



## Sociodrama-Based Play and Social-Emotional Development in Early Childhood: A Quasi-Experimental Study

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**Abstract:** Developing social-emotional competencies constitutes a core priority in early childhood education, as these competencies underpin children's capacity to manage their emotions, engage constructively with others, and build healthy interpersonal relationships. This study aims to examine the effect of positive emotional stimulation through sociodrama play on young children's social-emotional skills. Employing a quantitative framework, the research adopted a quasi-experimental pretest-posttest control-group design with participants aged 4-6 years, who were allocated equally to the experimental and control groups. Data collection relied on a structured observational instrument derived from the Social-Emotional Assessment/Evaluation Measure (SEAM), and data were analyzed using Analysis of Covariance (ANCOVA) in Jamovi to account for pre-existing group differences. Statistical outcomes revealed no significant difference between the two groups. Nonetheless, observational records indicated a discernible trend of growth across several social-emotional domains. While these developmental tendencies could not be confirmed statistically, the findings suggest that the observed gains were constrained by the conditions inherent to the study design. This investigation adds to the empirical literature on the capacity of structured sociodrama activities to nurture children's social-emotional growth.

**Keywords:** early childhood education; emotional stimulation; play-based learning; social-emotional development; sociodrama play

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## INTRODUCTION

Competencies related to social and emotional functioning during the early years of life have come to occupy a central position in contemporary educational discourse, given their far-reaching implications for children's long-term well-being, academic trajectories, and capacity for social adjustment (Darling-Churchill & Lippman, 2016; Hosokawa & Tomozawa, 2026). Prominent international bodies including UNESCO, the World Health Organization (WHO), and the Organisation for Economic Co-operation and Development (OECD) consistently assert that purposeful investment in socio-emotional learning during early childhood yields substantial returns in terms of children's resilience, motivation to learn, and sustained educational attainment (Denham & Brown, 2010; Jones et al., 2021; Krall et al., 2022; Mahoney et al., 2018). Research findings corroborate this position: children who cultivate robust emotional awareness and interpersonal skills early in life are more likely to exhibit stronger academic performance, healthier peer relationships, and greater psychological well-being across the life course (Bishop, 2023; Oberle et al., 2016; Zinsser et al., 2015). By contrast, deficits in socio-emotional functioning can compromise children's ability to modulate emotional responses, engage collaboratively with classmates, and navigate routine social challenges effectively (Durlak et al., 2022; Taylor et al., 2017). In response to this evidence, current early childhood educational frameworks have grown increasingly attentive to the deliberate cultivation of socio-emotional capacities alongside cognitive skill development.

The quality of the emotional experiences children encounter in their daily environments profoundly influences their motivation, attentiveness, and disposition toward learning. Grounded in the broaden-and-build framework, positive emotional states are theorized to widen children's cognitive and behavioral repertoires while simultaneously building durable psychological resources (Fredrickson, 2004, 2013). When children encounter emotions such as joy, curiosity, and a sense of belonging, they are more inclined to participate actively in social exchanges and to display empathic sensitivity toward their classmates (Justice et al., 2017; Kaenah et al., 2025; Puji & Hakobyan, 2025; Savina et al., 2025). Within nurturing classroom environments, these affective states further encourage children's exploratory behavior and willingness to engage in collaborative forms of learning (Andina et al., 2025; Immordino-Yang et al., 2019; Schonert-reichl, 2017).

Notwithstanding growing awareness of the value of socio-emotional learning, many early childhood education systems continue to privilege cognitive academic goals over emotional and relational development. Instruction in numerous preschool and kindergarten contexts continues to center on foundational literacy and

numeracy competencies, frequently curtailing opportunities for children to engage in expressive play and meaningful peer interaction (Hirsh-Pasek et al., 2015; Whitebread, 2012; Zosh et al., 2017). Compounding this imbalance is the relative scarcity of rigorous empirical investigations into play-based interventions designed specifically to cultivate positive emotional development. Much of the existing scholarship tends to address broad socio-emotional learning programs or focus on reducing maladaptive behaviors, with considerably less attention to the systematic promotion of constructive emotional capabilities. Moreover, well-controlled quasi-experimental studies rigorously assessing the impact of structured sociodrama in early childhood educational settings remain uncommon in the literature (Aktaş et al., 2025; Huisstede et al., 2024; Mages, 2008; Tuncdemir, 2025b, 2025a). This scholarly gap underscores the pressing need to explore innovative play-centered pedagogical models that deliberately target children's positive emotional growth.

As a precursor to the present study, preliminary fieldwork was undertaken within an early childhood education institution in Padang, Indonesia, to assess the baseline status of children's socio-emotional development. This assessment employed a structured observational protocol adapted from the Social-Emotional Assessment/Evaluation Measure (SEAM) framework (Squires et al., 2014), with particular attention to emotion regulation, peer-directed interaction, and cooperative behavior. Preliminary findings indicated that roughly 65% of the children assessed fell within the low-to-moderate range of social-emotional competence. More granularly, approximately 60% of children experienced notable difficulties managing emotional reactions during classroom activities, while about 67% showed limited engagement in prosocial peer behaviors such as sharing and taking turns. Beyond individual child profiles, classroom instruction was predominantly teacher-directed, emphasizing cognitive task completion and minimal integration of structured play experiences designed to stimulate positive emotional development. These baseline observations highlight a significant discrepancy between developmental expectations and prevailing instructional practices, underscoring the urgency of developing and implementing innovative, play-oriented approaches to strengthen children's socio-emotional competencies. Within this context, play-based pedagogy stands out as a particularly apt framework, offering children authentic and experientially rich opportunities to develop their emotional and social capacities through active engagement.

Play-based learning has long occupied a prominent place in early childhood education, celebrated for its capacity to support children's holistic growth across multiple developmental domains. Through play, children are afforded opportunities to explore and articulate emotions, assume and negotiate different social roles, and refine communication skills in purposeful interpersonal settings (Yogman et al., 2018). Play-based pedagogies are also valued for stimulating creativity, cultivating problem-solving dispositions, and enabling the active construction of knowledge through exploration and peer interaction (Lillard et al., 2012; Nicolopoulou, 2005; Nicolopoulou & Richner, 2007). Play-based learning also promotes creativity, problem-solving, and active knowledge construction through interaction and exploration (Parker et al., 2022; Weisberg et al., 2016). The incorporation of play-based approaches within early childhood curricula is widely regarded as essential for promoting integrated cognitive and socio-emotional development. Among the diverse play modalities available to educators, dramatic play has garnered particular recognition as a potent vehicle for nurturing social-emotional competencies. This form of play allows children to recreate and rehearse real-world social scenarios, give voice to their inner emotional states, and imaginatively inhabit multiple perspectives (Goldstein & Lerner, 2017; Goldstein & Winner, 2012). Research has further documented that engagement in dramatic and role-play activities substantially contributes to the development of empathy, perspective-taking abilities, and emotional regulation capacities (Celume et al., 2020; McCaslin, 2013). Through such immersive experiences, children practice emotional communication, engage in collaborative negotiation of social roles, and contribute to shared narrative worlds. Sociodrama, as a distinct and structured variant of dramatic play, is defined by its emphasis on group-level exploration of social themes through embodied role enactment and spontaneous improvisation (Giacomucci, 2021; Moreno, 2013; Nolte, 2019). When implemented in early childhood classrooms, sociodrama creates generative conditions for children to externalize and process emotional experiences, cultivate empathic understanding, and develop the capacity to appreciate diverse viewpoints through shared narrative construction (McLennan, 2011). This pedagogical orientation resonates with sociocultural learning theory, which foregrounds the indispensable role of social interaction and mediated activity in the development of cognitive and affective capacities (Rogoff, 2003; Vygotsky, 1978). As such, sociodrama holds considerable promise as a structured instructional approach for advancing children's socio-emotional development.

The core learning mechanisms embedded within sociodrama typically encompass role enactment, collaborative storytelling, and improvisational exchange. Engaging in role-play encourages children to adopt and embody diverse social perspectives, thereby deepening their empathic understanding of others' emotions and lived experiences (Ramalho, 2021; C. Zhang et al., 2022; J. Zhang et al., 2025). Storytelling activities offer children narrative frameworks through which they can make sense of emotional situations and trace causal threads within social interactions (Koivula et al., 2019). Spontaneous improvisational responses to evolving dramatic scenarios, in turn, promote cognitive flexibility and the on-the-spot regulation of emotional reactions. When combined, these interwoven processes collectively nurture children's empathic sensitivity, communicative competence, and capacity for prosocial and collaborative conduct. Recent studies have increasingly called for

the embedding of socio-emotional learning within early childhood curricula through experiential and play-centered pedagogical approaches (Babar et al., 2024; Tuncdemir, 2025a). Evidence drawn from preschool-based intervention research consistently demonstrates that structured socio-emotional learning initiatives can yield meaningful gains in children's emotional regulation, classroom engagement, and quality of peer relationships (Denham & Bassett, 2019; Mondì et al., 2021). Notwithstanding these promising findings, a substantial proportion of existing programs continue to rely on formal instructional frameworks rather than child-initiated play experiences. Scholars in the field argue that play-based learning environments provide more naturalistic contexts in which children can authentically rehearse emotional expression, empathic responding, and social negotiation (Berti & Cigala, 2022; Murano et al., 2020). Accordingly, the development and empirical evaluation of innovative play-based approaches to socio-emotional learning constitutes an ongoing research priority in the field of early childhood education.

The relevance of socio-emotional intervention has been further amplified by the educational disruptions wrought by the COVID-19 pandemic. Extended school closures during the pandemic era severely constrained children's opportunities for in-person social interaction, with documented adverse consequences for their emotional stability and sense of connection (Egan et al., 2021; Loades et al., 2020; Prime et al., 2020). Numerous investigations have recorded elevated rates of anxiety, social withdrawal, and emotional distress among children in the aftermath of pandemic-related schooling disruptions (UNESCO, 2021; UNICEF, 2022). As educational communities work to restore children's social functioning, collaborative play-based activities have been widely endorsed as effective mechanisms for rebuilding emotional resilience and strengthening peer relationships (Haoyue & Marie Oyam, 2024; Pyle & DeLuca, 2017; Ramani & Brownell, 2010; Sezgin & Demiriz, 2019). Against this backdrop, the investigation of sociodrama as a structured pedagogical intervention assumes heightened pertinence.

Despite growing interest in play-based socio-emotional learning, the empirical base specifically examining sociodrama as a formalized intervention in early childhood education settings remains limited. Prior studies have predominantly concentrated on general socio-emotional learning curricula or loosely structured forms of dramatic play, without rigorously evaluating the particular affordances of sociodrama-based pedagogy (Aktaş et al., 2025; Huisstede et al., 2024; Mages, 2008; Tuncdemir, 2025b). Additionally, extant research tends to focus on mitigating negative behavioral outcomes rather than actively cultivating positive emotional capacities such as empathy, joy, and cooperative engagement. Rigorously designed quasi-experimental investigations that measure the concrete developmental impact of sociodrama interventions in early childhood classrooms remain notably scarce. This gap in the empirical literature underscores the need for more targeted inquiry into the potential of sociodrama-based learning to advance children's socio-emotional competencies.

The present study advances beyond prior work in several meaningful respects. First, it re-orientates the evaluative lens toward promoting positive emotional growth rather than the more common focus on reducing negative behaviors. Second, it treats sociodrama as a rigorously structured, play-based pedagogical intervention, decisively moving beyond loosely defined or unstructured dramatic play practices. Third, the study employs a quasi-experimental design with ANCOVA-based analysis to afford a more methodologically robust assessment of intervention effects. Taken together, these features position this study to contribute a more nuanced and evidence-grounded understanding of how sociodrama can catalyze early childhood social-emotional development. Specifically, this study aims to examine whether delivering positive emotional stimulation through structured sociodrama activities enhances the social-emotional competencies of children aged 4-6 years, with particular attention to empathy, emotional regulation, and peer-directed interaction, compared with those receiving conventional classroom instruction. Based on the study's theoretical framework and the broader empirical literature, it is anticipated that children engaged in sociodrama-based learning will achieve higher levels of social-emotional development than their counterparts in standard educational settings.

## METHODS

The study adopted a quantitative research paradigm, operationalized through a quasi-experimental pretest-post-test control-group design, enabling a systematic investigation of the influence of sociodrama-based positive emotional stimulation on young children's social-emotional competencies. This design was chosen because it offers a practicable and ethically sound mechanism for evaluating causal effects in naturalistic educational contexts, where the full randomization required by experimental designs is frequently infeasible (Creswell & Creswell, 2018; Shadish et al., 2002). The primary dependent variable, children's social-emotional competencies, was assessed at two time points, both before and after the intervention, across both the experimental and control groups. Children in the experimental condition participated in a structured sociodrama-based learning program, whereas those in the control condition maintained their participation in the existing regular curriculum without any supplementary dramatic play activities. This dual-assessment approach enabled a meaningful comparison of post-intervention outcomes while accounting for baseline disparities between groups. The study sample comprised 30 children, aged 48 to 72 months, enrolled at Dharmawanita Kindergarten in Padang Magek, Agam Regency, West Sumatra Province, Indonesia. Participants were identified through

purposive sampling guided by a set of pre-established inclusion criteria: (1) children falling within the 4-6 year age bracket; (2) children with no formally identified developmental disabilities or disorders; and (3) children whose parents or legal guardians had provided informed written consent authorizing their participation. The full sample was divided into two equal groups: 15 children were assigned to the experimental condition and 15 to the control condition. A sample of 30 participants is considered appropriate for quasi-experimental inquiry in early childhood settings, where logistical and ethical considerations often preclude the recruitment of substantially larger cohorts. This position is supported by prior research conducted in comparable educational contexts employing similarly sized samples (Gersten et al., 2005).

The intervention program unfolded across eight weeks within the early childhood educational setting. During this time, children in the experimental group participated in sociodrama sessions held twice weekly, lasting 30 to 45 minutes each. The control group, by contrast, maintained its standard curricular activities throughout the intervention period, with no exposure to structured dramatic play. The sociodrama program was expressly designed to elicit and reinforce positive emotional experiences encompassing joy, gratitude, hope, and empathy through structured dramatic activities theoretically anchored in the broaden-and-build theory of positive emotions by Fredrickson (2013). Thematic scenarios embedded within the sessions drew directly from children's everyday social experiences and challenges, incorporating situations such as sharing possessions with classmates, offering assistance to peers, expressing appreciation, and negotiating simple interpersonal conflicts.

Throughout each session, children were invited to embody a variety of social roles including friends, helpers, and family members engaging in storytelling, role enactment, and facilitated improvisation. These activities were intended to stimulate authentic emotional expression and meaningful peer interaction. Teachers participating in the program served as process facilitators: structuring dramatic scenarios, demonstrating contextually appropriate emotional responses, encouraging broad and active participation, and delivering positive reinforcement. Teachers also guided children through reflective discussions following each session to consolidate emotional learning and strengthen the transfer of socio-emotional insights into everyday behavior. Prior to the intervention, the research team secured the necessary ethical approvals and delivered targeted training to participating teachers. Pre- and post-intervention assessments of children's social-emotional competencies were administered using a consistent instrument across both time points, with ongoing structured observations conducted throughout the program to verify implementation fidelity and procedural consistency.

Data collection was conducted using a purpose-designed observational instrument developed to assess children's social-emotional competencies across key developmental domains. The instrument was developed by adapting and contextualizing the Social-Emotional Assessment/Evaluation Measure (SEAM), originally developed by Squires et al. (2014) and widely accepted as a psychometrically sound tool for evaluating socio-emotional development in early childhood populations. The research team undertook a systematic process of modification and simplification to ensure alignment with the specific cultural and developmental characteristics of children aged 4-6 years participating in the study. The resulting observation checklist contained 10 behaviorally defined indicators organized into four core socio-emotional domains: self-awareness, emotional regulation, social interaction, and responsible behavior. Each indicator was assessed through structured direct observation during learning activities, employing a consistent rating format. The observation process was conducted by trained classroom teachers using a checklist structure that promoted consistency and inter-rater reliability in scoring. Indicators were specified as concrete, directly observable behaviors to reduce reliance on inference and ensure each item could be reliably identified across classroom contexts. The indicators of social-emotional skills used in this study are detailed in Table 1.

**Table 1.** Indicators of Social-Emotional Skills

| Dimension            | Indicator                                                         | Item Number |
|----------------------|-------------------------------------------------------------------|-------------|
| Self-Awareness       | Recognizing and expressing own emotions (e.g., happy, sad, angry) | 1           |
|                      | Demonstrating self-confidence in participating in activities      | 2           |
| Emotional Regulation | Managing emotions appropriately (e.g., not easily frustrated)     | 3           |
|                      | Showing patience while waiting for turns                          | 4           |
| Social Interaction   | Initiating interaction with peers                                 | 5           |
|                      | Cooperating with peers during group activities                    | 6           |
|                      | Sharing toys or materials with others                             | 7           |
| Responsible Behavior | Following simple rules and instructions                           | 8           |
|                      | Taking responsibility for own actions                             | 9           |
| Prosocial Behavior   | Showing empathy (e.g., helping or comforting peers)               | 10          |

Quantitative data from the study were examined using one-way Analysis of Covariance (ANCOVA) in Jamovi ([Şahin & Aybek, 2019](#)). ANCOVA was selected as the primary analytical method because it enables rigorous group comparisons while statistically controlling for potential confounding influences, most notably children's baseline pretest scores ([Field, 2018](#)). Prior to conducting the primary analysis, the research team verified that the data satisfied the key statistical assumptions underlying ANCOVA, including normality of model residuals, homogeneity of variance across groups, and a linear relationship between the covariate and the dependent variable. Once these conditions were confirmed, the analysis evaluated differences in post-intervention social-emotional competency scores between the experimental and control groups, with pretest scores as the primary covariate. Gender was also entered as a fixed factor in the analytical model to assess whether it exerted a measurable influence on post-intervention outcomes. Through this approach, any post-intervention group differences observed were interpreted as reflecting the potential causal contribution of the sociodrama-based program, after statistical adjustment for pre-existing individual differences.

Rigorous adherence to established ethical principles governing research involving children was maintained throughout all phases of the study. Informed written consent was obtained from parents or legal guardians of all participating children prior to the initiation of data collection, with participation remaining entirely voluntary throughout. Families were explicitly informed of their unrestricted right to withdraw their child from the study at any point, without any negative repercussions. All personal and identifying information of participants was maintained in strict confidence, and the collected data were used solely for academic inquiry. Upon completion of the study, children in the control condition were also offered access to sociodrama learning sessions, thereby ensuring that all participants benefited equitably from the educational intervention and that no child was systematically disadvantaged by virtue of group assignment.

## RESULT AND DISCUSSION

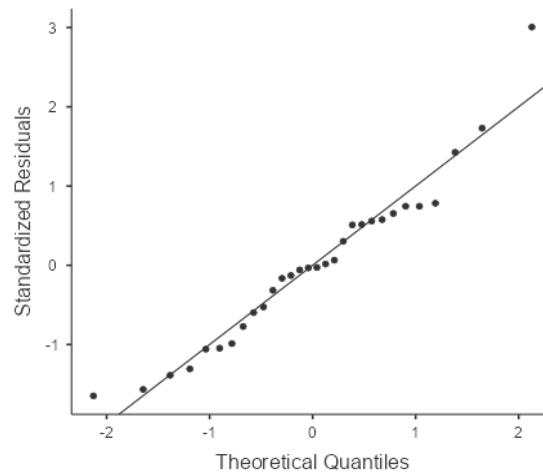
The following section presents the study's key findings, organized sequentially to address: descriptive statistics, verification of analytical assumptions, and the outcomes of the ANCOVA conducted to evaluate the effect of positive emotional stimulation through sociodrama play on children's social-emotional competencies. Descriptive statistics were computed to characterize children's social-emotional functioning before and after the intervention. Results of the statistical assumption checks covering normality and variance homogeneity are presented before the primary analysis to confirm the suitability of parametric methods. The ANCOVA findings are then presented to assess the magnitude and significance of the intervention effect, followed by supplementary observational and descriptive analyses to enrich interpretation of the statistical results.

Before commencing the primary analysis, the research team conducted a series of diagnostic checks to confirm that the data met the prerequisites stipulated for ANCOVA. The normality of model residuals was examined to establish whether the data approximated a normal distribution, while Levene's test for equality of variances was applied to verify that variance levels across the comparison groups were equivalent. These preliminary checks were designed to confirm the appropriateness of parametric statistical procedures for the present dataset. Satisfaction of the normality assumption indicates that residuals conform to the expected distributional pattern without material departures, while confirmation of variance homogeneity indicates that within-group variability is roughly equivalent across conditions. Together, these conditions substantiate the statistical validity of the ANCOVA model. The outcomes of both assumption checks are detailed in [Table 2](#).

**Table 2.** Shapiro-Wilk Test for Normality of Residuals

| Statistic | p     |
|-----------|-------|
| 0.961     | 0.324 |

[Table 2](#) presents the Shapiro-Wilk test results, which confirm that the model residuals follow a normal distribution ( $p = 0.324 > 0.05$ ). This statistical finding received convergent support from visual examination of the Q-Q plot, where observed data points aligned closely with the diagonal reference line and exhibited only negligible deviations from normality. To supplement the quantitative test, a graphical assessment of the residual distribution is provided in [Figure 1](#), offering additional confirmatory evidence of distributional adequacy.



**Figure 1.** Q-Q Plot of Standardized Residuals

These results indicate that the residuals are free from pronounced skewness or kurtosis that might otherwise compromise the validity of the analysis. Satisfying the normality assumption ensures that the ANCOVA model produces statistically sound and defensible parameter estimates. Accordingly, the present data may be considered sufficiently normal to proceed with ANCOVA. The Q-Q Plot shows the alignment between the empirical residual quantiles and the theoretical quantiles expected under a normal distribution. In the present analysis, the majority of plotted points fell along or near the diagonal reference line, with only minor deviations at the distributional extremes. This visual configuration corroborates the conclusion that residuals are normally distributed. The concordance between the graphical pattern and the Shapiro-Wilk test result collectively suggests that significant violations, such as skewness, excess kurtosis, or extreme outliers, do not compromise the ANCOVA model. The result is presented in [Table 3](#).

**Table 3.** Test of Homogeneity of Variance  
(Levene's Test)

| <b>F</b> | <b>df1</b> | <b>df2</b> | <b>p</b> |
|----------|------------|------------|----------|
| 3.17     | 1          | 8          | 0.086    |

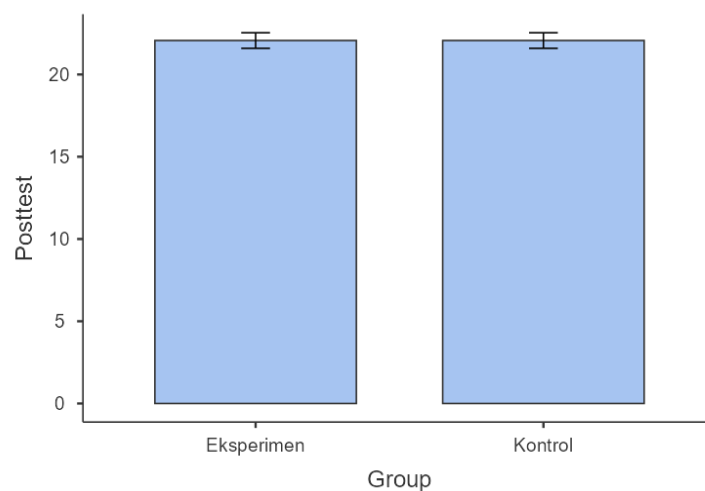
As shown in [Table 3](#), the Levene's test confirmed that the assumption of variance homogeneity was tenable ( $p = 0.086 > 0.05$ ), indicating that the distribution of score variability across the two groups was not statistically distinguishable. This result confirms that neither group contributes disproportionately to the overall variance in the data, thereby ensuring that between-group comparisons are not distorted by differential dispersion. Homogeneity of variance further supports the stability and reliability of the ANCOVA model's estimates of group effects. The fulfillment of this assumption reinforces confidence in the appropriateness of the parametric analytical approach employed in this study.

A one-way ANCOVA was executed to evaluate the influence of the sociodrama-based learning program on children's social-emotional competencies, with baseline pretest scores entered as the covariate to control for pre-existing individual differences between groups. The central purpose of this analysis was to determine whether differences observed in post-intervention outcomes could be attributed to the intervention itself, net of initial variation among participants. The analytical model also incorporated gender as a supplementary fixed factor to examine its potential moderating role in social-emotional outcomes. The ANCOVA framework affords a more precise estimation of intervention effects by partitioning out variance attributable to extraneous sources. The inclusion of partial eta-squared ( $\eta^2p$ ) as a measure of effect size permitted a substantive interpretation of the practical significance of observed statistical relationships. The full ANCOVA results are presented in [Table 4](#).

**Table 4.** One-Way ANCOVA Results for Social-Emotional Skills

| <b>Source</b> | <b>Sum of Squares</b> | <b>df</b> | <b>Mean Square</b> | <b>F</b> | <b>p</b> | <b><math>\eta^2p</math></b> |
|---------------|-----------------------|-----------|--------------------|----------|----------|-----------------------------|
| Overall model | 24.936                | 3         | 8.312              | 1.1627   | 0.343    |                             |
| Gender        | 20.880                | 1         | 20.880             | 2.2745   | 0.144    | 0.080                       |
| Post-test     | 3.955                 | 1         | 3.955              | 0.4309   | 0.517    | 0.016                       |
| Pretest       | 0.100                 | 1         | 0.100              | 0.0109   | 0.918    | 0.000                       |
| Residuals     | 238.680               | 26        | 9.180              |          |          |                             |

The overall ANCOVA model, as reported in Table 4, yielded a non-significant F-ratio [ $F(3, 26) = 1.1627$ ,  $p = 0.343$ ], indicating that the model as a whole did not attain statistical significance. After adjusting for pretest score differences, the sociodrama-based intervention did not produce a statistically significant difference in social-emotional competency scores compared with the control condition. Further examination of effect size estimates reveals the intervention's limited practical impact. The partial eta-squared value for the group variable (post-test) was very small ( $\eta^2p = 0.016$ ), signifying that the intervention accounted for only a marginal proportion of the total variance in children's social-emotional outcomes. Under the conditions characterizing this study, therefore, the intervention's practical impact was correspondingly modest. With respect to gender, no statistically significant effect was observed ( $p = 0.144$ ); however, the associated effect size ( $\eta^2p = 0.080$ ) suggests a small-to-moderate practical contribution, intimating that gender may exert some influence on social-emotional development—albeit insufficiently to achieve statistical significance in the present sample. The pretest covariate likewise failed to reach statistical significance ( $p = 0.918$ ), indicating that pre-existing differences in children's socio-emotional baseline levels did not materially affect post-intervention outcomes. In aggregate, these findings suggest that the intervention's statistical impact was modest and that outcome variability in this study was driven predominantly by factors external to the programmatic treatment itself. To facilitate visual interpretation of group differences, Figure 2 provides a graphical comparison of mean post-test scores across the experimental and control conditions.



**Figure 2.** The Comparison of Mean Post-test Scores Between the Experimental and Control Groups

The graphical display in Figure 2 reveals that mean post-test scores across the two groups were broadly comparable, with only a marginal numerical advantage observable for the experimental group. The quantitative difference between conditions, while directionally consistent with the expected intervention effect, is negligible. This pattern provides visual confirmation that the sociodrama-based program did not produce a substantial shift in post-intervention outcomes relative to the control condition and converges with the ANCOVA results indicating the absence of a statistically significant group effect on children's social-emotional competencies. The study's findings collectively suggest that sociodrama-based pedagogical activities hold meaningful potential to support children's social-emotional development through participatory and experiential learning processes, even though statistically significant effects were not detected under the present study conditions, despite the absence of formal statistical significance, structured observational records documented discernible developmental tendencies across several key socio-emotional dimensions, including self-awareness, emotional regulation, engagement in social interaction, and adherence to prosocial behavioral norms. Participating children displayed heightened confidence in articulating and expressing emotional states, showed an improving capacity to modulate emotional responses within peer contexts, demonstrated more animated involvement in social play, and exhibited greater internalization of cooperative behavioral expectations, such as sharing and turn-taking. These patterns indicate that sociodrama creates substantive experiential learning contexts within which young children can actively construct socio-emotional understanding through grounded, interpersonal engagement. This conclusion aligns with findings from prior investigations, which have similarly characterized dramatic play as an efficacious pedagogical vehicle for socio-emotional learning, given its capacity to immerse children in emotionally meaningful and contextually anchored social situations (Goldstein & Lerner, 2017; Trawick-Smith et al., 2025; Vasc & Lillard, 2020).

These outcomes align with a broader body of research documenting the capacity of structured dramatic play to enhance emotional awareness, cultivate empathy, and sharpen interpersonal communication (Özcan & İvrendi, 2024). Participatory and experiential methods such as role-play are generally considered more

developmentally generative than didactic, teacher-directed instruction, as they enable children to construct understanding through active, relational processes rather than passive reception (Celume et al., 2020). Beyond individual emotional growth, sociodrama appears to foster prosocial behavioral patterns and cooperative dispositions, competencies that are foundational to early social development (Saputri et al., 2021), while concurrently supporting the regulation of affect and the development of contextually appropriate social responses (Agustina et al., 2025; Young et al., 2024). Additional empirical evidence indicates that structured dramatic play enhances children's capacity for perspective-taking and deepens the quality of peer interaction (Nicolopoulou et al., 2015; Wirahandayani et al., 2023), in addition to facilitating the development of emotional literacy through attentive interpretation of social and contextual cues (Smits-van Der Nat et al., 2024).

The absence of statistical significance may be attributed to a constellation of interrelated methodological and developmental factors. Socio-emotional development is inherently incremental and cumulative, with dimensions such as emotional regulation and responsible behavioral conduct requiring sustained, repeated exposure and ongoing reinforcement to manifest as measurable change (Arace et al., 2021; Denham et al., 2012). The eight-week duration of the present intervention may have been insufficient to produce the magnitude of developmental shift required to achieve statistical detectability. Furthermore, the relatively modest sample size limits statistical power, making it more challenging to detect significant group differences even in the presence of discernible behavioral change. This limitation is consistent with findings from other small-scale intervention studies, in which meaningful developmental progress has been documented in the absence of statistically significant group contrasts (Blewitt et al., 2020; McClelland et al., 2013; Murano et al., 2020).

Gender-stratified analysis indicated that both male and female participants appeared to derive developmental benefits from the sociodrama program, although these gender-differentiated effects did not reach statistical significance. A pattern emerged in which girls tended to demonstrate heightened emotional expressiveness, while boys displayed more pronounced gains in cooperative and collaborative behavior, a pattern consistent with established developmental and gender-normative trends in early socio-emotional development (Chaplin & Aldao, 2013; Else-Quest et al., 2006). Researchers in the field, however, emphasize that both girls and boys stand to benefit substantially from learning environments characterized by relational richness, emotional communication, and collaborative activity (Maria et al., 2025; Woods & Hanish, 2021). Sociodrama, by its very design, provides precisely such environments, creating shared social and emotional spaces where children of all genders can freely explore and process their emotions.

The comparability of baseline social-emotional levels between the two groups lends additional interpretive credibility to the finding that observed post-intervention gains are more plausibly attributable to program participation than to pre-existing group differences. This interpretation aligns with prior research consistently demonstrating that structured social engagement enhances socio-emotional competencies across varying initial developmental profiles (Bierman et al., 2025; Domitrovich et al., 2017). Direct observational records further corroborated these trends, documenting improved classroom participation, increased displays of confidence and empathic responsiveness, and more consistent engagement in classroom interactions. These gains were particularly evident in the domains of social interaction and self-awareness, with more gradual but perceptible development observed in emotional regulation and responsible behavior (Cadima et al., 2015; Jennings et al., 2013).

Beyond individual child outcomes, sociodrama was observed to foster a more constructive and emotionally supportive classroom atmosphere, characterized by higher levels of cooperative engagement, emotional expression, and mutual responsiveness among children. Such environmental qualities have been associated in the broader literature with enhanced learning motivation and the maintenance of supportive educational conditions in early childhood settings (Goble et al., 2019; Hamre et al., 2013; Rucinski et al., 2018). It is important to acknowledge, however, that implementation was not without challenges: children's initial hesitancy and the demands placed on teachers to maintain consistent, skilled facilitation highlight the centrality of guided, purposeful adult involvement in maximizing the educational value of dramatic play experiences (Bautista et al., 2016). Skilled facilitation is particularly important in ensuring that sociodrama activities remain focused, productive, and aligned with intended learning goals.

A further noteworthy observation is that engagement in sociodrama appeared to deepen children's emotional comprehension through direct experiential participation. Within role-play scenarios, children are positioned not merely as observers of social situations, but as active agents who enact, experience, and reflect upon diverse emotional and relational contexts. For instance, a child adopting the role of a peer offering consolation or making an apology gains a qualitatively different understanding of the emotional dimensions of such interactions than could be achieved through verbal instruction alone. This form of learning through embodied social experience enables children to internalize prosocial norms and relational values more deeply. These observations resonate with research underscoring the particular effectiveness of experiential learning methodologies with young children, whose natural orientation toward learning through play and social participation makes such approaches developmentally well-suited (Hakkarainen & Bredikyte, 2020; Weisberg et al., 2016; Whitebread et al., 2017). Several important limitations must be acknowledged in interpreting these

findings. The quasi-experimental design, lacking full random assignment of participants, limits the extent to which causal inference can be drawn, as unmeasured environmental variables may have influenced outcomes in ways not controlled for. Additionally, the reliance on teacher-administered observational instruments introduces the risk of observer bias, particularly given that facilitating teachers were also responsible for assessing the children they taught. These limitations should be carefully considered when evaluating the scope and generalizability of the study's conclusions. Notwithstanding these constraints, the findings collectively suggest that sociodrama-based learning offers meaningful practical value as a pedagogical approach for supporting early childhood social-emotional development, particularly in nurturing self-awareness, emotional regulation, peer-directed social interaction, and responsible behavioral conduct. These results affirm the broader developmental importance of play-based and experiential educational approaches in early childhood, and underscore the need for future research employing larger and more diverse participant samples, extended program durations, and mixed-method analytical frameworks to develop a more robust and comprehensive empirical foundation for sociodrama-based practice.

## CONCLUSION

The results of this study indicate that the structured sociodrama-based play program, as implemented within the scope and duration of the present investigation, did not yield a statistically significant effect on children's social-emotional competency scores when baseline differences were controlled for via ANCOVA. This outcome suggests that the program, at least under the conditions governing this study, was insufficient to produce outcome differences large enough to attain statistical detectability between the two participant groups. Notwithstanding the absence of formal statistical significance, direct observational records captured a consistent pattern of developmental improvement across several social-emotional dimensions, most notably in emotional expressiveness, peer interaction quality, and cooperative behavioral engagement. This pattern lends tentative support to the view that sociodrama-based pedagogy can generate practical educational value by fostering experiential and relational engagement in social learning contexts. Interpretations of these findings must, however, be tempered with appropriate caution, as statistically significant differences between conditions did not corroborate the observed behavioral improvements. Sociodrama may most aptly be understood as a supplementary instructional approach that broadens children's opportunities for emotional exploration, development of interpersonal understanding, and practice of prosocial conduct within authentic and meaningful social contexts. Nonetheless, the limited reach of statistically significant findings in this study highlights the critical importance of carefully evaluating the conditions, duration, and scale under which sociodrama is implemented. Future research in this domain should expand participant samples, extend program duration to capture more cumulative developmental effects, and incorporate mixed-methods research designs to yield richer, more conclusive evidence on the educational potential of sociodrama-based approaches in early childhood settings.

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