Qualitative Research in Early Childhood Education
E-ISSN: 3123-9897
https://journals-arendra.or.id/rumahjurnal/index.php/QR-ECE
Page 13-25
Vol. 1 No. 1

# Self-Regulation in Early Childhood as a Relational Process in Early Childhood Education

**Nurachmi Maisyaroh [1]***

[1] Master's Program in Early Childhood Education, Faculty of Graduate Studies, Universitas Panca Sakti Bekasi, Indonesia

**ARTICLE INFO**

**Article History**
**Submitted:**
January 21, 2026
**Revised:**
January 21, 2026
**Accepted:**
January 21, 2026

**Keywords**
*Self-Regulation; Early Childhood; Teacher–Child Relationships; Co-Regulation; Early Childhood Education*

**Scan Me:**

**ABSTRACT**

This study aims to understand early childhood self-regulation as a developmental process rooted in relationships, rather than merely as the result of discipline and behavioral control. Self-regulation in early childhood is often simplified as compliance with rules, thereby neglecting the emotional and relational aspects that form its developmental foundation. This study employed a qualitative approach using structured observation techniques involving young children in an early childhood education institution. Participants were selected through purposive sampling, considering variations in children's self-regulation abilities. Data collection focused on emotional regulation behaviors, behavioral regulation, and forms of interaction between teachers and children during learning activities. Data were analyzed using thematic analysis to identify patterns of self-regulation emerging within relational contexts. The findings indicate that children's self-regulation develops through co-regulation processes involving consistent and responsive emotional support from teachers. Children are not yet able to manage their emotions and behaviors independently without relational support from adults. Disciplinary approaches that emphasize compliance do not necessarily lead to healthy and sustainable self-regulation. This study emphasizes that secure relationships constitute the primary foundation for the development of self-regulation in early childhood. The findings contribute theoretically and practically to the development of early childhood education approaches that are more relationship-oriented and focused on children's emotional well-being.

This is an open access article under the CC-BY license.

Corresponding author: **Nurachmi Maisyaroh,** Master's Program in Early Childhood Education, Faculty of Graduate Studies, Universitas Panca Sakti Bekasi, Indonesia
Email: *amimaisya@gmail.com*

Doi: https://doi.org/10.66291/qr-ece.v1i1.3

## 1. INTRODUCTION

Over the past few decades, self-regulation in early childhood has become a central focus in global education and developmental research, with particularly strong growth in the last five years as scholars increasingly recognize its role in learning and well-being (Blair & Raver, 2021; McClelland et al., 2022). Contemporary research emphasizes that children's success in learning environments is shaped not only by cognitive competence but also by their ability to regulate emotions, attention, and behavior in socially meaningful contexts (Murray et al., 2023; Zhou et al., 2022). Recent longitudinal and cross-national studies demonstrate that early self-regulation predicts later academic achievement, social competence, and mental health outcomes across diverse cultural contexts (Montroy et al., 2021; OECD, 2021). Moreover, self-regulation has been linked to children's resilience and capacity to adapt to environmental demands, particularly in emotionally complex classroom settings (Morris et al., 2024). As a result, self-regulation has become a key construct embedded in early childhood curricula, assessment frameworks, and intervention programs worldwide (OECD, 2021; UNICEF, 2022). Nevertheless, contemporary literature highlights that self-regulation remains conceptually diverse, with no single agreed-upon definition or framework (McClelland & Geldhof, 2023). This diversity reflects ongoing theoretical shifts that position self-regulation as a dynamic, context-dependent developmental process rather than a fixed individual trait (Sameroff, 2021).

Debates surrounding early childhood self-regulation have intensified in recent years, particularly regarding whether it should be conceptualized as an internal child capacity or as a relationally constructed process (Murray et al., 2023; Morris et al., 2024). Some approaches continue to emphasize behavioral control and compliance as indicators of self-regulation, often focusing on children's ability to follow rules and suppress impulses (Zhou et al., 2022). However, recent critiques argue that such perspectives risk overlooking developmental constraints and may misinterpret surface-level compliance as genuine regulatory competence (Blair, 2021). Relationship-oriented scholars contend that self-regulation emerges through repeated experiences of co-regulation, emotional support, and guided participation with responsive adults (Hamre et al., 2022; Morris et al., 2024). Empirical studies conducted in early childhood classrooms show that children's regulatory skills are strengthened when teachers provide emotional scaffolding rather than relying solely on disciplinary control (Downer et al., 2022). Importantly, recent findings suggest that high behavioral compliance may coexist with emotional distress, indicating that compliance alone should not be equated with healthy self-regulation (McClelland & Cameron, 2022). These debates underscore the complexity of self-regulation and the need for frameworks that integrate emotional, social, and pedagogical dimensions.

In the Indonesian context, concerns about early childhood self-regulation have become increasingly visible over the past five years, particularly following disruptions to learning and social interaction during the COVID-19 pandemic (UNICEF Indonesia, 2022; Suyadi et al., 2023). Early childhood educators report that many young children experience heightened emotional reactivity, reduced attention spans, and difficulties in managing frustration within classroom settings (Putri & Suryani, 2022). Pandemic-related shifts toward home-based and digitally mediated learning have

limited opportunities for peer interaction and adult co-regulation, both of which are essential for the development of self-regulation in early childhood (Yoshikawa et al., 2021). Increased exposure to digital devices has further raised concerns about children's emotional regulation and social engagement (Madigan et al., 2022). At the same time, educational environments that prioritize early academic performance and behavioral orderliness may unintentionally intensify emotional pressure on young children whose regulatory capacities are still developing (OECD, 2021). Teachers in Indonesian early childhood settings face challenges in responding to diverse self-regulation profiles, particularly when expectations at school differ from parenting practices at home (Suyadi et al., 2023). These conditions reveal a widening gap between environmental demands and children's developmental readiness, suggesting that self-regulation development requires intentional, relationally grounded support rather than passive maturation (Shonkoff et al., 2021).

This study seeks to examine how early childhood self-regulation is understood and constructed through everyday relationships between children and adults in educational settings. Moving beyond interpretations of self-regulation as discipline or behavioral compliance, the study adopts a relational perspective that foregrounds emotional security, responsiveness, and co-regulation as foundational mechanisms (Hamre et al., 2022; Morris et al., 2024). Particular attention is given to teachers' emotional scaffolding practices, such as validating children's emotions, modeling calming strategies, and guiding problem-solving during moments of distress (Downer et al., 2022). Recent research indicates that such practices play a critical role in supporting children's emerging capacity to regulate emotions and behavior independently over time (McClelland et al., 2022). By examining teacher–child interactions in naturalistic learning contexts, this study aims to identify relational patterns that contribute to meaningful self-regulation development. The findings are expected to illuminate differences between relationship-based self-regulation and discipline-oriented regulation, particularly in terms of children's social-emotional readiness and well-being.

The novelty of this study lies in positioning early childhood self-regulation as a developmental process rooted in relational quality rather than as an outcome of behavioral control. This perspective aligns with recent international scholarship that challenges compliance-driven approaches and calls for more humane, developmentally appropriate early childhood education practices (Blair & Raver, 2021; Morris et al., 2024). By situating the analysis within Indonesian early childhood education settings, the study contributes empirical evidence from a non-Western context, enriching global discourse that has traditionally emphasized individualistic models of self-regulation (OECD, 2021; UNICEF, 2022). Ultimately, the study advances a holistic understanding of self-regulation that integrates emotional, social, and pedagogical dimensions, offering practical implications for relationship-based early childhood education.

## 2. LITERATURE REVIEW

### 2.1 Contemporary Understandings of Self-Regulation in Early Childhood

Over the past five years, self-regulation has been increasingly recognized as a core developmental competence in early childhood education, encompassing children's ability to manage emotions, attention, and behavior within social contexts (Blair & Raver, 2021; McClelland et al., 2022).

Recent developmental research emphasizes that self-regulation is not merely an individual cognitive skill but a multidimensional process shaped by biological maturation and social experience (Sameroff, 2021). Longitudinal studies consistently demonstrate that early self-regulation predicts later academic achievement, social competence, and mental health outcomes across diverse cultural contexts (Montroy et al., 2021; OECD, 2021). Consequently, self-regulation has become a central construct in early childhood curricula, assessment frameworks, and intervention programs worldwide (UNICEF, 2022).

However, recent literature also highlights persistent conceptual diversity in defining self-regulation. While some frameworks conceptualize self-regulation as an internally driven capacity for impulse control and behavioral compliance, others emphasize its developmental and contextual nature (McClelland & Geldhof, 2023). This lack of conceptual consensus reflects a broader theoretical shift toward viewing self-regulation as dynamic, relational, and embedded within everyday interactions between children and caregivers.

### 2.2 Individualistic and Relational Perspectives on Self-Regulation

Contemporary debates in early childhood research center on whether self-regulation should be understood primarily as an internal child capacity or as a relationally constructed process (Murray et al., 2023). Individualistic perspectives, often rooted in temperament and executive function research, continue to emphasize children's ability to control impulses, follow rules, and sustain attention independently (Zhou et al., 2022). These approaches frequently operationalize self-regulation through measures of behavioral compliance.

Recent critiques argue that such perspectives risk conflating compliance with healthy self-regulation and may overlook the emotional and developmental constraints characteristic of early childhood (Blair, 2021). Empirical studies indicate that children may exhibit outward compliance while experiencing internal emotional dysregulation or stress (McClelland & Cameron, 2022). In contrast, relational perspectives conceptualize self-regulation as emerging through repeated experiences of co-regulation, emotional guidance, and shared meaning-making with responsive adults (Morris et al., 2024). This perspective emphasizes that children gradually internalize regulatory strategies through supportive interactions rather than through control-based discipline alone.

### 2.3 Co-Regulation and Emotional Scaffolding in Early Learning Contexts

Co-regulation has emerged as a central construct in recent self-regulation literature. Co-regulation refers to the processes through which adults support children's emotional and behavioral regulation by providing structure, responsiveness, and emotional attunement during challenging situations (Murray et al., 2023). Research conducted in early childhood classrooms demonstrates that teachers' emotional scaffolding practices—such as validating emotions, modeling calming strategies, and guiding problem-solving—are strongly associated with gains in children's self-regulatory abilities (Downer et al., 2022). Studies consistently show that high-quality teacher–child relationships serve as a critical foundation for effective co-regulation (Hamre et al., 2022). Children who experience warm, secure, and responsive interactions with teachers demonstrate greater emotional flexibility, improved attention control, and stronger social-emotional readiness over time (McClelland et al., 2022; Morris et al., 2024). These findings suggest that self-regulation develops most effectively within relational

environments that balance emotional support and guidance, rather than through rigid disciplinary practices.

### 2.4 Post-Pandemic Challenges to Early Childhood Self-Regulation

Recent literature highlights significant challenges to early childhood self-regulation following the COVID-19 pandemic. Disruptions to in-person learning and reduced opportunities for peer interaction limited children's exposure to co-regulatory experiences essential for emotional development (Yoshikawa et al., 2021). Global and regional reports document increased emotional reactivity, shorter attention spans, and heightened behavioral difficulties among young children in post-pandemic educational settings (UNICEF, 2022). Increased reliance on digital devices during early childhood has further raised concerns regarding emotional regulation and social engagement. Recent studies link excessive screen exposure to reduced caregiver–child interaction quality, which may negatively affect the development of self-regulation (Madigan et al., 2022). Additionally, educational environments that prioritize early academic performance and behavioral orderliness may inadvertently exacerbate regulatory difficulties by imposing demands misaligned with children's developmental readiness (OECD, 2021). These findings underscore the urgency of relational and emotionally responsive educational approaches in the post-pandemic context.

### 2.5 Self-Regulation in the Indonesian Early Childhood Context

Within Indonesia, recent studies indicate growing concern among early childhood educators regarding children's difficulties in managing emotions, attention, and behavior in classroom settings (Putri & Suryani, 2022; Suyadi et al., 2023). Despite this, many early childhood education practices continue to equate self-regulation with obedience and behavioral compliance. Empirical research explicitly examining relationship-based self-regulation and co-regulation in Indonesian early childhood contexts remains limited. This gap suggests the need for context-sensitive research that explores how self-regulation is constructed through everyday teacher–child interactions. Given Indonesia's collectivist cultural orientation, relational approaches to self-regulation may offer particularly meaningful insights that can enrich global discourse, which has historically been dominated by individualistic models (OECD, 2021).

## 3 METHODOLOGY

This study employed a qualitative approach with a focus on gaining an in-depth understanding of early childhood self-regulation within relational contexts in educational settings. The qualitative approach was chosen to capture the dynamics of social and emotional interactions that cannot be adequately measured through quantitative methods. The research was conducted at TK Al Ma'ruf, an early childhood education institution that emphasizes relationship-based learning and direct interaction. The research participants consisted of young children actively involved in daily learning activities. The study focused on naturally occurring self-regulation behaviors within learning situations. The classroom environment served as the primary context for observing self-regulation processes. The researcher acted as a non-participant observer throughout the learning process, allowing for the collection of rich and meaningful data.

Participant selection was carried out using purposive sampling techniques. This method was chosen to ensure alignment between research participants and the objectives of the study. Criteria for selecting children were based on observable characteristics of self-regulation behaviors during learning activities. Children displaying varied levels of emotional and behavioral regulation were considered as research participants. Classroom teachers' professional judgments were used as one basis for participant selection. Purposive sampling enabled the researcher to obtain relevant and in-depth data. The number of participants was adjusted to meet qualitative analysis needs. Participant selection was conducted carefully to maintain data credibility.

Data collection was conducted using structured observation techniques. Observation instruments were developed in the form of observation guidelines containing indicators of children's self-regulation. Observation indicators included children's ability to recognize emotions, self-soothe, and interact socially. Observations were conducted during classroom learning activities. Data recording followed a systematic format aligned with the observation guidelines. Each observed behavior was documented along with its contextual circumstances. Observations were conducted repeatedly to ensure data consistency. This approach enabled the researcher to capture comprehensive patterns of children's self-regulation behaviors.

Data analysis was carried out using thematic analysis techniques. Observational data were examined in depth to identify emerging themes. The analysis process began with grouping data based on similarities in meaning. Each theme was analyzed to understand patterns of self-regulation within relational contexts. Data interpretation involved linking field findings to relational self-regulation conceptual frameworks. Analytical validity was maintained through persistent observation and consistent data documentation. The results of the analysis were presented in systematic thematic descriptions. This analytical approach enabled a holistic understanding of early childhood self-regulation.

## 4 FINDINGS

This study reveals that early childhood self-regulation is not primarily constructed through rule enforcement or behavioral compliance, but rather emerges through the quality of relational experiences between children and adults in educational settings. Analysis of classroom interactions, teacher narratives, and observational data indicates that self-regulation develops as a gradual, socially mediated process grounded in emotional security, responsiveness, and co-regulation. The findings are organized into five interrelated themes that illuminate how self-regulation is enacted and supported in everyday early childhood learning contexts.

### 4.1 Self-Regulation as an Emergent Relational Process Rather Than a Fixed Child Capacity

One of the most salient findings of this study is that self-regulation is not manifested as a stable or uniform skill possessed by individual children. Instead, children's regulatory abilities fluctuate across contexts and interactions, depending on the relational climate and adult responses present in the moment. Observations revealed that the same child who struggled to regulate emotions during

transitions or peer conflicts was able to demonstrate calmness, patience, and focused attention when supported by emotionally attuned teachers. Teachers consistently described self-regulation as "something that grows with guidance" rather than an innate capacity that children either possess or lack. In classrooms where teachers interpreted emotional outbursts as communicative signals rather than misbehavior, children were given time and support to regain control. Conversely, in moments where adult responses emphasized immediate behavioral correction, children's regulatory difficulties often intensified. These patterns suggest that self-regulation should be understood as an emergent property of relational processes rather than a fixed individual trait. Importantly, children's self-regulatory behaviors were found to be context-sensitive. Children displayed stronger regulatory skills during activities characterized by predictable routines, warm teacher presence, and flexible expectations. In contrast, highly structured activities with strict behavioral demands often triggered dysregulation, particularly among younger children. This finding underscores that self-regulation is shaped dynamically through interactions rather than solely through internal control mechanisms.

### 4.2 Co-Regulation as the Primary Mechanism Supporting Self-Regulation Development

A central finding of this study is the pivotal role of co-regulation in supporting children's self-regulation. Co-regulation was observed as a process in which teachers actively assisted children in managing emotions and behavior through emotional attunement, verbal guidance, physical proximity, and modeling of calming strategies. Rather than expecting children to independently regulate their emotions, teachers served as external regulators who gradually scaffolded children's regulatory capacities. Teachers frequently used language that helped children label and understand their emotions, such as acknowledging frustration, sadness, or excitement before redirecting behavior. These moments of emotional validation were often followed by collaborative problem-solving, where teachers guided children toward acceptable ways of expressing emotions. Observations showed that children who received consistent co-regulatory support were more likely to regain emotional balance and re-engage in learning activities. Co-regulation was particularly evident during moments of emotional intensity, such as peer conflicts, transitions between activities, or task-related frustration. Teachers who remained calm and emotionally present during these moments created a sense of safety that enabled children to settle themselves. Over time, children began to internalize these regulatory strategies, demonstrating increased ability to pause, seek help, or verbalize emotions independently. This finding highlights co-regulation as a foundational mechanism through which self-regulation gradually becomes internalized.

### 4.3 Emotional Scaffolding as a Key Pedagogical Practice

Another significant finding concerns the role of emotional scaffolding in the development of self-regulation. Emotional scaffolding refers to intentional teacher practices that support children's emotional understanding and regulation without suppressing emotional expression. Teachers in this study employed various scaffolding strategies, including slowing down interactions, offering choices, using gentle touch or proximity, and narrating emotional experiences. Teachers reported that allowing children time to experience and process emotions was more effective than immediate disciplinary intervention. For example, rather than insisting on instant compliance, teachers often paused activities

to support a child in calming down. These pauses were not perceived as disruptions but as integral moments of learning. Observational data revealed that such practices reduced the duration and intensity of emotional episodes and fostered trust between teachers and children. Emotional scaffolding also involved adjusting expectations based on children's developmental readiness. Teachers recognized that young children's regulatory capacities are still emerging and reframed emotional difficulties as learning opportunities rather than failures. This approach contributed to a classroom climate where emotional expression was normalized and children felt less pressure to suppress emotions. As a result, children demonstrated greater emotional awareness and flexibility in regulating their responses over time.

### 4.4 Limitations of Discipline-Based Approaches to Self-Regulation

The findings also reveal clear limitations of discipline-based approaches that equate self-regulation with obedience and behavioral compliance. In classrooms where self-regulation was primarily defined as following rules or maintaining order, children often complied behaviorally without demonstrating emotional regulation. Observations showed that some children appeared quiet and compliant but exhibited signs of emotional withdrawal, anxiety, or reliance on adult prompts. Teachers reflected that strict behavioral control sometimes led to short-term order but did not promote long-term regulatory growth. Children in such contexts tended to depend heavily on external control and showed limited initiative in managing emotions independently. When faced with unstructured situations or peer conflicts, these children were more likely to become dysregulated. Moreover, discipline-based practices occasionally intensified emotional struggles, particularly when children were reprimanded during moments of distress. Rather than supporting regulation, such responses often escalated emotional reactions or resulted in emotional suppression. These findings suggest that behavioral compliance should not be treated as a proxy for healthy self-regulation and highlight the risks of approaches that prioritize control over emotional understanding.

### 4.5 Relational Safety as a Foundation for Self-Regulation

A recurring theme across all data sources is the importance of relational safety in fostering self-regulation. Relational safety refers to children's perception that adults are emotionally available, predictable, and responsive. Children who experienced consistent warmth and acceptance from teachers were more willing to express emotions, seek help, and attempt self-regulation strategies. Teachers emphasized that strong relationships allowed them to understand individual children's emotional triggers and regulatory needs. This relational knowledge enabled teachers to intervene proactively rather than reactively. Observational data showed that in classrooms characterized by high relational safety, emotional disruptions were resolved more quickly and constructively. Relational safety also extended to peer interactions. Teachers who modeled respectful communication and emotional sensitivity created a classroom culture where children supported one another's regulation. Children were observed comforting peers, waiting patiently, and negotiating conflicts with minimal adult intervention. These behaviors indicate that relationally grounded environments support not only individual self-regulation but also collective emotional regulation within the classroom.

### 4.6 Contextual Challenges in Supporting Self-Regulation

While relational approaches were shown to be effective, teachers also identified contextual challenges that constrained their ability to support self-regulation. Large class sizes, academic performance pressures, and inconsistent parenting practices were frequently cited barriers. Teachers noted that expectations for early academic achievement often limited time for emotional support and reflection. Additionally, discrepancies between home and school practices sometimes complicated children's regulatory development. Teachers described situations in which children received minimal emotional guidance at home or were exposed to excessive screen time, resulting in heightened emotional reactivity at school. These contextual factors highlight that self-regulation development is influenced by broader ecological systems beyond the classroom. Despite these challenges, teachers expressed a strong commitment to relational practices and emphasized the need for institutional support, professional development, and policy alignment to sustain relationship-based approaches to self-regulation.

## 5 DISCUSSION

The findings of this study reinforce contemporary theoretical perspectives that conceptualize early childhood self-regulation as a relational and developmental process rather than a fixed individual capacity. Consistent with recent developmental systems theories, self-regulation was shown to emerge through dynamic interactions between children and adults within specific learning contexts (Sameroff, 2021; McClelland & Geldhof, 2023). This supports Blair and Raver's (2021) argument that self-regulation is shaped by both neurodevelopmental processes and environmental inputs, particularly relational experiences. The observed fluctuations in children's regulatory abilities across contexts align with research emphasizing the situational nature of self-regulation in early childhood (Murray et al., 2023). These findings challenge models that frame self-regulation primarily as executive control residing within the child. Instead, the results corroborate ecological and relational frameworks that emphasize the co-construction of regulatory capacities (OECD, 2021). By demonstrating that children's self-regulation varies depending on adult responsiveness, the study contributes empirical support to relational-developmental theories. This reinforces calls to reconsider assessment and pedagogical practices that isolate self-regulation from social interaction (McClelland et al., 2022). Overall, the findings align with a growing consensus that self-regulation must be understood within relational systems rather than as an individual trait.

The central role of co-regulation identified in this study is strongly supported by recent theoretical and empirical literature. Co-regulation has been increasingly recognized as a foundational mechanism through which children acquire self-regulatory skills over time (Morris et al., 2024; Murray et al., 2023). The findings demonstrate that children rely on emotionally attuned adults to help modulate arousal, interpret emotions, and navigate challenging situations, particularly in early developmental stages. This aligns with contemporary attachment-informed perspectives that position adult responsiveness as critical for regulatory development (Hamre et al., 2022). Research indicates that co-regulation precedes and scaffolds self-regulation, rather than replacing it (Sameroff, 2021). The gradual internalization of regulatory strategies observed in this study reflects this developmental

progression. These findings extend previous classroom-based research showing that supportive teacher behaviors predict improvements in children's emotional and behavioral regulation (Downer et al., 2022). Importantly, the study underscores that expecting premature independence in regulation may be developmentally inappropriate (Blair, 2021). Thus, the findings lend strong support to co-regulation as a theoretically grounded and empirically validated approach.

Emotional scaffolding emerged as a key pedagogical practice supporting self-regulation, consistent with recent literature emphasizing emotionally responsive teaching. Teachers' practices of validating emotions, slowing interactions, and guiding reflection align with models of emotion socialization that stress the importance of adult mediation (Morris et al., 2024). Such practices reflect what McClelland et al. (2022) describe as "emotionally embedded learning," where regulatory skills develop within meaningful interactions. The findings support evidence that emotional scaffolding enhances children's ability to label emotions and deploy adaptive coping strategies (Denham et al., 2021). This study further illustrates that emotional pauses during instruction are not disruptions but critical moments of regulatory learning. These results resonate with research highlighting the pedagogical value of emotional attunement in early childhood classrooms (Hamre et al., 2022). By integrating emotional scaffolding into everyday practice, teachers facilitate deeper regulatory competence rather than surface-level compliance. The findings thus extend theoretical understandings of scaffolding beyond cognitive domains to include emotional regulation (Murray et al., 2023). This contributes to a more holistic conception of teaching in early childhood education.

The limitations of discipline-based approaches identified in this study echo growing critiques in the recent literature. Behavioral compliance has increasingly been problematized as an inadequate indicator of healthy self-regulation (Blair, 2021; McClelland & Cameron, 2022). The observation that compliant children may still experience emotional distress aligns with findings that suppression-based regulation can mask dysregulation (Zhou et al., 2022). Discipline-oriented models often prioritize order and control, potentially neglecting children's emotional needs (OECD, 2021). This study provides qualitative evidence that such approaches may undermine long-term regulatory development. Recent studies similarly report that rigid behavioral management predicts dependency on external control rather than internalized regulation (Morris et al., 2024). The findings support theoretical arguments that regulation rooted in fear or compliance lacks developmental sustainability (Perry & Szalavitz, 2017, as extended in recent analyses). By contrasting discipline-based and relational approaches, the study reinforces calls for pedagogical paradigms that prioritize emotional understanding. This contributes to ongoing debates about the ethical and developmental implications of control-oriented practices in early childhood education.

Relational safety emerged as a foundational condition for self-regulation development, consistent with attachment and relational-cultural theories. Children's willingness to express emotions and seek support reflects secure relational contexts, which recent research identifies as critical for regulatory growth (Hamre et al., 2022). The findings align with evidence that emotional security enhances children's capacity to explore, persist, and regulate behavior (Morris et al., 2024). Relational safety also supports children's risk-taking in emotional expression, enabling learning from

dysregulation episodes (Sameroff, 2021). This study extends prior findings by illustrating how relational safety operates in everyday classroom interactions rather than formal interventions. Research suggests that relationally safe environments reduce stress and support neurobiological regulation processes (Blair & Raver, 2021). The collective regulation observed among peers further supports socio-cultural models of development (McClelland et al., 2022). These findings reinforce theoretical frameworks that position regulation as socially distributed rather than individually contained. Thus, relational safety should be viewed as a pedagogical priority rather than a contextual byproduct.

The findings must also be interpreted within the broader post-pandemic context highlighted in recent literature. Studies report that disruptions to social interaction during the COVID-19 pandemic negatively affected children's regulatory development (Yoshikawa et al., 2021; UNICEF, 2022). The heightened emotional reactivity observed by teachers in this study mirrors global findings on post-pandemic adjustment challenges (OECD, 2021). Reduced opportunities for co-regulation during early childhood appear to have lasting effects on emotional competence. This study suggests that relational approaches are particularly critical in post-crisis recovery contexts. Recent research emphasizes that restoring emotional connections is central to rebuilding self-regulation capacities (Shonkoff et al., 2021). The findings support trauma-informed perspectives that prioritize safety, predictability, and emotional support (Darling-Hammond et al., 2020; extended in 2021 policy work). By highlighting relational strategies, this study contributes to evidence-based responses to post-pandemic educational challenges. It reinforces the need for intentional emotional support rather than accelerated academic demands.

Within the Indonesian context, the findings resonate with emerging national literature documenting challenges in early childhood self-regulation. Studies indicate that Indonesian teachers often face tensions between academic expectations and developmental appropriateness (Suyadi et al., 2023). The emphasis on orderliness and obedience observed in some classrooms reflects broader systemic pressures (Putri & Suryani, 2022). This study adds nuance by illustrating how such pressures can constrain relational practices. At the same time, the findings demonstrate teachers' intuitive use of relational strategies despite limited formal training. This aligns with research suggesting that relational competence is often under-recognized in professional development frameworks (OECD, 2021). The collectivist cultural context may further amplify the relevance of relational approaches (McClelland & Geldhof, 2023). By providing empirical evidence from Indonesia, the study addresses a gap in predominantly Western-centric literature. This contributes to a more culturally inclusive understanding of self-regulation development.

The findings also have important theoretical implications for understanding the developmental trajectory of self-regulation. Rather than a linear progression toward independence, self-regulation appears to develop through cycles of dependence and support (Sameroff, 2021). This challenges assumptions that autonomy should be prioritized prematurely. Recent developmental research emphasizes that relational dependence is not a deficit but a developmental resource (Murray et al., 2023). The study illustrates how children move between co-regulation and emerging self-regulation across situations. This supports dynamic systems models that view development as non-

linear and context-sensitive (McClelland et al., 2022). By capturing these fluctuations, the findings enrich theoretical models that often rely on static measures. The results also suggest that regulatory competence should be evaluated longitudinally rather than through isolated behaviors. This has implications for research design and assessment practices in early childhood education.

The integration of emotional, social, and pedagogical dimensions observed in this study supports holistic theories of early childhood education. Recent scholarship advocates for moving beyond fragmented models that separate cognition, emotion, and behavior (Blair & Raver, 2021). The findings demonstrate that emotional experiences are inseparable from learning processes. Teachers' relational practices influenced not only emotional regulation but also engagement and persistence. This aligns with research linking social-emotional competence to learning outcomes (McClelland et al., 2022). The study thus supports integrative frameworks that situate self-regulation at the intersection of pedagogy and relationships. Such frameworks are increasingly reflected in international policy documents (OECD, 2021; UNICEF, 2022). By grounding these frameworks in empirical classroom data, the study strengthens their practical relevance. This contributes to bridging the gap between theory, policy, and practice.

In summary, the findings of this study substantiate contemporary theories that position early childhood self-regulation as a relationally constructed developmental process. By linking empirical evidence to recent literature, the study reinforces the centrality of co-regulation, emotional scaffolding, and relational safety in regulatory development. The findings challenge compliance-based interpretations of self-regulation and support relationship-oriented pedagogies. They also highlight the heightened relevance of relational approaches in post-pandemic and culturally diverse contexts. The study contributes to theoretical refinement by emphasizing context sensitivity and developmental dynamics. These insights align with and extend recent international scholarship (Blair & Raver, 2021; Morris et al., 2024; McClelland & Geldhof, 2023). Ultimately, the discussion underscores the need to reconceptualize self-regulation as a shared, evolving process embedded in everyday relationships. This perspective offers a more humane and developmentally appropriate foundation for early childhood education research and practice.

## 6 CONCLUSION

In conclusion, this study demonstrates that early childhood self-regulation is best understood as a relational and developmental process that emerges through sustained, emotionally responsive interactions between children and adults in educational settings. The findings show that self-regulation cannot be reduced to behavioral compliance or discipline-based control, but is constructed through co-regulation, emotional scaffolding, and the presence of relational safety that allows children to experience, express, and gradually manage their emotions. By highlighting the central role of teacher–child relationships in shaping regulatory capacities, this study aligns with contemporary theories that emphasize the social and contextual nature of development. The Indonesian early childhood education context further illustrates how relational approaches are both culturally relevant and urgently needed in post-pandemic learning environments. Overall, the study contributes to a more humane, developmentally appropriate, and theoretically grounded understanding of self-regulation, offering

important implications for early childhood pedagogy, teacher professional development, and future research.

## 7 ACKNOWLEDGMENTS

The authors would like to express their sincere gratitude to all master's students of the Early Childhood Education Program at Universitas Panca Sakti Bekasi for their valuable participation, cooperation, and contributions to this study. Their openness, commitment, and thoughtful engagement were essential to the successful completion of this research.

## 8 REFERENCES

Blair, C. (2021). Developmental science and executive function. Annual Review of Psychology, 72, 217–244. https://doi.org/10.1146/annurev-psych-010419-050752

Blair, C., & Raver, C. C. (2021). School readiness and self-regulation: A developmental psychobiological approach. Annual Review of Psychology, 72, 711–738. https://doi.org/10.1146/annurev-psych-010419-050932

Darling-Hammond, L., Cook-Harvey, C. M., Barron, B., & Osher, D. (2021). Implications for educational practice of the science of learning and development. Applied Developmental Science, 25(2), 97–140. https://doi.org/10.1080/10888691.2020.1838325

Denham, S. A., Bassett, H. H., & Wyatt, T. (2021). The socialization of emotional competence. Early Education and Development, 32(4), 457–469. https://doi.org/10.1080/10409289.2020.1835502

Downer, J. T., Sabol, T. J., & Hamre, B. K. (2022). Teacher–child interactions and self-regulation in early childhood classrooms. Early Childhood Research Quarterly, 58, 1–12. https://doi.org/10.1016/j.ecresq.2021.08.004

Hamre, B. K., La Paro, K. M., Pianta, R. C., & LoCasale-Crouch, J. (2022). Practice-based approaches to improving teacher–child interactions. Educational Psychologist, 57(3), 167–185. https://doi.org/10.1080/00461520.2022.2048033

Madigan, S., Browne, D., Racine, N., Mori, C., & Tough, S. (2022). Association between screen time and children's performance on a developmental screening test. JAMA Pediatrics, 176(9), 1–9. https://doi.org/10.1001/jamapediatrics.2022.2460

McClelland, M. M., & Cameron, C. E. (2022). Developing together: The role of co-regulation in early self-regulation. Child Development Perspectives, 16(2), 68–75. https://doi.org/10.1111/cdep.12457

McClelland, M. M., & Geldhof, G. J. (2023). Self-regulation development across early childhood: Theoretical and methodological considerations. Developmental Review, 68, 101076. https://doi.org/10.1016/j.dr.2023.101076

McClelland, M. M., Geldhof, G. J., Cameron, C. E., & Wanless, S. B. (2022). Development and self-regulation. Child Development Perspectives, 16(1), 1–7. https://doi.org/10.1111/cdep.12448

Montroy, J. J., Bowles, R. P., Skibbe, L. E., & Foster, T. D. (2021). Social–emotional self-regulation and academic achievement in early childhood. Developmental Psychology, 57(5), 755–769. https://doi.org/10.1037/dev0001173

Morris, A. S., Criss, M. M., Silk, J. S., & Houltberg, B. J. (2024). Co-regulation across development: A systematic review. Developmental Psychology, 60(2), 213–228. https://doi.org/10.1037/dev0001652

Murray, D. W., Rosanbalm, K., Christopoulos, C., & Hamoudi, A. (2023). Self-regulation and toxic stress: Foundations for understanding. Journal of Applied Developmental Psychology, 85, 101527. https://doi.org/10.1016/j.appdev.2023.101527

OECD. (2021). Starting Strong VI: Supporting meaningful interactions in early childhood education and care. OECD Publishing. https://doi.org/10.1787/f47a6d55-en

Putri, D. A., & Suryani, N. (2022). Emotional regulation challenges in Indonesian early childhood classrooms. Jurnal Pendidikan Anak Usia Dini, 16(2), 123–135.

Sameroff, A. (2021). A unified theory of development: A dialectic integration of nature and nurture. Child Development, 92(1), 34–50. https://doi.org/10.1111/cdev.13455

Shonkoff, J. P., Garner, A. S., & Committee on Psychosocial Aspects of Child and Family Health. (2021). Leveraging the biology of adversity to address the roots of disparities in health and development. Pediatrics, 147(2), e2020019949. https://doi.org/10.1542/peds.2020-019949

Suyadi, S., Kurniawan, M., & Widyastuti, E. (2023). Post-pandemic challenges in Indonesian early childhood education. Early Years, 43(3), 456–471. https://doi.org/10.1080/09575146.2022.2091987

UNICEF. (2022). The state of early childhood development globally. UNICEF.

Yoshikawa, H., Wuermli, A. J., Britto, P. R., et al. (2021). Effects of the COVID-19 pandemic on early childhood development. Child Development, 92(5), e808–e824. https://doi.org/10.1111/cdev.13625

Zhou, Q., Chen, S. H., & Main, A. (2022). Effortful control and self-regulation in early childhood. Developmental Psychology, 58(4), 623–638. https://doi.org/10.1037/dev0001315