger, and fear. Using emotion cards, expressive drawings, and a game called "Emotion Charades," participants learned to identify emotions in themselves and others. Children also created their own emotion masks to symbolize how they feel in different situations, fostering emotional vocabulary and expression.

Session 3: Understanding Emotion Triggers and Body Signals

Children explored the connection between emotional experiences and physical sensations. The facilitator used storytelling and guided imagery to help children recognize how emotions manifest in the body (e.g., clenched fists when angry). A body outline activity allowed children to color in parts of the body where they feel different emotions, enhancing emotional self-awareness and regulation.

Session 4: Expressing Emotions in Healthy Ways

This session focused on strategies for expressing feelings constructively. Through role-play and drama games, children practiced expressing emotions like disappointment or frustration without aggression. The "Feelings Thermometer" activity helped them rate the intensity of their emotions and discuss ways to cool down or talk it out when emotions escalate.

Session 5: Recognizing Emotions in Others

The goal of this session was to build empathy and perspective-taking. Using facial expression puzzles, video clips, and a peer mirroring game, children learned to interpret nonverbal cues and emotional states of others. The facilitator emphasized the value of kindness, using real-life examples to discuss how recognizing emotions can help maintain friendships.

Session 6: Practicing Empathy and Helping Behaviors

Building on the previous session, children were encouraged to engage in helping behaviors through

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cooperative activities such as group mural painting or passing-object games. A story about a character who helps a friend in need served as a discussion point, allowing children to reflect on empathy and practice compassionate responses in guided role-play.

Session 7: Listening and Communication Skills

This session introduced foundational communication skills, including active listening, using respectful words, and turn-taking in conversation. Children practiced these skills through pair-sharing, listening games like "Pass the Message," and puppet dialogues. Visual aids were used to reinforce how good listening makes others feel heard and supported.

Session 8: Problem Solving and Conflict Resolution

Children learned steps for solving interpersonal problems using a simple "Stop, Think, Choose" model. Conflict scenarios were presented using puppets, and children acted out alternative solutions in small groups. Games like "Fix the Friendship" challenged children to generate multiple peaceful outcomes, strengthening their negotiation and compromise abilities.

Session 9: Teamwork and Cooperation

This session emphasized collaboration through team-based games and building tasks. Activities like "Build a Tower Together" and cooperative board games required communication, patience, and shared decision-making. The facilitator highlighted the value of working together and how teamwork enhances peer relationships.

Session 10: Reflection and Closure

In the final session, children reviewed the concepts learned throughout the program using a board game that integrated emotional and social questions. Each child received a personalized "Friendship and Feelings" certificate. The group celebrated with a shared activity (e.g., decorating a group memory poster), allowing participants to express what they enjoyed and learned, fostering a positive sense of closure.

2.4. Data Analysis

Data were analyzed using repeated measures analysis of variance (ANOVA) to assess the main effects of time, group, and the interaction between time and group on the dependent variables of anhedonia and school participation. Measurements were taken at three time points: pre-test (baseline), post-test (after the 12-session intervention), and five-month follow-up. The Bonferroni post-hoc test was employed to determine the significance of changes between individual time points. All statistical analyses were performed using SPSS version 27. A significance level of $p < 0.05$ was considered statistically meaningful throughout the study.

3. Findings and Results

The sample consisted of 30 children, with 15 participants in the experimental group and 15 participants in the control group. In terms of gender, 18 participants (60%) were male, while 12 participants (40%) were female. The age distribution of the participants ranged from 6 to 10 years. Specifically, 8 children (26.7%) were 6 years old, 9 children (30%) were 7 years old, 7 children (23.3%) were 8 years old, 4 children (13.3%) were 9 years old, and 2 children (6.7%) were 10 years old. Regarding the parental education level, 12 participants (40%) had at least one parent with a university degree, while 18 participants (60%) had parents with a high school diploma or lower.

Table 1

Means and Standard Deviations of Emotional Intelligence and Peer Interaction Across Time and Groups

Variable	Group	Pretest (M ± SD)	Posttest (M ± SD)	Follow-up (M ± SD)
Emotional Intelligence	Experimental	88.67 ± 6.25	102.54 ± 5.97	100.81 ± 6.18
	Control	89.42 ± 6.12	90.73 ± 6.44	89.90 ± 6.33
Peer Interaction	Experimental	34.81 ± 3.67	42.23 ± 3.29	41.76 ± 3.11
	Control	34.45 ± 3.48	35.26 ± 3.54	34.88 ± 3.52

As shown in Table 1, the experimental group showed a marked increase in emotional intelligence scores from the pretest (M = 88.67, SD = 6.25) to the posttest (M = 102.54, SD = 5.97), with scores slightly decreasing but remaining high at the follow-up (M = 100.81, SD = 6.18). In contrast, the control group showed minimal change over time. Similarly, peer interaction scores in the experimental group increased from pretest (M = 34.81, SD = 3.67) to posttest (M = 42.23, SD = 3.29), with sustained improvement at follow-up (M = 41.76, SD = 3.11), while the control group scores remained relatively unchanged.

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Before performing the repeated measures analysis of variance (ANOVA), the assumptions of normality, sphericity, and homogeneity of variances were checked. The normality of the data was confirmed using the Shapiro-Wilk test, with all p-values exceeding the 0.05 threshold (pretest: p = 0.075, posttest: p = 0.089, follow-up: p = 0.112), indicating that the data did not significantly deviate from a normal distribution. The assumption of sphericity was tested using Mauchly's test, and the results showed no violation of sphericity (pretest: p = 0.160, posttest: p = 0.246, follow-up: p = 0.320). Additionally, the homogeneity of variances was confirmed using Levene's test, with p-values exceeding 0.05 for all time points (pretest: p = 0.314, posttest: p = 0.527, follow-up: p = 0.611), indicating equal variances across groups at each time point. These results suggest that all assumptions were met for the subsequent analysis.

Table 2

Repeated Measures ANOVA Results for Emotional Intelligence and Peer Interaction

Variable	Source	SS	df	MS	F	p-value	η^2 (Effect Size)
Emotional Intelligence	Time	2643.27	2	1321.63	31.24	<.001	.53
	Group	2278.14	1	2278.14	38.09	<.001	.58
	Time × Group	2519.49	2	1259.74	29.74	<.001	.51
	Error	2289.46	56	40.88			
Peer Interaction	Time	883.62	2	441.81	28.77	<.001	.50
	Group	639.54	1	639.54	35.66	<.001	.55
	Time × Group	788.21	2	394.11	25.47	<.001	.48
	Error	859.28	56	15.34			

Table 2 presents the repeated measures ANOVA results for both emotional intelligence and peer interaction. For emotional intelligence, there was a significant main effect of time, $F(2, 56) = 31.24$, $p < .001$, $\eta^2 = .53$, and a significant interaction effect of time by group, $F(2, 56) = 29.74$, $p < .001$, $\eta^2 = .51$, indicating that changes over time differed between the groups. The same pattern was observed for peer interaction, with a significant main effect of time, $F(2, 56) = 28.77$, $p < .001$, $\eta^2 = .50$, and a significant time by group interaction, $F(2, 56) = 25.47$, $p < .001$, $\eta^2 = .48$, suggesting the intervention had a notable effect over time for the experimental group.

Table 3

Bonferroni Post-Hoc Test Results for Emotional Intelligence and Peer Interaction

Variable	Comparison	Mean Difference	SE	p-value
Emotional Intelligence	Pretest vs. Posttest	-13.87	1.94	<.001
	Posttest vs. Follow-up	1.73	1.42	.218
	Pretest vs. Follow-up	-12.14	1.88	<.001
Peer Interaction	Pretest vs. Posttest	-7.42	1.19	<.001
	Posttest vs. Follow-up	0.47	0.87	.589
	Pretest vs. Follow-up	-6.95	1.22	<.001

As reported in Table 3, the Bonferroni post-hoc tests revealed that, for emotional intelligence, the mean difference between pretest and posttest was statistically significant (Mean Difference = -13.87, $p < .001$), and the improvement was maintained at follow-up (Mean Difference = -12.14, $p < .001$). The slight decrease between posttest and follow-up was not statistically significant ($p = .218$). A similar trend was found for peer interaction, where both pretest to posttest (Mean Difference = -7.42, $p < .001$) and pretest to follow-up (Mean Difference = -6.95, $p < .001$) comparisons were significant, with no significant difference between posttest and follow-up ($p = .589$), indicating stability in gains over time.

4. Discussion and Conclusion

The findings of this randomized controlled trial indicate that the play-based intervention was effective in significantly improving both emotional intelligence and peer interaction among children in the experimental group compared to the control group. These improvements were not only observed immediately after the ten-session program but were also sustained at the five-month follow-up,

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highlighting the long-term benefits of play-centered emotional education. Repeated measures ANOVA confirmed significant interaction effects between time and group for both dependent variables, and post-hoc Bonferroni tests revealed that these changes were statistically meaningful from pretest to posttest and maintained at follow-up. These results affirm the central hypothesis of this study: structured play interventions can enhance children's emotional and social competencies in meaningful and lasting ways.

The positive changes in emotional intelligence observed in the experimental group align with previous research that emphasizes the role of experiential learning in emotional development. Emotional intelligence, including components such as emotion recognition, empathy, and regulation, can be nurtured through guided activities that mirror real-life emotional experiences. This is especially true when these activities are presented in a child-friendly medium like play. The intervention allowed children to practice emotional expression, learn to manage frustration, and identify feelings in themselves and others—all within a safe, interactive context. These findings are supported by prior studies that found emotional competencies to be malleable and responsive to targeted, culturally relevant interventions (Driscoll & Torres, 2020, 2022).

The results further support the idea that play-based programs can be especially effective in multicultural contexts, such as those experienced by children in Turkish classrooms today. Children who face cultural or linguistic challenges may have difficulty navigating complex emotional or social scenarios. By using universally accessible tools such as storytelling, role-play, and drawing, the intervention overcame potential cultural barriers and offered children new ways to express and understand emotions. This approach is consistent with the findings of researchers who emphasize the cultural adaptability of play as a mechanism for reducing stress and promoting resilience (Ra, 2023; Serafica et al., 2019). In diverse educational environments, play provides a shared language through which emotional development can be fostered across cultural divides.

The enhancement of peer interaction also underscores the value of group-based play in cultivating prosocial behaviors. Activities designed to promote cooperation, listening, and conflict resolution contributed to improved social engagement among participants. The peer-based structure of the sessions created numerous opportunities for practicing social roles, managing group dynamics, and responding empathetically to others. This experiential format supports research demonstrating that children learn social norms and behaviors most effectively in interactive, peer-rich settings (Talwar et al., 2022). Furthermore, the sustained improvement at follow-up suggests that children internalized these behaviors and were able to transfer them into their daily social environments over time.

These findings are particularly important in light of the broader literature on acculturative stress and emotional maladjustment. Children from immigrant families or bicultural backgrounds may be especially vulnerable to emotional dysregulation due to the stressors their families experience while adapting to a host culture (Le & Huyen-Nguyen, 2024; Park, 2023). Emotional tensions at home, including those stemming from parental cultural conflicts or marginalization, can hinder children's ability to learn emotional regulation through traditional familial socialization. In this study, the play-based intervention appeared to offer an external compensatory environment for developing these emotional skills. Prior research has shown that children who are not supported emotionally at home or school are more likely to experience anxiety, withdrawal, or aggression in peer settings (Lorenzo-Blanco et al., 2016; Ramirez et al., 2023).

Play also appears to function as a protective factor against the effects of chronic psychological stress. For instance, García et al. (2017) found that acculturative stress negatively impacts physiological stress responses in children, such as cortisol regulation, which can have long-term consequences on emotional well-being (García et al., 2017). By offering children a constructive outlet for emotional expression and social engagement, structured play may buffer against the physiological and psychological impacts of ongoing stress. This aligns with findings that emphasize the role of social support and culturally adaptive interventions in mitigating stress in multicultural youth (Park & Bayne, 2024; Reyes et al., 2018).

Additionally, the improvements observed in peer interaction validate earlier findings that peer engagement is not only a developmental outcome but also a catalyst for further emotional growth. Children who struggle with emotion regulation often face peer rejection, which in turn exacerbates feelings of loneliness or anger. Interventions that simultaneously address emotional understanding and social skills, such as the one used in this study, can break this negative cycle. The reciprocal relationship between emotional intelligence and peer success has been highlighted in various studies, including those focusing on culturally

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diverse or transitional populations (Jin & Choi, 2023; Tian et al., 2019). These studies support the notion that emotional competencies serve as a foundation for successful peer relationships.

Notably, these findings also resonate with literature on cultural adaptation and integration strategies. Children who learn to manage emotional conflicts and interact positively with peers are better equipped to navigate intercultural environments. Acculturation models suggest that integration—rather than marginalization or forced assimilation—is the most adaptive strategy for individuals in multicultural contexts (Behara et al., 2018). This is particularly relevant in school settings where children must reconcile multiple cultural norms. Play-based emotional education can serve as an implicit integration strategy, helping children develop the emotional and social fluency needed to function effectively in diverse peer groups (Ertl et al., 2019; Raju, 2023).

Furthermore, the sustainability of the intervention's effects over a five-month period provides encouraging evidence for the long-term impact of short-term, well-designed programs. Previous studies on brief interventions have shown mixed results regarding the longevity of behavioral change. However, this study supports the growing body of work suggesting that when interventions are emotionally engaging and socially embedded, their effects are more likely to endure (Hansen et al., 2018; Romero & Piña-Watson, 2017). The children in the experimental group maintained gains in emotional and social functioning even in the absence of ongoing facilitation, suggesting internalization and continued use of the learned skills.

5. Limitations & Suggestions

While the results of this study are promising, several limitations must be acknowledged. First, the relatively small sample size (n = 30) limits the generalizability of the findings. Although significant effects were observed, the results may not fully represent the broader population of children in diverse or multicultural settings. Second, the study relied on self-report and teacher-report measures, which are susceptible to social desirability bias or limited observational windows. Objective behavioral assessments or multi-informant data could have strengthened the findings. Third, the cultural specificity of the sample—children in Turkey—may limit cross-cultural applicability. Though play is a universal medium, cultural norms about emotional expression and social interaction can vary widely, and adaptations may be necessary in other contexts. Finally, while the five-month follow-up provides useful information about the sustainability of outcomes, a longer-term assessment would be needed to determine the lasting developmental impact of the intervention.

Future research should consider replicating this study with larger and more diverse populations across different cultural settings. Investigating the effectiveness of play-based interventions among children from different ethnic, linguistic, and socioeconomic backgrounds would provide more comprehensive insight into their universal applicability. Additionally, future studies could include longitudinal designs that follow participants for one year or longer to assess whether gains in emotional intelligence and peer interaction persist and influence other developmental outcomes such as academic achievement, mental health, or self-esteem. It would also be beneficial to explore the specific mechanisms within play (e.g., role-play, cooperative tasks) that are most effective for different emotional competencies. Finally, integrating neurobiological or physiological measures, such as cortisol levels or heart rate variability, could provide deeper insights into the stress-buffering effects of emotional play.

Educators, counselors, and mental health professionals working with children should consider incorporating structured play-based activities into regular school programming to promote emotional and social learning. These activities can be used not only as interventions but also as preventive measures to support emotional development from an early age. Training teachers to facilitate emotionally responsive play can extend the reach of such interventions without the need for outside specialists. Schools should prioritize inclusive and emotionally supportive environments where children from all cultural backgrounds can engage meaningfully with peers. Finally, parents should be encouraged to use play as a tool for emotional dialogue at home, reinforcing the skills learned in school settings.

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Declaration of Interest

The authors of this article declared no conflict of interest.

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Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors equally contributed in this article.

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