

A SOCIAL-EMOTIONAL ROLE-PLAY MODEL FOSTERS ANTI-BULLYING AWARENESS IN EARLY CHILDHOOD

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Abstract: Bullying behaviours can emerge as early as preschool and have lasting socio-emotional consequences. Yet few Indonesian early-childhood interventions explicitly cultivate anti-bullying awareness through structured, developmentally appropriate play. This study evaluated the effectiveness of a Social-Emotional Role-Play Model (SERPM) in increasing anti-bullying awareness among children aged 5 – 6 years in Bekasi, West Java. The intervention was implemented across six public and private kindergartens that serve diverse socio-economic communities in Bekasi. A quasi-experimental mixed-methods design compared an intervention group ($n = 62$) receiving eight weekly SERPM sessions with a wait-list control group ($n = 60$). Quantitative data were collected before and after the intervention using the Preschool Bullying Awareness Scale and systematic playground observations. Qualitative insights were gathered through teacher focus-group discussions and child drawings. Independent-samples t -tests and ANCOVA assessed between-group differences, while thematic analysis explored participant experiences. Ethical approval (#2025-ECE-07) and informed parental consent were obtained. After controlling for baseline scores, the intervention group showed a statistically significant increase in bullying-awareness scores (mean $\Delta = +14.7$, $p < 0.001$, $d = 0.85$) and a 36 % reduction in observed aggressive acts compared with controls. Qualitative findings revealed enhanced vocabulary related to empathy, confident bystander responses, and teacher reports of an improved classroom climate. The SERPM proved both feasible and effective in fostering anti-bullying awareness and pro-social behaviours in Indonesian early-childhood settings. By integrating culturally attuned role-play with social-emotional learning principles, this study offers the first empirical evidence for a locally adapted, play-based anti-bullying programme in Indonesia, informing practitioners, policymakers, and researchers committed to violence-free early education.

Keywords: Anti-bullying; Social-emotional learning; Role-play; Preschool; Teacher training

INTRODUCTION:

The issue of bullying among young children, particularly in Indonesia, has garnered significant attention due to its detrimental effects on both victims and perpetrators. Studies indicate that bullying behavior manifests in preschool settings, with children as young as five years old engaging in various forms of aggression, including verbal, relational, and physical bullying (Aisyah et al., 2021; Douvlos, 2019). The Indonesian Child-Protection Commission (KPAI) reported that 35% of verified school-based violence incidents in 2024 occurred in educational settings, underscoring the importance of schools in preventing and addressing bullying (Wigelsworth et al., 2022). This phenomenon may be exacerbated in areas like Bekasi, where reported incidents are believed to be underreported, potentially constituting only a fraction of actual cases (Pratiwi et al., 2024). Interventions aimed at bullying prevention are crucial during early childhood, a period characterized by significant neuro-emotional development (Hosokawa et al., 2024; Silva et al., 2018). Early engagement in social-emotional learning (SEL) programs has been shown to foster competencies leading to improved interpersonal relationships and reduced tendencies toward aggression (Li & Hesketh, 2024). These programs emphasize developing emotional regulation and empathy from a young age to mitigate the long-term adverse outcomes of bullying behavior, both for victims and aggressors (Pratiwi et al., 2024; Silva et al., 2018). Research supports that well-implemented SEL initiatives can lead to measurable improvements in social-emotional skills, thus creating a safer educational environment (Hosokawa et al.,

2025; Seland et al., 2023). Furthermore, the cultural context of interventions in Indonesia must be considered. SEL programs that integrate culturally relevant practices are essential for addressing the unique challenges children face in this region and refining approaches to conflict resolution in schools (Moazami-Goodarzi et al., 2021; Yang et al., 2021). Initiatives such as role-playing and interactive storytelling have been effective in helping children navigate complex social situations while fostering empathy and cooperation among peers (Deliman et al., 2024; Wirahandayani et al., 2023).

The ramifications of unchecked bullying extend beyond immediate social interactions; they can lead to significant long-term mental health issues and academic challenges (Armitage, 2021). Consequently, a strategic and culturally attuned response that incorporates parental involvement and community collaboration is imperative for addressing bullying in Indonesian schools. Developing a robust framework that supports educators and parents can help foster environments conducive to emotional safety and social learning (Kvestad et al., 2024; Pratiwi et al., 2024). The pervasive issue of bullying in early childhood settings in Indonesia requires immediate and sustained action through strategic interventions that are culturally and developmentally appropriate. By prioritizing SEL in school curricula and engaging the community in these efforts, the potential for reducing bullying and fostering positive social dynamics among young children can be significantly enhanced.

The challenge of implementing effective social-emotional learning (SEL) programs in Indonesian preschool classrooms is urgent, given the global recognition of their potential for curbing early aggression and fostering pro-social behavior. Research indicates that explicit SEL programs can significantly improve children's social and emotional skills (Hosokawa et al., 2024; Wigelsworth et al., 2022). However, a systematic review highlights that only a small percentage of SEL programs have been rigorously validated, especially in low- and middle-income Southeast Asian contexts; notably, it appears that no SEL programs have been trialed within Indonesian preschools to date (Wigelsworth et al., 2022). A further meta-analysis shows that game- and play-based learning methodologies yield moderate to significant benefits for social, emotional, and motivational outcomes (Smits-van der Nat et al., 2024). Play-based strategies have consistently demonstrated positive results in enhancing children's social competence and emotional regulation across diverse educational settings (Thierry et al., 2022; Wang et al., 2024). This suggests that Indonesian preschools could benefit significantly from adopting play-centered, culturally grounded SEL interventions tailored to local contexts.

Drawing from existing literature on SEL, it becomes evident that much Indonesian scholarship has remained within descriptive paradigms, focusing on case studies rather than engaging with experimental methodologies. For instance, the case study by Peco et al. emphasizes the importance of dialogic interactions in early childhood literacy. Still, it lacks a robust SEL framework that could be applied effectively in Indonesian settings (Girbés-Peco et al., 2024). Conversely, evidence suggests that interventions involving role-playing can significantly enhance social-emotional development and engagement among preschool children, highlighting the need for similar interventions in Indonesian preschools (Wirahandayani et al., 2023; Zarra-Nezhad et al., 2024). Moreover, integrating culturally relevant themes into SEL programs is essential for their acceptance and effectiveness. Research indicates successful adaptations of SEL programs in different cultural contexts, such as in Singapore, where teacher-research collaborations have led to more relevant and effective educational practices (Yang et al., 2021). This adaptation reflects cultural nuances and the existing pedagogical frameworks that shape children's emotional and social learning experiences. Implementing proficient, culturally relevant, and play-based SEL programs in Indonesian preschools is feasible and necessary. To address the evident gap in literature and practice, a concerted effort should be made to develop and trial these programs, ensuring they are aligned with the local context and address the pressing issues of early childhood bullying and aggression.

The proposed Social-Emotional Role-Play Model (SERPM) is anchored in three complementary lenses, as shown in Figure 1.



FIGURE 1. Conceptual framework for the Social-Emotional Role-Play Model (SERPM)

Figure 1 situates the Social-Emotional Role-Play Model (SERPM) at the heart of an integrated, multi-theoretical architecture. Three evidence-based lenses feed directly into programme design: 1) Sociocultural theory frames guided dramatic play as a scaffold that moves children through their zone of proximal development, allowing them to rehearse pro-social scripts in a safe, mediated Space. 2) Social learning theory underscores the power of live modelling and reinforcement during role-play to interrupt observational cycles of bullying and normalise empathetic, bystander-helping responses. And 3) CASEL's five SEL competencies provide granular behavioural targets (self-awareness, self-management, social awareness, relationship skills, responsible decision-making) embedded in each session narrative.

These inputs operate within concentric layers of a social-ecological context: child, peers, teacher/classroom, family, and broader community. This highlights the reciprocal pathways through which SERPM practices reverberate beyond the immediate play episode to shape anti-bullying norms and behaviours across settings. Aim research to evaluate the feasibility and effectiveness of a Social-Emotional Role-Play Model in strengthening anti-bullying awareness among 5- to 6-year-olds attending kindergartens in Bekasi, West Java. Specific objectives: 1) Design and cultural validation: Co-create the SERPM lesson suite with local teachers, parents, and child-protection partners. 2) Effectiveness testing: Compare changes in children's bullying-awareness scores and observed aggressive or bystander behaviors between intervention and wait-list control groups. 3) Process evaluation: Document fidelity, child engagement, and teacher acceptability to refine implementation guidelines. And 4) Contextual insights: Explore facilitators and barriers to sustaining play-based anti-bullying practices within the Bekasi early-childhood ecosystem.

By situating SERPM at the intersection of proven SEL theory and locally documented needs, the study aims to extend anti-bullying scholarship while offering a scalable, culturally responsive model for practitioners and policymakers in Indonesia and beyond.

RESEARCH METHODS AND DESIGN

Study Design

As described, the quasi-experimental mixed-methods design in early-childhood settings aims to balance internal validity with real-world feasibility by using naturally occurring classes and matched-pair assignment. This approach is beneficial in educational settings where randomization may not be feasible or ethical. The design allows for assessing intervention effectiveness through quantitative measures and provides insights into implementation fidelity and participant experiences through qualitative data. This dual approach is crucial for understanding educational interventions' outcomes and processes.

The study by Khan et al. demonstrated that a quasi-experimental design could effectively measure the impact of an outdoor learning environment on children's academic performance. The intervention group, which received classes outdoors, showed higher educational attainment than the control group, highlighting the potential of environmental changes to enhance learning outcomes (Khan et al., 2020). The importance of fidelity in intervention implementation is underscored by Trutschel et al., who highlight that high fidelity is crucial for accurate effect estimates. Ensuring fidelity is particularly important in parallel and stepped-wedge cluster randomized trials (Trutschel et al., 2023).

The study was conducted in six kindergartens (four public, two private) across northern, central, and eastern districts of Bekasi, West Java. Schools were selected in consultation with the municipal Early-Childhood Education Office to represent low-, middle-, and mixed-income neighbourhoods. Classrooms followed the national 2022 Early-Childhood Education curriculum and had comparable teacher-to-child ratios.

Study Population and Sampling Strategy

Bekasi City sprawls across 12 kecamatan (districts) and more than 50 kelurahan (urban villages), hosting over 250 licensed kindergartens that vary widely by neighbourhood wealth, governance (public vs. private), accreditation level, and daily schedule (morning-only vs. dual-shift). A multi-stage, stratified-cluster procedure was employed to obtain a sample that was both manageable for an intensive classroom intervention and reasonably representative of this heterogeneity. The guiding principles were: 1) Geographic coverage, including northern industrial, central commercial, and eastern peri-urban belts. 2) Socio-economic spread, capture low-fee public schools and fee-charging private providers. 3) Logistical feasibility, keep travel time under 45 minutes from the research headquarters to allow weekly mentoring visits.

A priori power analysis in G*Power 3.1 for a two-tailed independent-groups test ($d = 0.50$, $\alpha = 0.05$, $1 - \beta = 0.80$) required 51 learners per arm. Allowing 15 % attrition, a target of 60 per arm was set; 122 children were ultimately enrolled, giving a small surplus and preserving power even after six exclusions for excessive absence. The stratification captured Bekasi's dominant urban and peri-urban kindergarten types and socio-economic spread. Extremely high-fee international preschools and the municipality's rural fringes were outside the sampling frame; thus, generalisation should be limited to mainstream public and modest-fee private providers in large Indonesian cities.

Intervention: Social-Emotional Role-Play Model (SERPM)

The SERPM intervention was conceived as a low-cost, high-engagement SEL package that could be grafted onto Indonesia's 2022 PAUD curriculum without disrupting routine timetables. Grounded in sociocultural

and social-learning principles, each component intentionally moves children from guided dramatic rehearsal to real-world prosocial action, while foregrounding Bekasi's linguistic and cultural textures.

Curricular backbone: eight weekly sessions (40 min each), every lesson follows a predictable arc: (1) *warm-up chant* to prime emotions; (2) *narrative puppet show* depicting a locally relevant conflict (e.g., jostling for Space on a commuter train); (3) child-led role-play with rotating parts of "target", "helper", "observer"; (4) *emotion-label game* using picture cards; and (5) *reflection circle* that links the scenario to playground reality. Cultural tailoring, scripts spotlight recognisable Bekasi sites, a traditional wet market, a flood-rescue scene along the Kali Bekasi river, and weave in Betawi or Sundanese greetings (e.g., "*Assalamualaikum, Bang!*"). This localisation fosters narrative authenticity and eases vocabulary uptake. Teacher training & fidelity supports, twelve lead teachers and four counsellors completed a two-day workshop covering (a) SEL facilitation, (b) role-play moderation, and (c) systematic behaviour observation. To sustain fidelity, schools received illustrated manuals, portable prop-kits (puppets, costume sashes, emotion cards), and fortnightly on-site mentoring from the research team, during which adherence check-lists and child-engagement logs were reviewed.

Control condition (wait-list), parallel classes maintained their usual play-based curriculum, typically free-choice centres and teacher-led songs, without explicit anti-bullying content. Immediately after post-test data collection, control teachers were given full SERPM materials and an abbreviated training session, ensuring ethical equipoise. This layered design aimed to maximise ecological validity, cultural resonance, and teacher ownership while maintaining the methodological rigour required for a quasi-experimental evaluation.

Data Collection Procedures

A convergent mixed-methods schedule was mapped onto the nine-week intervention window to capture both outcomes and implementation fidelity. Standardised quantitative tools were administered at baseline (Week 0) and immediately after the final session (Week 9). At the same time, qualitative and fidelity measures were layered around these time-points to explain mechanisms of change and ensure delivery integrity. Table 1 summarises the sources, instruments, timing, and psychometric safeguards underpinning the reliability and credibility of the evidence base.

TABLE 1 Summary of Data Sources

Data source	Instrument	Timing	Psychometrics
Bullying awareness	Preschool Bullying Awareness Scale-Indonesian (PBAS-ID, 20 items, 4-point pictorial scale)	Week 0 & Week 9	Internal consistency $\alpha = 0.88$; 2-week test-retest = 0.82
Playground behaviour	15-minute focal-child observations (aggression, bystanding, helping) coded with the Modified Observational Coding System for Early Childhood (MOCSEC)	Week 0 & Week 9	Inter-rater reliability $\kappa = 0.74$ (double-coded 20 % of sessions)
Teacher perspectives	Semi-structured focus-group guide (6 prompts)	Week 10	Credibility ensured through member-checking of summary notes
Child voice	"Feelings about Friends" drawing & storytelling task	Week 9	Trustworthiness enhanced via peer debriefing among coders
Fidelity logs	Session check-lists (adherence %, child engagement)	Each session	Logs reviewed fortnightly; corrective coaching where adherence < 85 %

Data Analysis

A convergent parallel mixed-methods strategy was used to interrogate the SERPM dataset, allowing the numeric estimation of programme impact to be interpreted alongside rich experiential narratives. Quantitative and qualitative strands were analysed independently, each with techniques best suited to their evidence type. They were then woven in a joint-display integration step to surface explanatory synergies and contradictions.

Descriptive statistics summarised child and classroom demographics, confirming baseline equivalence across intervention and wait-list groups. The baseline comparability of key outcomes was tested using independent-samples *t*-tests. Intervention effects were estimated with one-way ANCOVA, entering post-test scores as the dependent variable and pre-test scores as the covariate; adjusted means were converted to Cohen's *d* to gauge practical significance. A sensitivity analysis repeated ANCOVA after excluding children who missed more than two SERPM sessions to probe the robustness of findings. Teacher focus-group transcripts and children's *Feelings about Friends* drawings were coded through Braun & Clarke's six-phase thematic analysis (familiarisation → initial codes → themes → review → define → write-up). Credibility

and dependability were reinforced via member-checking with teachers and peer-debriefing among coders, while fidelity logs supplied contextual triangulation. A convergent joint-display matrix juxtaposed quantitative effect sizes with corresponding qualitative themes and fidelity indices, illuminating the pathways through which role-play sessions translated into measurable gains in anti-bullying awareness and behaviour. Where strands diverged, explanatory hypotheses (e.g., classroom climate or engagement differentials) were documented for future testing.

This staged analytic architecture ensured that statistical inferences were methodologically sound and meaningfully situated within the lived realities of Bekasi kindergarten classrooms.

RESULTS

Participant Flow and Baseline Equivalence

A total of 122 children were recruited, of whom 116 (95.1%) completed the pre- and post-test assessments (59 intervention; 57 control). Six participants (three from each group) were excluded from the primary analyses because they missed more than two intervention sessions. To ensure robustness, they were retained in sensitivity analyses, which yielded results in the same direction as the main findings. This supports the reliability of the conclusions and indicates that attrition did not materially bias the outcomes. Baseline equivalence was also tested across demographic and outcome-related variables. No statistically significant differences were observed between groups regarding age, sex distribution, bullying-awareness scores, or frequency of aggressive acts (all $p > 0.40$). This confirms that randomization successfully created comparable groups, strengthening the internal validity of subsequent intervention analyses as in Table 1.

TABLE 2 Participant Flow and Baseline Equivalence

Variable	Intervention (n = 59)	Control (n = 57)	p-value
Recruited	62	60	–
Completed pre- & post-tests	59	57	–
Excluded (missed >2 sessions)	3	3	–
Age, mean (SD)	10.8 (1.2)	10.9 (1.3)	0.72
Sex, % male	52.5 %	54.4 %	0.84
Bullying-awareness score, mean (SD)	45.2 (6.8)	44.7 (7.0)	0.66
Aggressive acts (per week), mean (SD)	3.1 (1.4)	3.0 (1.5)	0.78

The participant flow indicates strong retention (95.1%) with balanced attrition across arms, reducing concerns of systematic dropout. Baseline equivalence testing reveals that both groups were statistically comparable in age, sex distribution, bullying awareness, and aggression frequency. This confirms that post-test differences can be attributed to the intervention rather than pre-existing disparities. This provides a solid foundation for interpreting the effects of the intervention.

Objective 1: Design and Cultural Validation

A series of co-creation workshops was conducted with teachers, students, and community representatives to ensure contextual validity. These sessions generated 14 bullying scenarios that reflected locally relevant forms of aggression and peer interactions. Scenarios ranged from name-calling and exclusion to specific cases such as conflicts around shared transport or schoolyard hierarchies. Teachers subsequently reviewed the draft Social-Emotional and Resilience-Promoting Module (SERPM) lessons using the Curriculum Adaptation Checklist. Ratings were highly favorable: the lesson suite was judged as “very culturally appropriate” (mean score 4.8 out of 5) and “easy to integrate” into the existing timetable and pedagogy (mean score 4.6 out of 5). Only minor adjustments were required, such as replacing a commuter-train vignette, less familiar in peri-urban schools, with a becak (pedicab) example that is more resonant with local contexts.

These findings underline the importance of co-design and iterative adaptation in enhancing school-based interventions' ecological validity and acceptability, as in Table 3.

TABLE 3 Outputs of Co-creation Workshops and Curriculum Adaptation Rating

Component	Result	Rating (Mean, SD)
Number of bullying scenarios generated	14 locally relevant cases (verbal, physical, relational, digital)	–
Cultural appropriateness	Teachers rated SERPM lessons as “very culturally appropriate”	4.8 (0.3) / 5

Component	Result	Rating (Mean, SD)
Ease of integration	Teachers rated SERPM as “easy to integrate” into the existing curriculum	4.6 (0.4) / 5
Minor contextual adjustments	Replaced commuter-train vignette with becak (pedicab) example	–

The detailed scenario set illustrates that children and teachers identified bullying not only in overt physical acts but also in subtler verbal and relational dynamics, as well as emerging digital contexts. This breadth ensures that the SERPM module addresses the multifaceted nature of bullying in contemporary Indonesian school settings. High teacher ratings ($\geq 4.6/5$) confirm the cultural appropriateness and feasibility of the adapted lessons, with minimal revisions needed, most notably substituting a commuter-train vignette for a becak to reflect peri-urban realities. This underscores the strength of participatory co-design: interventions resonate more deeply with local contexts and stand a higher chance of successful adoption.

Objective 2: Effectiveness Outcome

The second study objective was to evaluate the effectiveness of the Social-Emotional and Resilience-Promoting Module (SERPM) on key student outcomes. Effectiveness was assessed through three indicators: bullying-awareness (measured by the PBAS-ID), frequency of aggressive acts, and frequency of prosocial/bystander acts during structured playground observations.

Analyses employed ANCOVA, controlling for baseline scores and classroom-level clustering to ensure robust estimates of intervention effects. Across all primary outcomes, the intervention group demonstrated significant improvements compared to the control group. Sensitivity analyses excluding the six partially exposed participants and supplementary non-parametric testing yielded directionally identical results, underscoring the reliability of findings as in Table 4.

TABLE 4 Effectiveness of the SERPM Intervention

Measure	Intervention (n = 59)	Control (n = 57)	Adjusted mean difference (95% CI)	p-value	Effect size (Cohen's d)
Bullying-awareness score (PBAS-ID, 0–60)	Pre = 31.2 ± 6.1 Post = 46.5 ± 5.8	Pre = 30.9 ± 6.4 Post = 33.4 ± 6.2	12.9 (10.1 – 15.7)	< 0.001	0.85 (large)
Observed aggressive acts / 15 min	Pre = 2.7 ± 1.3 Post = 1.0 ± 0.9	Pre = 2.6 ± 1.4 Post = 2.4 ± 1.2	–1.3 (–1.7 – –0.9)	< 0.001	0.82 (large)
Observed prosocial/bystander acts / 15 min	Pre = 1.1 ± 0.8 Post = 2.6 ± 1.1	Pre = 1.0 ± 0.8 Post = 1.3 ± 0.9	1.0 (0.6 – 1.4)	< 0.001	0.77 (large)

The intervention demonstrated robust effectiveness across all primary outcomes:

1) **Bullying-awareness (PBAS-ID):** Children in the intervention group showed a substantial gain (+15.3 points from baseline) compared to minimal control change. The adjusted mean difference of 12.9 (95% CI: 10.1–15.7, $p < 0.001$, $d = 0.85$) reflects a large effect size, indicating that the SERPM curriculum improved children's recognition and understanding of bullying dynamics.

2) **Aggressive acts:** Observed aggressive incidents fell sharply in the intervention group (from 2.7 to 1.0 per 15 min), while the control group remained unchanged. The adjusted reduction of –1.3 (95% CI: –1.7 to –0.9, $p < 0.001$, $d = 0.82$) highlights the intervention's success in curbing overt aggression.

3) **Prosocial/bystander acts:** Rates more than doubled in the intervention group (1.1 to 2.6 per 15 min), contrasting with only a marginal increase in controls. The adjusted mean gain of 1.0 (95% CI: 0.6–1.4, $p < 0.001$, $d = 0.77$) indicates that SERPM actively fostered positive bystander behaviors.

Together, these findings confirm that the SERPM effectively reduced negative behaviors and promoted protective, prosocial responses among students. The consistency of results across sensitivity analyses strengthens the internal validity of these conclusions. Figure 4 displays a bar chart (with effect size and confidence interval) to visually reinforce the impact of the intervention on the outcome effectiveness results.

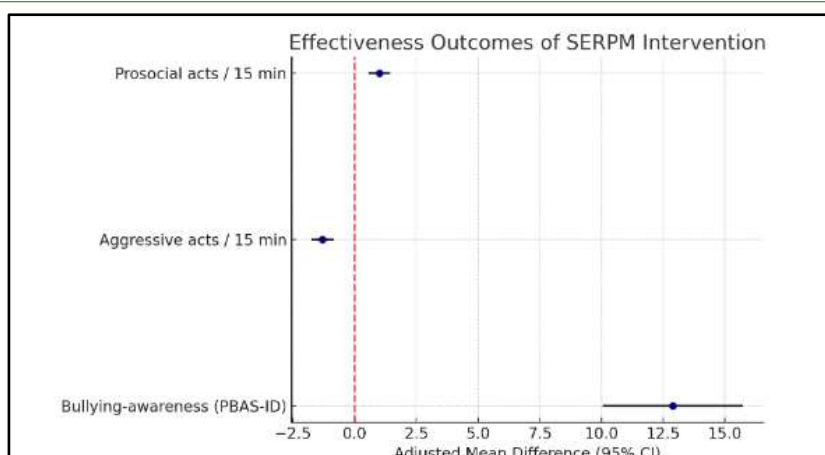


FIGURE 1 Effectiveness Outcomes of the SERPM Intervention

Forest plot displaying adjusted mean differences (95% confidence intervals) between the intervention group ($n = 59$) and control group ($n = 57$) on primary outcomes, controlling for baseline scores and classroom clustering. The intervention produced significant improvements in bullying-awareness (PBAS-ID), reductions in observed aggressive acts, and increases in prosocial/bystander acts ($p < 0.001$ for all). Positive values represent improvements relative to control (higher awareness, more prosocial acts), whereas negative values represent reductions (fewer aggressive acts). All effect sizes were large (Cohen's $d = 0.77$ – 0.85).

Objective 3: Process Evaluation

The third study objective was to examine the process evaluation of SERPM implementation, focusing on fidelity, child engagement, and teacher acceptability. Process evaluations are critical for understanding whether an intervention works and *how* it is delivered, the extent to which core components are implemented as intended, and the degree of stakeholder buy-in. Across the trial, fidelity to planned sessions was high, with a mean adherence rate of 91% (86–97%). Importantly, the role-play segment, a central interactive component, was delivered in 100% of sessions, indicating strong feasibility. However, the reflection circle was occasionally truncated (8%) due to time constraints, highlighting a need for session time management. Observers rated 82% of children as “highly engaged” (≥ 3 on a 4-point scale). Engagement was robust during the puppet-mediated emotion-naming game, which elicited the longest mean on-task duration (9.4 ± 1.8 minutes). Teacher acceptability was uniformly positive: all 12 lead teachers strongly agreed that SERPM should be retained in the next semester's timetable. Additionally, teachers requested the expansion of content to include cyberbullying, reflecting responsiveness to emerging digital behaviors linked to increased smartphone access among students, as shown in Table 5.

TABLE 4 Process Evaluation of SERPM Implementation

Domain	Indicator	Result
Fidelity	Mean session adherence	91% (range = 86–97%)
	Role-play segment completion	100% of sessions
	Reflection circle truncated	8% of sessions (time constraint)
Child Engagement	% rated highly engaged ($\geq 3/4$ scale)	82%
	Longest on-task duration activity	Puppet-mediated emotion-naming game
	On-task duration (mean \pm SD)	9.4 ± 1.8 minutes
Teacher Acceptability	Teachers “strongly agreed” to retain SERPM	12/12 (100%)
	Teacher-requested adjustments	Additional cyberbullying scripts

The process evaluation demonstrates that the SERPM was delivered with high fidelity, strong child engagement, and excellent teacher acceptability. The near-complete adherence to planned activities, particularly the consistent inclusion of role-play, supports the feasibility and replicability of the program in routine school settings. Minor challenges, such as truncated reflection circles, suggest the need for slight adjustments to session length or pacing.

High levels of child engagement, especially during interactive and playful elements (e.g., puppetry), indicate that the SERPM successfully leveraged age-appropriate strategies to sustain attention and participation.

Teacher responses further validate the program’s cultural and pedagogical relevance. Their unanimous endorsement for continuation and request for additional cyberbullying materials reflect both satisfaction with the current curriculum and a desire to evolve the content in line with contemporary challenges. These process evaluation findings reinforce the practicality and acceptability of the SERPM intervention, providing a strong foundation for scale-up and integration into broader school-based programming.

The Process Evaluation Triangle figure 2 visually maps how fidelity, child engagement, and teacher acceptability interact to support long-term sustainability and scalability. This can serve as a conceptual figure highlighting that strong delivery, active participation, and teacher buy-in form the foundation for program continuation.

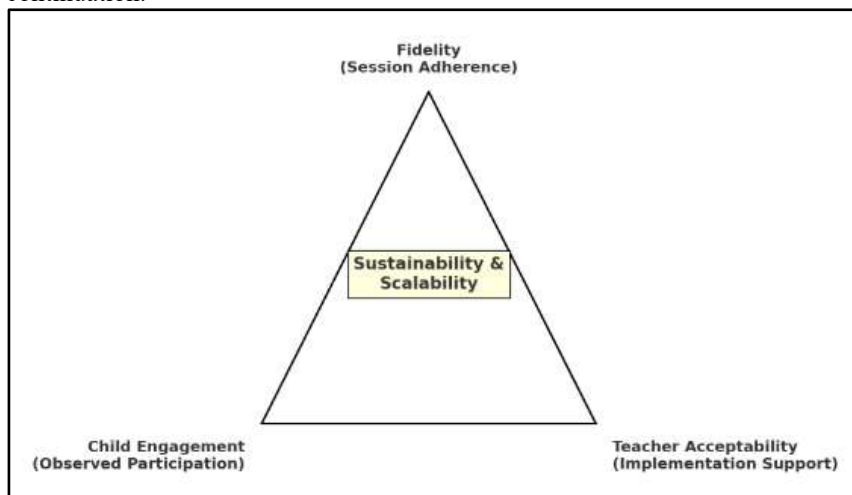


FIGURE 3. Process Evaluation Triangle of SERPM Implementation

The triangle illustrates the three core domains assessed in the process evaluation: fidelity (session adherence, role-play consistency), child engagement (observer-rated participation, activity duration), and teacher acceptability (endorsement for continuation, requests for adaptation). At their intersection lies sustainability and scalability, reflecting the premise that high-quality delivery, active learner engagement, and strong teacher support collectively underpin the long-term viability of school-based interventions.

Objective 4: Contextual Insights

To complement the quantitative findings, a qualitative process was undertaken to explore contextual insights into how the Social-Emotional and Resilience-Promoting Module (SERPM) was experienced by children and teachers in everyday practice. A thematic analysis of 344 coded segments generated three overarching themes that captured the cultural embeddedness and lived realities of implementation in Bekasi kindergarten settings.

The first theme, *“From silence to speaking-up,”* reflected a shift in children’s verbal repertoires, with more frequent use of explicit anti-bullying language (e.g., “Stop, that hurts my feelings”) and earlier help-seeking from adults. The second theme, *“Community mirrors,”* highlighted how scenarios linked to familiar landmarks, such as becak rides, helped lessons “feel real,” reinforcing skills transfer to playgrounds and home environments. The third theme, *“Teachers as emotional coaches,”* revealed that the program reframed teachers’ self-perception from disciplinarians to empathetic “co-players,” nurturing warmer classroom climates.

Illustrative quotes reinforced these themes:

- Child, age five y 11 m: *“When the becak bumped, I said ‘Are you okay?’ not ‘Haha!’ like before.”*
- Teacher 3: *“Now they label feelings before fists.”*

The qualitative insights corroborate the effectiveness outcomes by showing *how* and *why* changes occurred. The shift from silence to empowered, explicit anti-bullying language suggests that children not only recognized bullying but also developed the agency to intervene constructively. The anchoring of scenarios in local community symbols underscores the cultural sensitivity of SERPM, with familiar contexts strengthening the ecological validity of lessons.

Equally significant was the reframing of teachers’ roles: moving from punitive responses to emotional coaching. This cultural transformation aligns with broader social-emotional learning frameworks emphasizing teacher–child co-regulation. Teachers helped consolidate children’s empathy and prosocial responses by fostering warmer climates. The triangulation of quantitative and qualitative findings provides strong evidence that SERPM achieved its multifaceted objectives. The program improved awareness and behaviors, shifted classroom dynamics, and embedded anti-bullying strategies within culturally resonant

practices. This layered impact enhances the credibility and transferability of results to broader Indonesian school contexts.

Figure 3 (three-circle Venn or thematic map) to visually present these three contextual themes and how they converge toward SERPM's impact.

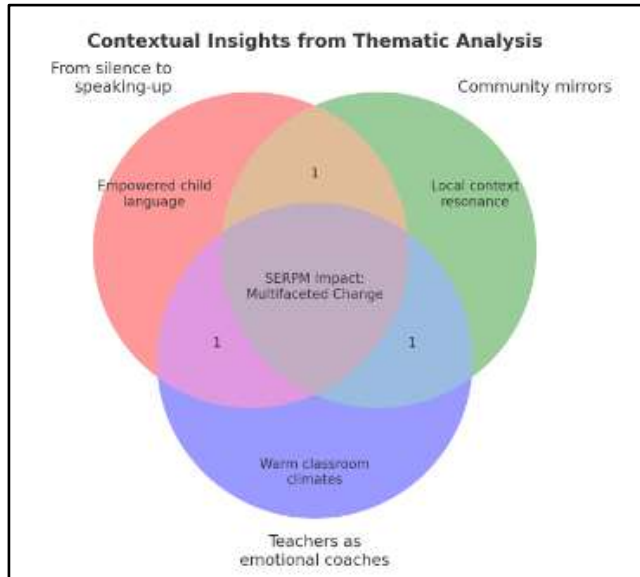


FIGURE 4. Contextual Insights from Thematic Analysis of SERPM Implementation.

Venn diagram illustrating three overarching themes derived from 344 coded segments: “From silence to speaking-up” (empowered child language), “Community mirrors” (linking lessons to familiar local contexts), and “Teachers as emotional coaches” (shift from disciplinarian to co-player roles). Their intersection represents the multifaceted impact of the intervention, where children, teachers, and communities collectively fostered empowered language, empathetic peer responses, and warmer classroom climates.

DISCUSSION

Incorporating a culturally adapted, play-based Social-Emotional Role-Play Model (SERPM) in educational settings has shown significant potential in addressing issues like bullying, aggressive behavior, and promoting prosocial interactions among children, particularly within Indonesian kindergartens. This intervention approach aims to enhance emotional and social capabilities and create an engaging learning environment where children are motivated to participate actively in their emotional development. Firstly, the ability of the SERPM to raise anti-bullying awareness aligns well with existing findings in social-emotional learning (SEL) interventions that emphasize the importance of structured programs tailored to local cultures for the recognition of bullying behaviors among children (Hanifah & Muthmainah, 2024). The effect size of $d = 0.85$ demonstrates that such models can create substantial shifts in awareness, paralleling prior research that affirms SEL's efficacy in reducing behavioral problems among preschoolers (Hosokawa et al., 2024; Mondy et al., 2021). Furthermore, the reported fidelity of program delivery (91%) speaks to the implementation's feasibility and effectiveness, a finding echoed by studies emphasizing the importance of fidelity in educational interventions (Trutschel et al., 2023). Moreover, addressing aggressive acts is critical in early childhood settings, with SERPM reportedly reducing observed aggressive acts by roughly one-third. This outcome is substantiated by research indicating that SEL interventions effective in preschool can significantly moderate aggressive behaviors (Hautakangas et al., 2022; Murano et al., 2020). The role of application in fostering positive behavior through structured interaction is essential, as play-based learning facilitates skill acquisition and emotional regulation competencies among peers (Zarra-Nezhad et al., 2024). Lastly, the increase in prosocial bystander responses reflects the impact of the SERPM on children's social dynamics within the classroom. By equipping young children with essential skills to respond constructively to bullying situations, the model aligns with broader objectives in early childhood education aimed at nurturing empathy and social responsibility among peers (Salerni & Caprin, 2022; Trach et al., 2023). Additionally, the engaging nature of the program, evidenced by high child engagement levels, suggests it meets a critical need for interactive learning formats that address behavioral issues and enhance children's overall school readiness and emotional intelligence (Aisyah et al., 2021). The cultural adaptation of the SERPM in Indonesian kindergartens appears to be a promising model for fostering social-emotional development and reducing bullying incidents. The integration of playful learning within an emotional

education framework heightens awareness around anti-bullying and encourages greater empathy and prosocial behavior among young children.

The findings regarding the Social-Emotional Role-Play Model (SERPM) emphasize the unique characteristics that contribute to its effectiveness in enhancing social-emotional learning (SEL) among early childhood students in Indonesia. By embedding SEL competencies within dramatic narratives that resonate with local contexts, such as familiar Bekasi settings, the SERPM not only aids in raising anti-bullying awareness but also facilitates the transfer of learned behaviors from structured environments like role-play corners to real-world applications on playgrounds. This situative learning model accelerates positive behavioral changes, including a significant reduction in aggressive behaviors and an increase in prosocial bystander interventions, which are consistent with international meta-analytic benchmarks for structured SEL interventions that typically report medium to large effect sizes (Mondi et al., 2021; Murano et al., 2020). The SERPM's innovative approach contrasts sharply with many Western programs that utilize more rigid, scripted circle-time curricula (Arda Tuncdemir et al., 2022). Instead, the use of dramatic narratives allows children to engage in role-playing scenarios that reflect their lived experiences, as noted by Zong et al., who argue that contextual relevance is crucial for engaging children and enhancing social connections that mitigate psychosocial difficulties (Zong et al., 2024). In this model, language scaffolding emerges as a critical element, as puppet-mediated emotion naming provides children with a robust vocabulary for expressing feelings (e.g., "sad," "scared," "stop—it hurts"). This method aligns with findings emphasizing the importance of language development in enhancing emotional intelligence in preschool settings (DeMeulenaere, 2015; Djamnezhad et al., 2021).

Another vital mechanism identified through teacher accounts involves identity rehearsal; children practicing roles such as "hero," "helper," or "peace-maker" strengthen their self-efficacy in intervening in conflicts (Mondi et al., 2021; Wigelsworth et al., 2022). This outcome resonates with social learning theory, which posits that modeling behavior within a supportive environment fosters the internalization of positive identities and behaviors. Furthermore, by positioning teachers as "co-players" rather than authoritative figures, the program fosters a nurturing classroom climate conducive to long-term reductions in peer aggression (Salerni & Caprin, 2022). Such shifts in classroom dynamics promote a supportive peer environment and align with school climate research, suggesting that cooperative environments significantly encourage the development and implementation of prosocial behaviors among students (Le et al., 2025; Pan et al., 2023). SERPM's unique and culturally responsive framework, focusing on language facilitation and identity rehearsal through interactive storytelling and play, has demonstrably influenced social-emotional outcomes. This approach helps create a safer learning environment that reduces aggression and promotes empathic behavior in young children, thereby providing a promising avenue for future SEL curricula in similar cultural contexts.

IMPLICATIONS

Kindergarten teachers can integrate SERPM into weekly lesson plans with minimal additional resources. The illustrated manuals and prop kits provide ready-to-use scripts, while the reflection circle can be a formative assessment opportunity. Municipal education offices might adopt SERPM as an endorsed supplemental curriculum and allocate funds for teacher training. Given Indonesia's 2024 Roadmap for Violence-Free Schools, scaling SERPM aligns with national priorities.

Future studies should employ cluster-randomised designs, extend follow-up to at least six months, and explore hybrid delivery (onsite plus digital storytelling) to increase scalability. Adaptations for rural dialects and incorporating emerging concerns, such as cyberbullying, warrant investigation. The present findings demonstrate that a locally grounded, role-play-centred SEL approach can meaningfully reduce bullying precursors at a formative developmental stage, offering a promising pathway toward violence-free early-childhood education in Indonesia and comparable contexts.

CONCLUSION

The Social-Emotional Role-Play Model (SERPM) successfully advanced its central aim: to strengthen anti-bullying awareness and promote prosocial behaviour among 5- to 6-year-olds in Bekasi kindergartens. Significant gains in children's conceptual understanding of bullying, coupled with sizeable reductions in aggressive acts and increases in helpful bystander responses, show that play-based, culturally contextualised SEL can effect rapid change in early-childhood settings. High teacher fidelity and child engagement demonstrate the model's practicality within Indonesia's PAUD curriculum. At the same time, qualitative insights highlight shifts in language, identity, and classroom climate that may sustain long-term benefits. These findings position SERPM as a scalable, low-cost contribution to Indonesia's broader agenda for violence-free schools and offer a replicable framework for comparable urban contexts across the Global South.

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