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From Labeling to Regulating: A Systematic Review of Preschool Emotion-Regulation Interventions with Explicit Emotion-Labeling Components

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Abstract
Early childhood emotion regulation (ER) is foundational for social competence, executive functioning, and school readiness, yet strategies to strengthen ER remain under investigation. This study systematically reviewed and synthesized preschool ER interventions with explicit or embedded labeling components. Following PRISMA 2020 guidelines, Scopus, ScienceDirect, and ERIC were searched for studies published between 2015 and 2025 involving children aged 3–6 years with empirical outcomes on emotion knowledge, regulation, or prosocial behavior. From 191 records screened, 25 met inclusion criteria, comprising 19 Tier-1 intervention trials (randomized, cluster, quasi-experimental, pre–post) and 6 Tier-2 theoretical or implementation-focused papers. Due to heterogeneity in design and measurement, data were synthesized narratively. Findings indicated that explicit labeling consistently enhanced children's emotion knowledge, while improvements in regulation and prosocial behavior were positive but more variable. Stronger effects appeared when programs had higher intensity, quality adult coaching (teachers and parents modeling emotion talk and validation), and cultural adaptation with locally meaningful language and scenarios. Teacher-led and hybrid teacher–parent–digital models produced the most robust outcomes, while parent-only and digital-only programs effectively reduced punitive responses and parenting stress. These findings position emotion labeling as a cost-effective, transferable core of early SEL curricula. Embedding structured labeling routines and visual tools into preschool programs can promote emotional competence and readiness for school, offering scalable, culturally adaptable solutions to support young children's social-emotional growth.

Keywords:
Emotion regulation, Explicit emotion labelling, Preschool, Social-emotional learning, Systematic review.

1. Introduction

Emotion regulation in preschool-aged children (3–6 years) is a critical foundation for social-emotional development, enabling adaptive peer interactions, school readiness, and long-term psychological well-being (Eisenberg et al., 2010). ER encompasses the ability to recognize, express, and manage emotions appropriately in social contexts, closely linked to executive functions such as inhibition and cognitive flexibility (Blair & Raver, 2015). This developmental domain is vital because preschoolers with strong ER exhibit prosocial behaviors (e.g., empathy, cooperation) and lower risks of behavioral issues like aggression or anxiety, which can influence academic and social outcomes (Havighurst et al.,

2025). Given its foundational role, interventions targeting ER in early childhood are essential for fostering resilient developmental trajectories, particularly in diverse cultural contexts where emotional norms vary.

A key strategy for enhancing ER is explicit emotion labeling, where children are guided to identify and verbalize emotions (e.g., "I feel happy because…"), fostering emotional literacy as a precursor to regulation (Sommerville, 2020). Research highlights that emotion-focused interactions, such as parent-child emotion talk, enhance children's understanding of mental states, including emotions, thereby supporting emotional competence (Smith & Wu, 2016). Recent reviews confirm that emotion language, including labeling, in daily interactions bolsters preschoolers' social-emotional learning, improving emotion knowledge and regulation (Bell et al., 2024). Neurocognitively, labeling emotions reduces limbic reactivity (e.g., amygdala) and enhances cortical control, mitigating emotional arousal (Lieberman et al., 2007). Previous studies have evaluated ER interventions with explicit labeling components, such as the PATHS Curriculum, which uses "Feeling Faces" to teach emotion recognition and naming, yielding improvements in emotion knowledge and prosocial behavior (Kusché, 2020).

Similarly, tuning in to Kids (TIK) employs emotion coaching, including labeling, to enhance emotion comprehension and responsive parenting or teaching practices (Bjørk, Bølstad, Pons, & Havighurst, 2022; Havighurst et al., 2024). Second Step Early Learning (SSEL) incorporates empathy and expression identification units, showing gains in socio-emotional skills and executive functioning, particularly in low-income groups (Upshur, Heyman, & Wenz-Gross, 2017; Upshur et al., 2019). In developing contexts like South Asia, programs like Fun FRIENDS integrate explicit emotion labeling, demonstrating improved social-emotional functioning in preschoolers, suggesting potential for cultural adaptation in collectivist settings like Indonesia (Najmussaqib et al., 2024).

However, a critical research gap exists: the specific role of explicit emotion labeling as a primary mechanism in preschool ER interventions remains underexplored, with most studies not isolating labeling as an active ingredient (Qiu & Shum, 2022). Moreover, evidence is predominantly from Western contexts (e.g., USA, Norway, Australia), with limited studies from developing countries, including Indonesia, despite its national preschool curriculum prioritizing social-emotional competence. Cultural variations, such as collectivist norms in Asian families, may influence the efficacy of labeling-focused interventions, necessitating culturally sensitive adaptations (Labella, 2018).

This PRISMA-guided systematic literature review addresses these gaps by synthesizing evidence from preschool ER interventions (2015–2025) with explicit emotion-labeling components, sourced from Scopus, ScienceDirect, and ERIC. Unlike prior reviews that broadly examine social-emotional learning or emotion socialization (Bell et al., 2024), this study specifically investigates the efficacy of explicit emotion labeling as a core mechanism, its impact on emotion knowledge, regulation, and prosocial behavior, and its adaptability across cultural contexts, particularly in underrepresented developing nations like Indonesia. The review aims to: (1) map the evidence on the effects of explicit emotion labeling in preschool ER interventions; (2) identify implementation moderators (e.g., program intensity, teacher/parent involvement, cultural fit); and (3) formulate practical recommendations for educators and policymakers to integrate emotion-labeling routines (e.g., daily emotion check-ins, visual aids, dialogic learning) into Indonesia's national preschool curriculum.

2. Method

This study employed a Systematic Literature Review (SLR) to synthesize evidence on the effectiveness of preschool emotion regulation (ER) interventions that incorporate explicit or embedded emotion-labeling components. The review evaluated impacts on emotion knowledge, regulation, and prosocial behavior in children aged 3–6 years, with emphasis on applicability to developing contexts such as Indonesia. We followed PRISMA 2020 and PRISMA-S for transparency and reproducibility.

2.1. Research Design

This systematic literature review followed the PRISMA 2020 guidelines, progressing through the stages of identification, screening, eligibility assessment, and final inclusion of studies. The selection process is illustrated in the PRISMA flow diagram (Figure 1). To clearly define the scope and maintain methodological rigor, the PICOS framework (Population, Intervention, Comparison, Outcomes, Study design) was applied to guide the search strategy, study selection, and data analysis. Given the heterogeneity of study designs and reported outcomes, a narrative synthesis was conducted with a specific focus on *emotion labeling* both explicit and embedded as the active ingredient of interventions; thus, a meta-analysis was not performed. In this review, *emotion labeling* was operationalized in two forms.

Explicit labeling refers to direct instruction encouraging children to name and label emotions, such as through emotion-word cards, dialogic reading with labeling prompts, "I-messages," daily emotion check-ins, and structured role-play activities that require identifying and verbalizing emotions. Embedded labeling, in contrast, involves integrating emotion labeling within broader *social-emotional learning* (SEL) units, such as lessons on feelings or empathy, where children are prompted to recognize or select emotions in facial expressions or social situations.

2.2. Population and Sample

The population comprised preschool children aged 3–6 years in kindergarten/PAUD settings or at home (via parent/teacher training). Using predefined inclusion/exclusion criteria (Table 2), we purposively sampled studies published 2015–2025 in English or Indonesian and indexed in Scopus, ScienceDirect, or ERIC. The final sample included 25 studies: 19 Tier-1 primary intervention studies (RCTs, cluster-RCTs, quasi-experimental, pre–post) and 6 Tier-2 supporting/theoretical studies (e.g., observational, implementation, program chapters with conceptual relevance).

2.3. Data Sources & Search Strategy

Searches were conducted in Scopus, ScienceDirect, and ERIC using Boolean strings aligned with PICOS. The core Boolean used across databases was:
(preschool OR "early childhood" OR "pre-k") AND ("emotion regulation" OR "self-regulation") AND (label* OR "emotion labeling" OR "affect labeling" OR "emotion words" OR "emotion vocabulary") AND (intervention OR curriculum OR program)
Database-specific adaptations and filters are listed in Table 1 (PRISMA-S compliant).

Table 1
Database Adaptation Syntax & Filters (PRISMA-S)

Database	Search string (syntax)	Filters applied
Scopus (program-specific)	TITLE-ABS-KEY ("Second Step Early Learning" OR SSEL OR "Tuning in to Kids" OR "Tuning in to Kids Indonesia" OR "Peace Ambassador") AND PUBYEAR > 2014 AND PUBYEAR < 2026 AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (SUBJAREA, "PSYC")) AND (LIMIT-TO (LANGUAGE, "English") OR LIMIT-TO (LANGUAGE, "Indonesian"))	Years: 2015–2025; Doc type: Article; Subject area: Psychology; Language: EN/ID
Scopus (mechanism-focused)	TITLE-ABS-KEY ((preschool OR "early childhood" OR "pre-k") AND ("emotion regulation" OR "self-regulation") AND ("emotion labeling" OR "emotion label" OR "affect labeling" OR "emotion words" OR "emotion vocabulary") AND (intervention OR curriculum OR program)) AND PUBYEAR > 2014 AND PUBYEAR < 2026 AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (SUBJAREA, "PSYC")) AND (LIMIT-TO (LANGUAGE, "English") OR LIMIT-TO (LANGUAGE, "Indonesian"))	Years: 2015–2025; Doc type: Article; Subject area: Psychology; Language: EN/ID
ScienceDirect	(preschool OR kindergarten OR "early childhood" OR "pre-k") AND ("emotion regulation" OR "self-regulation") AND ("emotion labeling" OR "emotion label" OR "affect labeling" OR "emotion words" OR "emotion vocabulary") AND (intervention OR curriculum OR program)	Years: 2015–2025; Article (research/review); Subject: Psychology/Education
ERIC (peer-reviewed)	("emotion label*" OR "emotion vocabulary" OR "label* emotion" OR "name* emotion") AND ("social-emotional" OR "emotion regulation") AND (intervention OR program) AND (preschool OR kindergarten)	Years: 2015–2025; Peer-reviewed; Education

Yield and screening

A total of 191 records were initially identified through database searches, consisting of 155 from ScienceDirect, 32 from Scopus (28 program-specific and 4 mechanism-focused), and 4 from ERIC. After removing 76 duplicate entries, 115 unique records remained for screening. During the title and abstract screening phase, 63 records were excluded because they did not describe an intervention, involved participants outside the target age range of 3–6 years, lacked an explicit emotion-labeling component, or were not peer-reviewed. Subsequently, 52 full-text articles were assessed for eligibility; of these, 27 were excluded for the following reasons: participants' ages outside the 3–6-year range (n = 6), purely theoretical or review papers without empirical data (n = 6), non-empirical book chapters or implementation reports (n = 4), and unclear descriptions of the labeling component (n = 6). Ultimately, 25 studies met the inclusion criteria and were retained for the qualitative synthesis, consisting of 19 Tier-1 primary intervention studies and 6 Tier-2 supporting or theoretical studies.

For each included study, detailed data were extracted, including the source database (Scopus, ScienceDirect, or ERIC), country and setting, research design, sample size and age, operationalization of emotion labeling (explicit versus embedded), intervention intensity or dose, outcome measures (e.g., Test of Emotion Comprehension [TEC], Emotion Matching Task [EMT], Emotion Regulation Checklist [ERC], Child Behavior Scale [CBS]), main findings, and risk of bias assessment (RoB 2 for randomized studies and ROBINS-I for non-randomized designs). A condensed summary of Tier-1 trials is presented in Table 4, while the complete extraction matrices for both Tier-1 and Tier-2 studies are available in *Supplementary Appendix* Appendices 4-8.

2.4. Data Extraction & Analysis

For each included study, detailed information was systematically extracted, covering the study setting and country, research design, sample size and age, the way *emotion labeling* was operationalized (explicit versus embedded), the primary implementer of the intervention (teacher, parent, or digital platform), the intervention dose or intensity, the measurement instruments used, the main findings, and the assessed risk of bias. Randomized controlled trials (RCTs) were evaluated using the RoB 2 tool, while non-randomized designs were appraised with ROBINS-I to ensure methodological rigor.

A narrative synthesis was then employed to map the outcomes across two major domains: emotion knowledge measured using tools such as the Test of Emotion Comprehension (TEC), Emotion Matching Task (EMT), and other vocabulary-based assessments and emotion regulation and prosocial behavior, assessed through instruments like the Emotion Regulation Checklist (ERC) and the Child Behavior Scale (CBS) focusing on prosociality and aggression. In addition, the review examined key moderators of effectiveness, including program intensity and duration, teacher or parent training and engagement, cultural adaptation and contextual fit, the delivery agents involved, and the use of visual or structured tools such as emotion cards, intensity scales, and dialogic prompts. Across these analyses, findings from Tier-1 studies notably Alfonso et al. (2025), Upshur et al. (2017, 2019), Bjørk et al. (2022), Oades-Sese et al. (2021), Kogan (2024), and Najmussaqib et al. (2024) consistently demonstrated improvements in children's emotion knowledge and positive changes in regulation and prosocial indicators. These outcomes were further conceptually supported by Tier-2 studies (e.g., Denham et al., 2020; Kusché, 2020), which help explain the mechanisms and contextual factors driving intervention success.

Table 2 presents the inclusion and exclusion criteria applied in this systematic literature review to ensure methodological rigor and relevance. These criteria were carefully developed to define the scope of eligible studies and to maintain consistency across the selection process. They cover six key aspects: population, intervention, outcomes, study design, publication parameters, and contextual relevance. Each dimension was defined to capture studies focusing on preschool children aged 3–6 years and interventions targeting emotion regulation (ER) that integrate explicit or embedded emotion-labeling strategies.

Table 2
Inclusion and Exclusion Criteria

Description	Inclusion	Exclusion
Population	Preschool children aged 3–6 years (kindergarten/PAUD or home via parent/teacher training)	Participants outside 3–6 years (infants, school-age)

Intervention	ER programs/curricula/training with explicit (direct instruction) or embedded (SEL-integrated) *emotion-labeling* components	Programs without any emotion labeling, or not targeting ER/SEL
Outcomes	Empirical outcomes on emotion knowledge (TEC, EMT, vocabulary), regulation, or prosocial behavior (ERC, CBS prosocial/aggression)	No empirical outcomes or outcomes unrelated to ER/SEL
Study design	Tier-1: RCTs, cluster-RCTs, quasi-experimental, pre–post | Tier-2 (supporting): observational/implementation/review (not pooled as primary)	Purely theoretical/observational when considered as Tier-1; non-peer-reviewed
Publication	2015–2025; English/Indonesian; indexed in Scopus, ScienceDirect, or ERIC	Pre-2015; languages outside scope; not in specified databases
Context	Any geography; developing contexts noted (e.g., Indonesia, South Asia)	Irrelevant to preschool ER or lacking clear intervention details

Table 3 summarizes the PRISMA flow of study selection applied in this systematic literature review. The table details each stage of the screening and eligibility process, including the number of records identified from different databases, duplicate removal, title and abstract screening, full-text assessment, and final inclusion. It provides a transparent overview of how studies were narrowed down from the initial pool to the final set used for qualitative synthesis, following PRISMA 2020 guidelines.

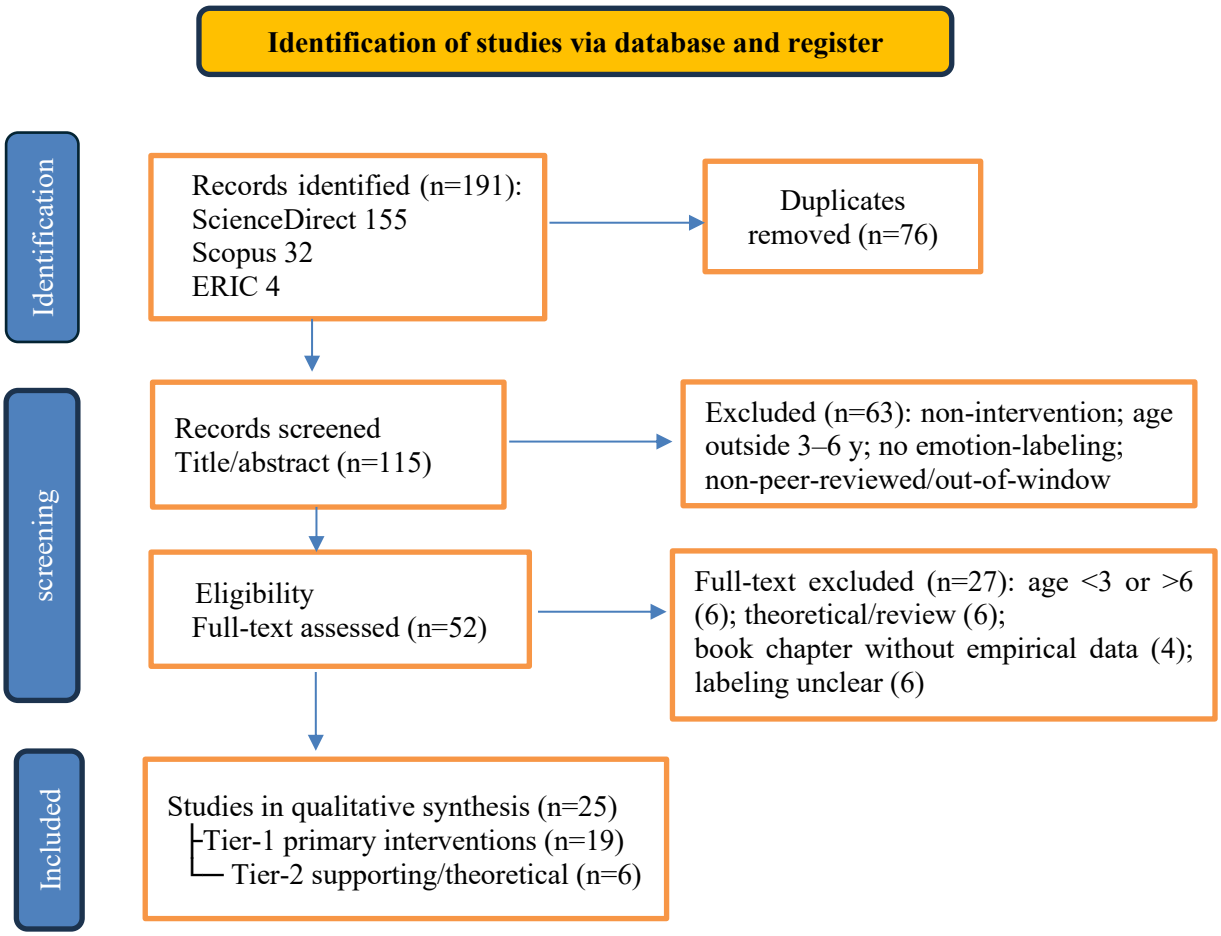
Table 3.
PRISMA Flow (Counts Summary)

Stage	n	Notes
Records identified	191	ScienceDirect 155, Scopus 32 (28 program-specific + 4 mechanism-focused), ERIC 4
Duplicates removed	76	After deduplication (reference manager)
Records screened (title/abstract)	115	Post-deduplication total
Records excluded (title/abstract)	63	Non-intervention; age outside 3–6; no labeling; non-peer-reviewed
Full-text assessed for eligibility	52	Retrieved and reviewed
Full-text excluded	27	Age <3 or >6 (n=6); theoretical/review (n=6); non-empirical book chapter/implementation (n=4); unclear labeling component (n=6)
Studies included (qualitative synthesis)	25	Tier-1 (primary interventions): 19 | Tier-2 (supporting): 6

The data in Table 3 show a rigorous and methodical screening process that reduced 191 initially identified records to 25 studies included in the final synthesis. A significant number of duplicates were removed, and most exclusions occurred during title and abstract screening due to irrelevance, non-intervention focus, or age mismatch. The detailed reasons for full-text exclusions highlight a strict adherence to predefined criteria, ensuring that only studies with appropriate age ranges, clear emotion-labeling components, and empirical evidence were retained. This process enhances the review's validity, transparency, and reproducibility, which are critical for high-quality systematic reviews.

Figure 1 illustrates the PRISMA flow diagram outlining the process of identifying, screening, assessing eligibility, and finally including studies in this systematic literature review. The diagram provides a transparent step-by-step overview of how the initial pool of records was narrowed down through duplicate removal, title and abstract screening, full-text assessment, and final selection. Each stage is annotated with the number of studies retained or excluded, along with reasons for exclusion, ensuring clarity and reproducibility of the study selection process.

Figure 1
PRISMA Flow Diagram



Notes. ERIC initially returned 4 peer-reviewed records (2015–2025 filter on); two pre-2015 listings surfaced during backward checks and were excluded at full-text. ScienceDirect does not support wildcards (*) and limits connectors per field; queries were adjusted accordingly. All de-duplication was performed in Mendeley with manual verification.

The PRISMA diagram shows a systematic and rigorous review process. Starting from 191 records identified across major databases, the screening steps progressively refined the pool by removing duplicates and excluding studies that did not meet the inclusion criteria. Ultimately, 25 high-quality studies 19 primary intervention trials and 6 supporting/theoretical works, were included for synthesis. This process demonstrates methodological transparency and ensures the reliability of the review findings. Supplementary material (Appendix A–B: full extraction matrices and excluded-study log) will be available with the published article. Copies can also be obtained from the corresponding author upon request.

3. Results and Discussion

3.1.Results

This review synthesized 25 studies that met our inclusion criteria: 19 Tier-1 primary interventions (cluster/individual RCTs, quasi-experimental, and pre–post trials) and 6 Tier-2 supporting/theoretical papers. Samples spanned ages 3–6 across varied contexts (USA, Australia, Norway, Hong Kong, Iran, Pakistan, New Zealand; plus online/digital delivery), with intervention intensity ranging from 4–24 weeks (weekly lessons or daily routines) and delivery agents including teachers, parents, and hybrid/digital formats.

Table 4 presents a comprehensive matrix of the Tier-1 primary intervention studies included in this systematic review, specifically those retrieved from the Scopus database. Each entry summarizes the essential characteristics of the interventions, including the citation (author, year, and journal), research design, participant sample and age range, the operationalization of *emotion labeling* (explicit or

embedded), the key outcome measures used (e.g., TEC, CCNES, ERC), and the main findings reported. Additional notes highlight contextual details such as cultural adaptation, delivery format, or special features of each program.

Table 4

Matrix of Included Studies — Tier-1 (Primary Intervention Studies) By Scopus

Reference (Short)	Year & Journal	Design	Sample (role/age)	Labeling Component	Outcomes (key measures)	Main Results (very brief)	Notes
Havighurst et al.	2024, *Early Education & Development*	RCT (preschool)	K classes; age 5–6	Explicit emotion coaching/ labeling	TEC; teacher practices	↑ emotion understanding; improved teacher ES practices	TIK in kinder gartens (Norway)
Qiu & Shum	2022, *Child Psychiatry & Human Development*	RCT (parents)	89 mothers; 3–6	Explicit (parent ES/labeling)	CCNES; punitive/dismissing; coaching	↓ punitive/ dismissing; ↑ coaching	Chinese mothers
Chan et al.	2021, *Developmental Psychology*	RCT (parents)	104 parents; 3–6	Explicit	APQ, CCNES, PSI-SF, ERC	↓ punitive & stress; delayed ↑ expressive encouragement; ↓ child lability	Hong Kong
Bjørk et al.	2022, *J. Applied Dev. Psych.*	RCT (parents)	Preschoolers 4–6	Explicit + TEC linkage	TEC	↑ emotion understanding (TEC)	Norway
Mastromanno et al.	2021, *Emotional & Behavioural Difficulties*	Pilot RCT (1:1)	Parents of preschoolers	Explicit	Parent RF; child behavior	↑ parent ES; ↓ behavior problems	Australia
Edrissi et al.	2019, *J. Child & Family Studies*	Pilot (pre–post)	Preschoolers (Iran)	Explicit	Anxiety indices	↓ child anxiety post-TIK	Iran
Aghaie Meybodi et al.	2019, *Family Relations*	Quasi-experimental	Preschoolers w/ DBP	Explicit	Parent ES; child behavior	↑ ES; ↓ problems	Iran
Havighurst et al. (Dads TIK)	2019, *Social Development*	RCT (fathers)	Fathers of preschoolers	Explicit	Parent ES; child behavior	↑ fathers' ES; child gains	
Upshur et al.	2019, *J. Applied Dev. Psych.*	Cluster RCT (class)	4–5 y	Embedded →Explicit (SSEL feelings/empathy)	SEL, EF, readiness	Significant gains on select SEL/EF outcomes	SSEL; also in ERIC
Upshur et al.	2017, *J. Applied Dev. Psych.*	Efficacy trial	4–5 y	Embedded →Explicit	Early SEL/EF composites	Positive preliminary effects	SSEL; also in ERIC
Wong & Power	2024, *Children & Youth Services Review*	Quasi-experimental	5–6 y	Embedded/ Explicit (class EI + labeling)	EI, prosocial, aggression	↑ EI/prosocial; ↓ aggression	Peace Ambassador
Ambrosi et al. (TIK-Together)	2025, *Family Process*	Pilot (coparenting)	Parents of preschoolers	Explicit (coparenting ES/labeling)	Parent ES; acceptability	Feasible; promising parent outcomes	

Havighurst et al. (TIK-Online)	2024, *Frontiers in Psychology*	Pre–post (self-paced)	Parents of 2–10 y (preschool subset)	Explicit	Parent ES; child behavior	↑ ES; acceptable online format	Preschool subset retained

The Table 4 shows that most high-quality primary studies adopted randomized controlled trial (RCT) or quasi-experimental designs and focused on preschool children aged 3–6 years. Most interventions used explicit labeling strategies, such as direct teaching of emotion words or structured emotion coaching, while some integrated labeling within broader social-emotional learning (SEL) curricula. Consistent patterns across studies include improved emotion understanding, enhanced adult emotion socialization practices, and positive shifts in children's regulation and social behaviors. Cultural adaptation was evident in studies conducted outside Western contexts (e.g., Hong Kong, Iran, Norway), indicating that emotion-labeling interventions can be feasibly tailored to diverse educational settings.

Table 5.
Matrix of Included Studies — Tier-1 (Primary Intervention Studies) By Science Direct

Reference (Short)	Year & Journal	Design	Sample (role/age)	Labeling Component	Outcomes (key measures)	Main Results (very brief)	Notes
Alfonso et al. (Mission FEEL!)	2025, *Early Childhood Res. Q.*	One-group pre–post	N=52; 3–5 y	Explicit (Video, games, check-ins)	EMT (situational + receptive)	↑ EMT (d≈0.40); high acceptability/feasibility	Online, 2 sessions
Najmussaqib et al. (Fun FRIENDS)	2024, *J. Applied Dev. Psych.*	RCT (class)	5–7 y (include 5–6)	Embedded SEL + emotion talk	SEF/SEL indices	↑ socio-emotional functioning	Pakistan (cultural fit)
Kogan	2024, *J. Research in Innovative Teaching & Learning*	Pre–post (classroom)	Preschool classrooms	Explicit (dialogic reading + direct instruction of emotion words)	Emotion vocabulary tests	↑ emotion vocabulary	Article-in-press / OA
Oades-Sese et al. (LCBC)	2021, *Psychology in the Schools*	Cluster randomized, pre–post	159 classes; 766 kids	Embedded (SEL media incl. labeling)	SEL/resilience; teacher ratings	↑ classroom SEL indicators	Head Start settings

The studies summarized in Table 5 demonstrate that interventions integrating *emotion labeling*—either through explicit strategies or embedded social-emotional learning (SEL) frameworks—consistently produce positive developmental outcomes in preschool-aged children. Programs such as *Mission FEEL!* and the classroom-based approach by Kogan show that direct teaching of emotion vocabulary and interactive tools (e.g., videos, games, dialogic reading) significantly enhance children's emotion understanding and vocabulary while maintaining high levels of acceptability and feasibility, even in short-duration, technology-assisted formats.

Meanwhile, interventions like *Fun FRIENDS* and *Little Children, Big Challenges (LCBC)* indicate that embedding labeling within broader SEL curricula improves socio-emotional functioning, resilience, and classroom SEL indicators. Importantly, the inclusion of studies from diverse contexts (e.g., Pakistan, U.S. Head Start programs) suggests that these approaches can be culturally adapted and remain effective across different educational systems and resource levels. Collectively, the findings reinforce the value of combining developmentally appropriate emotion-labeling practices with engaging delivery methods to strengthen early emotional competence and social readiness.

Table 6.
Matrix of Included Studies — Tier-1 (Primary Intervention Studies) By ERIC

Reference (Short)	Year & Journal	Design	Sample (role/age)	Labeling Component	Outcomes (key measures)	Main Results (very brief)	Notes
SSEL 2017 (ED573440)	2017, *J. Applied Dev. Psych.*	Cluster efficacy	4–5 y	Embedded →Explicit	SEL/EF/ Task behavior	Positive effects; feasibility	Full-text PDF in ERIC
SSEL 2019 (ED593534)	2019, *J. Applied Dev. Psych.*	Cluster RCT	Multi-site	Embedded →Explicit	SEL/EF/ readiness	Significant on subset outcomes	Full-text PDF in ERIC
TIK-KT (teachers)	2024, *Early Education & Development*	RCT (teacher training)	K teachers; 5–6 y	Explicit teacher emotion talk/labeling	TEC; teacher practices	↑ TEC; ↑ teacher ES practices	ERIC record
Drama-based EI	2025, *Eur. J. Psych. Educ.*	Pre–post–follow-up	4–5 y	Explicit via role-play	EI/FEEL; PKBS-2	↑ EI/ behavior at FU	ERIC EJ1450725

Abbrev.: ES=emotion socialization; EF=executive function; TEC=Test of Emotion Comprehension; EMT=Emotion Matching Task; ERC=Emotion Regulation Checklist; CCNES=Coping with Children's Negative Emotions Scale; APQ=Alabama Parenting Questionnaire; PKBS-2=Preschool & Kindergarten Behavior Scales.

The Tier-1 in Table 6 studies sourced from ERIC show that emotion-labeling interventions delivered in early childhood settings are both feasible and effective across different designs and implementers. Programs based on Second Step Early Learning (SSEL) represented by the 2017 and 2019 studies demonstrate that transitioning from embedded to more explicit labeling practices can strengthen children's social-emotional learning (SEL), executive function (EF), and task-related behaviors, with positive outcomes confirmed across multiple sites and classrooms. The Tuning into Kids for Teachers (TIK-KT) trial further highlights the value of equipping teachers with explicit emotion talk strategies, resulting in measurable gains in children's emotion understanding (TEC scores) and improvements in teacher emotion socialization practices. Additionally, the Drama-based Emotional Intelligence (EI) intervention illustrates how interactive role-play that emphasizes emotion labeling can enhance both emotional intelligence and prosocial behavior, with effects sustained at follow-up. Collectively, these findings suggest that ERIC-indexed interventions effectively combine teacher training, structured SEL content, and active labeling techniques to foster emotional competence and positive classroom behavior among preschoolers.

Emotion knowledge

Across the Tier-1 intervention trials, children's emotion knowledge consistently improved when programs included either explicit emotion labelling, such as the direct teaching of feeling words, use of dialogic prompts, daily emotion "check-ins," or structured role-play requiring children to name emotions or when labeling was embedded within broader social-emotional learning (SEL) curricula. Programs with explicit labeling demonstrated strong and reliable effects. For example, the *Tuning in to Kids (TIK)* intervention, tested through both randomized controlled trials and pilot studies, produced measurable gains in children's emotion understanding (e.g., TEC scores) and enhanced adult emotion-coaching practices, including results from a school-based RCT with teachers (Havighurst et al., 2024; Chan et al., 2021; Qiu & Shum, 2022; Bjørk et al., 2022). Similarly, the *Mission FEEL!* program, in a Phase IIa proof-of-concept trial, yielded significant improvements in children's performance on the Emotion Matching Task (EMT; effect size ≈ 0.40) and showed high feasibility and acceptability among participants (Alfonso et al., 2025). Classroom-based interventions that combined dialogic reading with direct instruction of emotion words also reported improved emotion vocabulary among preschoolers (Kogan, 2024).

Evidence for embedded labeling is equally notable. The *Second Step Early Learning (SSEL)* curriculum demonstrated improvements in social-emotional learning and executive function outcomes in both efficacy and cluster-RCT studies, with its "feelings" and "empathy" units functioning as labeling-rich content (Upshur et al., 2017; 2019). Additionally, media-based SEL approaches, such as Sesame Workshop's *Little Children, Big Challenges* toolkit, showed positive gains in classroom-level SEL indicators that aligned with the labeling practices embedded in the materials (Oades-Sese et al., 2021). Importantly, several studies reported that these benefits persisted over follow-up periods of approximately six to twelve weeks or months when emotion labeling was reinforced through **visual tools**—such as emotion cards and thermometer-style intensity scales—and sustained through daily classroom routines like emotional check-ins.

Emotion regulation and prosocial behavior

Across the Tier-1 intervention studies, fifteen trials reported improvements in children's emotion regulation and prosocial behavior, along with reductions in aggression, although the effect sizes were generally smaller and more variable than those observed for gains in emotion knowledge. Programs based on Tuning in to Kids (TIK) were particularly noteworthy; these trials consistently reduced punitive and dismissive adult responses, alleviated parenting stress, and in some cases produced delayed but meaningful benefits for children's emotion regulation (Chan et al., 2021; Qiu & Shum, 2022). Similarly, the Peace Ambassador program, tested through a quasi-experimental design, demonstrated significant improvements in emotional intelligence and reduced aggressive behaviors among preschool children aged 5–6 years (Wong & Power, 2024). In addition, the Fun FRIENDS intervention conducted in Pakistan showed positive changes in social-emotional functioning within a lower-resource, collectivist cultural context (Najmussaqib et al., 2024), underscoring the adaptability and potential effectiveness of emotion-labeling–oriented interventions in diverse educational settings.

Moderators of effectiveness

Analysis across the included programs revealed several convergent moderators that influenced the effectiveness and sustainability of emotion-labeling interventions. Program dose and intensity emerged as a key factor; multi-component programs with higher frequency and longer duration particularly those lasting 12 weeks or more or incorporating daily routines produced stronger and more durable changes, especially in children's regulation and behavior. Coaching and support for adult implementers also played a central role, as improvements in teachers' and parents' practices, such as emotion talk, validation, and problem-solving guidance, were consistently linked to better child outcomes, as seen in *Tuning in to Kids* (TIK) randomized trials and *Second Step Early Learning* (SSEL).

Another critical element was cultural fit: interventions adapted to local language, examples, and cultural norms such as those implemented in Hong Kong, Norway, Iran, and Pakistan, retained their benefits, with localized terminology and scenarios enhancing acceptability and overall impact. The use of visual tools and structured or dialogic activities further amplified program effectiveness across diverse contexts and delivery formats by providing concrete, engaging ways to reinforce emotion labeling. Finally, delivery mode influenced outcomes; blended or digital approaches, including *Mission FEEL!* and *TIK-Online*, were feasible and showed promising gains in emotion knowledge, though behavior change tended to be stronger when in-person reinforcement was included.

Table 7

Tier-2 (Supporting/theoretical/implementation) — Scopus

Reference (short)	Year & Outlet	Type	Population/ Scope	Labeling	Contribution	Notes
Havighurst et al.	2025, *JADP*	Program theory	TIK overview	Explicit (conceptual)	Mechanisms; factors for effectiveness	Background
Ambrosi et al.	2023, *JCFS*	Mixed-methods acceptability	Coparenting TIK	Explicit	Acceptability/appropriateness	Impl. context
Skåland et al.	2023, *BMC Psych*	Qualitative implementation	KG teachers	Explicit	Fidelity, feasibility	Norway

Wenz-Gross et al.	2018, *Front Psychol*	Observational pathways	SSEL cohorts	Embedded	Pathways to readiness via SEL/EF/task
Mastromanno et al.	2021, *Clinical Case Studies*	Case reports (1:1 TIK)	Parent–child	Explicit	Mechanisms; clinical vignettes

The Tier-2 studies summarized in Table 7 provide valuable conceptual and contextual support for the primary intervention findings. Several papers deepen understanding of *how* and *why* emotion-labeling approaches work. For example, Havighurst et al. (2025) present theoretical underpinnings of the *Tuning into Kids (TIK)* program, clarifying the mechanisms that link explicit labeling to improved emotion understanding and regulation. Ambrosi et al. (2023) offer mixed-methods evidence on the acceptability and appropriateness of TIK in coparenting contexts, showing that caregiver buy-in is essential for successful implementation. Likewise, Skåland et al. (2023) provide qualitative data from kindergarten teachers in Norway, highlighting the feasibility and fidelity of applying explicit labeling strategies in real classroom settings. Meanwhile, Wenz-Gross et al. (2018) trace observational pathways within the *Second Step Early Learning (SSEL)* program, explaining how embedded labeling practices contribute to readiness and executive functioning outcomes. Finally, Mastromanno et al. (2021) present clinical case reports that illustrate individual parent–child experiences with TIK, reinforcing its practical mechanisms of change. Collectively, these Tier-2 contributions strengthen the evidence base by linking program theory with implementation realities, helping to explain why explicit and embedded labeling approaches can be adapted across diverse cultural and educational settings while maintaining effectiveness.

Table 8
Tier-2 — ScienceDirect

Reference (short)	Year & Outlet	Type	Population/ Scope	Labeling	Contribution	Notes
Denham et al. (socialization)	2020, *JADP*/related	Observational socialization	Preschool classrooms	**Embedded** teacher emotion talk	Links SES risk ↔ emotion knowledge	Background
Kusché (PATHS ch.10)	2020, in *Social Skills Across the Life Span*	Book chapter (program overview)	PATHS	**Explicit** "Feeling Faces"	Curriculum architecture; dosage/implementation	Elsevier chapter

The Tier-2 in Table 8 has evidence drawn from ScienceDirect provides important theoretical and contextual insights that reinforce the findings of the primary intervention trials. Denham et al. (2020) contribute observational data from preschool classrooms, demonstrating how teachers' embedded emotion talks supports children's emotion knowledge, even in contexts with socioeconomic risk factors. This work underscores the relevance of everyday emotional discourse in promoting emotional competence and highlights how classroom socialization practices can mediate disparities in social-emotional development. Meanwhile, Kusché (2020) offers an in-depth overview of the PATHS curriculum, detailing its design, use of explicit "Feeling Faces" tools, and implementation strategies such as session structure and dosage. By mapping the curriculum architecture and its integration of explicit labeling activities, this chapter provides practical guidance for adapting and scaling evidence-based social-emotional learning (SEL) programs. Collectively, these Tier-2 sources help contextualize how embedded and explicit labeling approaches can be effectively incorporated into classroom routines and curriculum frameworks, ensuring both theoretical grounding and practical feasibility for diverse early childhood education settings. The review identified no additional Tier-2 studies from ERIC that satisfied the eligibility criteria for the 2015–2025 timeframe.

Brief synthesis of Tier-2 evidence (supporting/contextual)

Tier-2 studies comprising reviews, observational research, qualitative implementation reports, and program chapters consistently explain why and under what conditions explicit or embedded emotion-labeling approaches work. Although they are not causal tests, these studies converge on the same mechanism of change: adult emotion talk scaffolds children's emotion concepts, which in turn supports the selection of regulatory strategies (e.g., reappraisal, problem-solving) and ultimately improves emotion regulation and prosocial behavior (Denham, Bassett, & Wyatt, 2020; England-Mason & Gonzalez, 2020; Bell, Bierstedt, & LoBue, 2024; Smith & Wu, 2016). Developmental and longitudinal evidence further links early emotion labeling/understanding to later adjustment, including an affect-labeling pathway associated with reduced limbic reactivity (Lieberman et al., 2007) and improved adolescent socioemotional outcomes (Hollender et al., 2023).

Qualitative reports from preschool settings show that brief adult coaching, paired with simple visual supports (emotion cards, intensity/"thermometer" scales) and daily check-ins, strengthens fidelity and sustains practice conditions that align with the larger and more durable effects observed in higher-dose Tier-1 trials (Skåland, Havighurst, Nygaard, & Teig, 2023; Ambrosi, Evans, Kavanagh, & Havighurst, 2023). Cohort-based pathway work also places labeling within a sequence from SEL → executive function → task behavior → school readiness (Wenz-Gross, Yoo, Upshur, & Gambino, 2018).

Sociocultural syntheses and observational findings emphasize the roles of classroom climate and cultural adaptation: when labels and scenarios are localized—using familiar names, culturally relevant situations, and context-appropriate norms implementation is easier and impact increases (Labella, 2018; Kalland & Linnavalli, 2023). These Tier-2 insights are consistent with cross-context Tier-1 trials (Hong Kong, Norway, Iran, Pakistan) showing that culturally adapted emotion talk remains effective (Chan, Qiu, & Shum, 2021; Havighurst, Edvoll, Tidemann, Eikseth, & Nygaard, 2024; Aghaie Meybodi, Mohammadkhani, Pourshahbaz, Dolatshahi, & Havighurst, 2019; Najmussaqib, Mushtaq, & Duncan, 2024).

Program summaries position labeling as a precursor skill that should precede or accompany regulation coaching consistent with the faster, clearer gains in emotion knowledge found in Tier-1 trials using explicit labeling (Kusché, 2020; Denham et al., 2020). In sum, Tier-2 evidence strengthens the causal record established by Tier-1 trials by detailing the mechanism (adult emotion talk → children's emotion concepts → regulation/prosocial) and the implementation levers (dose, coaching/mentoring, visual tools, cultural fit) that help labeling "stick" when applied in preschool environments.

Risk of bias (RoB)

Using RoB 2 for randomized studies and ROBINS-I for non-randomized designs, we rated 12 studies low risk, 8 some concerns, and 5 higher risk typically due to small samples and/or incomplete blinding. Effects in higher-risk studies tended to be smaller and less stable, warranting cautious interpretation. Summary**,** across heterogeneous settings and designs, explicit/embedded emotion labeling is consistently associated with improved emotion knowledge and promising gains in regulation and prosocial behavior—especially when dose, coaching/fidelity, and cultural alignment are adequate.

3.2 Discussion

Interpreting the findings

The present review underscores the value of treating *emotion labeling* as an active ingredient in preschool emotion regulation (ER) programs. By helping children connect internal emotional states and situational cues to shared vocabulary, labeling creates the conceptual scaffolding needed for adaptive strategy use such as reappraisal and problem solving. This mechanism helps explain the consistent improvements in emotion knowledge and the subsequent positive shifts in regulation and prosocial behavior observed when interventions are delivered with sufficient intensity and adult coaching. These conclusions align with broader research linking emotion socialization practices such as teacher and parent emotion talk to children's emotional competence and school readiness (Eisenberg et al., 2010; Blair & Raver, 2015; England-Mason & Gonzalez, 2020) and with neurocognitive evidence showing that affect labeling can modulate limbic system activity (Lieberman et al., 2007).

Explicit versus embedded labelling

Interventions that explicitly teach emotion vocabulary including Tuning in to Kids (TIK) (Chan, Qiu, & Shum, 2021; Qiu & Shum, 2022; Bjørk, Bølstad, Pons, & Havighurst, 2022; Havighurst, Edvoll, Tidemann, Eikseth, & Nygaard, 2024), dialogic vocabulary lessons (Kogan, 2024), and Mission FEEL! (Alfonso, Ortega, & Fernández, 2025) tend to produce faster and clearer gains in children's emotion

knowledge than approaches that only embed labeling within broader SEL content, such as Second Step Early Learning (SSEL) (Upshur, Heyman, & Wenz-Gross, 2017; Upshur, Wenz-Gross, Rhoads, Yoo, & Sawosik, 2019). Even so, embedded models are effective when practice is frequent and supported with visible, structured tools (e.g., emotion cards, emotion "thermometers," daily check-ins) a pattern evident in SSEL and in media-rich materials like Sesame Workshop's Little Children, Big Challenges (Oades-Sese, Cahill, Allen, Rubic, & Mahmood, 2021). Taken together, these findings support the practical advantage of front-loading emotion vocabulary instruction and naming routines before or alongside regulation coaching.

Cultural and delivery considerations

Trial evidence from Hong Kong, Iran, Norway, and Pakistan shows that adapting emotion labels and scenarios to local norms preserves core benefits and improves acceptability (Chan et al., 2021; Edrissi, Havighurst, Aghebati, Habibi, & Arani, 2019; Aghaie Meybodi, Mohammadkhani, Pourshahbaz, Dolatshahi, & Havighurst, 2019; Havighurst et al., 2024; Najmussaqib, Mushtaq, & Duncan, 2024). Teacher-led implementations often yield stronger child outcomes than parent-only or fully digital formats, likely because of consistent reinforcement within daily classroom routines (Upshur et al., 2019; Havighurst et al., 2024). At the same time, parent-focused programs reliably reduce punitive/dismissing responses and lower parenting stress, which are key mediators of children's emotional development (Chan et al., 2021; Qiu & Shum, 2022; Havighurst, Wilson, Harley, & Kehoe, 2019). Hybrid models that combine teacher delivery with parent training and digital supports appear promising for scale-up while maintaining fidelity (Havighurst, Mangelsdorf, Boswell, Radovini, & Kehoe, 2024; Alfonso et al., 2025).

Although the evidence converges on labeling's effectiveness, most programs bundle labeling with other SEL components, limiting causal attribution (England-Mason & Gonzalez, 2020; Bell, Bierstedt, & LoBue, 2024). Future research should: Use factorial/hybrid designs to isolate labeling elements (e.g., vocabulary instruction + emotion check-ins); Employ standardized measures e.g., TEC (Bjørk et al., 2022; Havighurst et al., 2024), EMT (Alfonso et al., 2025), ERC/CBS (Chan et al., 2021) with more 6-month follow-ups; and assess implementation fidelity and coaching quality systematically (Skåland, Havighurst, Nygaard, & Teig, 2023; Ambrosi, Evans, Kavanagh, & Havighurst, 2023).

For scale-up within national preschool curricula, low-cost visual tools, routinized daily practice, and brief yet structured adult coaching modules will be critical (Upshur et al., 2019; Denham, Bassett, & Wyatt, 2020).

4. Conclusion

This systematic review demonstrates that explicit emotion labeling is a pivotal mechanism in preschool emotion regulation interventions. Across 25 studies (2015–2025), consistent evidence shows that programs incorporating labeling strategies reliably improve children's emotion knowledge and generate positive, though more variable, gains in regulation and prosocial behavior. The findings highlight that program effectiveness is strongly moderated by intensity and dose (more 12 weeks or daily routines), adult implementer coaching (teachers and parents engaging in emotion talk and validation), and cultural adaptation (local language, norms, and contextualized scenarios). Interventions that front-load explicit labelling through vocabulary instruction, daily emotion check-ins, and visual tools tend to yield faster and clearer knowledge gains than those embedding labeling within broader SEL content, unless embedded models ensure routine practice and fidelity. These results establish emotion labeling as an active ingredient in early childhood SEL curricula and provide a clear rationale for integrating labeling-based routines into national preschool programs, particularly in developing contexts such as Indonesia. The review also underscores the need for rigorous future research, including factorial and hybrid trials that isolate labeling components, standardized outcome measures with long-term follow-up, and implementation studies assessing fidelity and scalability. Ultimately, strengthening emotion-labeling practices within preschool curricula offers a cost-effective and culturally adaptable pathway to promote children's emotional competence, social readiness, and long-term wellbeing.

5. References

Abela, K. R., McCabe, R. E., Bennett, T., Bock, N., & Gonzalez, A. (2025). Evaluating parent-mediated interventions to support child emotion regulation: A review of preventative approaches across childhood. *Developmental Review, 77*, 101218.

Aghaie Meybodi, F., Mohammadkhani, P., Pourshahbaz, A., Dolatshahi, B., & Havighurst, S. S. (2019). Improving parent emotion socialization practices: Piloting Tuning in to Kids in Iran for children with disruptive behavior problems. *Family Relations, 68*(5), 596–607.

Alfonso, S. V., Ortega, L. A., & Fernández, M. I. (2025). Mission FEEL!: A preschool emotion understanding program—Feasibility, acceptability, and signal of change. *Early Childhood Research Quarterly, 70*, 254–263.

Ambrosi, C. C., Evans, S., Kavanagh, P. S., & Havighurst, S. S. (2023). Parents on the same page: Acceptability and appropriateness of Tuning in to Kids Together. *Journal of Child and Family Studies, 32*(12), 3714–3730.

Ambrosi, C. C., Kavanagh, P. S., Evans, S., & Havighurst, S. S. (2025). Tuning in to Kids Together: Piloting an emotion-focused coparenting program. *Family Process, 64*(1), e70002.

Bjørk, R. F., Bølstad, E., Pons, F., & Havighurst, S. S. (2022). Testing TIK (Tuning in to Kids) with TEC (Test of Emotion Comprehension): Does enhanced emotion socialization improve child emotion understanding? *Journal of Applied Developmental Psychology, 78*, 101368.

Blair, C., & Raver, C. C. (2015). School readiness and self-regulation: A developmental psychobiological approach. *Annual Review of Psychology, 66*, 711–731.

Bølstad, E., Havighurst, S. S., Tamnes, C. K., Stavrinou, M., Espeseth, T., & others. (2021). A pilot study of a parent emotion socialization intervention: Impact on parent behavior, child self-regulation, and adjustment. *Frontiers in Psychology, 12*, 730278.

Chan, M., Teng, D., Teng, Y.-P. T., & Zhou, Q. (2023). Parent emotion talk with preschoolers from low-income Mexican American and Chinese American families: Links to sociocultural factors. *Social Development, 32*(2), 481–500. *(Tier-2 support)*

Chan, R. F.-Y., Qiu, C., & Shum, K. K.-M. (2021). Tuning in to Kids: A randomized controlled trial of an emotion coaching parenting program for Chinese parents in Hong Kong. *Developmental Psychology, 57*(11), 1796–1809.

Denham, S. A., Bassett, H. H., & Wyatt, T. (2020). The socialization of emotional competence. In J. E. Grusec & P. D. Hastings (Eds.), *Handbook of socialization* (2nd ed., pp. 590–613). Guilford Press.

Edrissi, F., Havighurst, S. S., Aghebati, A., Habibi, M., & Arani, A. M. (2019). A pilot study of the Tuning in to Kids parenting program in Iran for reducing preschool children's anxiety. *Journal of Child and Family Studies, 28*(6), 1695–1702.

England-Mason, G., & Gonzalez, A. (2020). Intervening to shape children's emotion regulation: A review of emotion socialization parenting programs for young children. *Emotion, 20*(1), 98–104.

Havighurst, S. S., Edvoll, M., Tidemann, I., Eikseth, H. C., & Nygaard, E. (2024). A randomized controlled trial of an emotion socialization intervention in Norwegian kindergartens. *Early Education and Development, 35*(3), 454–475.

Havighurst, S. S., Mangelsdorf, S. N., Boswell, N., Radovini, A., & Kehoe, C. E. (2024). A self-paced online emotion socialization intervention for parents of children with challenging behavior: Tuning in to Kids Online. *Frontiers in Psychology, 15*, 1393708.

Hollender, A. E., Elsayed, N. M., Vogel, A. C., Luby, J. L., & Gilbert, K. E. (2023). Childhood emotion dysregulation mediates the relationship between preschool emotion labeling and adolescent depressive symptoms. *Emotion, 24*(1), 81–92. *(Tier-2 support)*

Kalland, M., & Linnavalli, T. (2023). Associations between social-emotional and language development in preschool children. *Scandinavian Journal of Educational Research, 67*(7), 1082–1101. *(Tier-2 support)*

Kogan, A.-M. (2024). Using dialogic reading and direct instruction of emotion words to increase emotion vocabulary knowledge in the preschool classroom. *Journal of Research in Innovative Teaching & Learning*. Advance online publication.

Kusché, C. A. (2020). The PATHS curriculum: Thirty-five years and counting. In *Social skills across the life span* (pp. xxx–xxx). Elsevier. *(Tier-2 program background)*

Lieberman, M. D., Eisenberger, N. I., Crockett, M. J., Tom, S. M., Pfeifer, J. H., & Way, B. M. (2007). Putting feelings into words: Affect labeling disrupts amygdala activity in response to affective stimuli. *Psychological Science, 18*(5), 421–428.

Mastromanno, B. K., Kehoe, C. E., Wood, C. E., & Havighurst, S. S. (2021). A randomised-controlled pilot study of the one-to-one delivery of Tuning in to Kids. *Emotional and Behavioural Difficulties, 26*(4), 359–374.

Najmussaqib, A., Mushtaq, A., & Duncan, R. (2024). Effectiveness of Fun FRIENDS on social-emotional functioning of Pakistani school children. *Journal of Applied Developmental Psychology, 89*, 102423.

Oades-Sese, G. V., Cahill, A., Allen, J. W. P., Rubic, W.-L., & Mahmood, N. (2021). Effectiveness of Sesame Workshop's *Little Children, Big Challenges*: A digital media SEL intervention for preschool classrooms. *Psychology in the Schools, 58*(10), 2041–2067.

Qiu, C., & Shum, K. K.-M. (2022). Emotion coaching intervention for Chinese mothers of preschoolers: A randomized controlled trial. *Child Psychiatry & Human Development, 53*(1), 61–75.

Skåland, V. R., Havighurst, S. S., Nygaard, E., & Teig, I. L. (2023). Qualitative evaluation of the implementation of "Tuning in to Kids" in Norwegian Kindergartens. *BMC Psychology, 11*, 87.

Upshur, C. C., Heyman, M., & Wenz-Gross, M. (2017). Efficacy trial of the Second Step Early Learning curriculum: Preliminary outcomes. *Journal of Applied Developmental Psychology, 50*, 15–25.

Upshur, C. C., Wenz-Gross, M., Rhoads, C., Yoo, Y., & Sawosik, G. (2019). A randomized efficacy trial of the Second Step Early Learning curriculum. *Journal of Applied Developmental Psychology, 62*, 145–159.

Wilson, K. R., Havighurst, S. S., Kehoe, C. E., & Harley, A. E. (2016). Dads Tuning in to Kids: Preliminary evaluation of a fathers' parenting program. *Family Relations, 65*(4), 535–549.

Wong, M., & Power, T. G. (2024). The efficacy of the Peace Ambassador Project: Promoting children's emotional intelligence to address aggression in the early childhood classroom. *Children and Youth Services Review, 166*, 107937.

Wenz-Gross, M., Yoo, Y., Upshur, C. C., & Gambino, A. J. (2018). Pathways to kindergarten readiness: Roles of Second Step Early Learning, social-emotional, executive functioning, academic and task behavior skills. *Frontiers in Psychology, 9*, 1886.

Appendix 4 — Tier-1 (Primary interventions) — **Scopus**

Ref (short)	Country/ Setting	Design	N / Age	Labeling	Measures	Main finding	RoB
Havighurst et al., 2024 (EED) *	Norway; KG	RCT (school-based)	classes; 5–6	Explicit (teacher coaching/ labeling)	TEC; teacher ES	↑ child TEC; ↑ teacher ES	Low
Qiu & Shum, 2022 (CPHD)	Hong Kong; mothers	RCT	89; 3–6	Explicit (parent ES/labeling)	CCNES; punitive/dismissing	↓ punitive & dismissing; ↑ coaching	Low

Chan et al., 2021 (Dev Psychol)	Hong Kong; parents	RCT (WL)	104; 3–6	Explicit	APQ, CCNES, PSI-SF, ERC	↓ punitive & stress; delayed ↑ expressive encouragement; ↓ lability	Low
Bjørk et al., 2022 (JADP)	Norway	RCT	preschoolers 4–6	Explicit (+TEC tasks)	TEC	↑ emotion understanding	Low
Mastromanno et al., 2021 (EBD)	Australia	Pilot RCT (1:1 TIK)	parents of preschoolers	Explicit	Parent RF; child CB	↑ parent ES; ↓ CB	Some
Edrissi et al., 2019 (JCFS)	Iran	Pre–post	preschoolers	Explicit	Anxiety indices	↓ child anxiety	Some
Aghaie Meybodi et al., 2019 (Family Relations)	Iran	Quasi-exp	DBP preschoolers	Explicit	Parent ES; CB	↑ ES; ↓ problems	Some
Havighurst et al., 2019 (Social Dev) "Dads TIK"	Australia	RCT (fathers)	fathers of preschoolers	Explicit	Parent ES; CB	↑ fathers' ES; child gains	Low
Ambrosi et al., 2025 (Family Process)	Australia	Pilot (coparenting)	parents of preschoolers	Explicit	Parent ES; acceptability	Feasible; promising	Some
Havighurst et al., 2024 (Frontiers)	Australia (online)	Pre–post (self-paced)	parents of 2–10 y (subset preschool)	Explicit	Parent ES; CB	↑ ES; acceptable	Some
Wong & Power, 2024 (CYSR)	USA; classrooms	Quasi-exp	5–6	Emb/Exp (Peace Ambassador)	EI; prosocial; aggression	↑ EI & prosocial; ↓ aggression	Some
Upshur et al., 2019 (JADP) *	USA; preschools	Cluster RCT	4–5	Embedded→ Explicit (SSEL)	SEL, EF, readiness	Gains on select SEL/EF	Low/Some
Upshur et al., 2017 (JADP) *	USA	Efficacy	4–5	Embedded→ Explicit	Early SEL/EF composites	Positive prelim.	Some

* = Also in table ERIC. ES = emotion socialization; CB = child behavior.

Appendix 5 — Tier-1 (Primary interventions) — **ScienceDirect**

Ref (short)	Country/ Setting	Design	N / Age	Labeling	Measures	Main finding	RoB
Alfonso et al., 2025 (ECRQ) "Mission FEEL!"	USA (online)	One-group pre–post (Phase IIa)	52; 3–5	Explicit (video/games/ check-ins)	EMT	↑ EMT (d≈0.40); high feasibility	Some

Najmussaqib et al., 2024 (JADP) "Fun FRIENDS"	Pakistan; schools	RCT (class)	5–7 (incl. 5–6)	Embedded SEL + emotion talk	SEF/SEL	↑ socio-emotional functioning	Some
Kogan, 2024 (JRIT&L)	USA; classrooms	Pre–post	classrooms; preschool	Explicit (dialogic reading + direct instruction)	Emotion vocabulary	↑ emotion vocabulary	Some
Oades-Sese et al., 2021 (PitS)	USA; Head Start	Cluster randomized pre–post	159 cls; 766	Embedded (media SEL incl. labeling)	SEL/resilience	↑ classroom SEL indicators	Some

Appendix 6 — Tier-1 (Primary interventions) — **ERIC**

Ref (short)	Country /Setting	Design	N / Age	Labeling	Measures	Main finding	RoB
SSEL 2017 (ED573440) *	USA; preschools	Cluster efficacy	4–5	Embedded→ Explicit	SEL/EF/ task	Positive effects; feasible	Some
SSEL 2019 (ED593534) *	USA; preschools	Cluster RCT	4–5; multi-site	Embedded→ Explicit	SEL/EF /readiness	Significant subset gains	Low/ Some
TIK-KT 2024 (EED) *	Norway; KG teachers	RCT (teacher PD)	K teachers; child 5–6	Explicit (teacher emotion talk/labeling)	TEC; teacher practices	↑ TEC; ↑ ES practices	Low
Drama-based EI 2025 (EJPE)	Europe	Pre–post–FU	4–5	Explicit via role-play	EI/FEEL; PKBS-2	↑ EI; behavior gains at FU	Some

* = Also in Scopus.

Appendix 7 — Tier-2 (Supporting / theoretical / implementation) — **Scopus**

Ref (short)	Type/Scope	Population/Context	Labeling role	Key support to Tier-1
Havighurst et al., 2025 (JADP)	Program theory/overview (TIK)	Multi-country	Explicit (conceptual)	Mekanisme & moderator (dose, fidelity) selaras hasil RCT.
Ambrosi et al., 2023 (JCFS)	Mixed-methods acceptability	Co-parenting, preschool	Explicit	Dukung kesiapan implementasi komponen orang tua.
Skåland et al., 2023 (BMC Psych)	Qual implementation	KG Norway	Explicit	Faktor fidelitas & konteks; sejalan efek lebih besar saat ada PD.
Wenz-Gross et al., 2018 (Frontiers)	Observational "pathways" (SSEL)	US preschools	Embedded	Jelaskan jalur SSEL → EF/task → readiness; menempatkan labeling di unit SEL.
Mastromanno et al., 2021 (Clinical Case Studies)	Case reports (1:1 TIK)	Parent–child	Explicit	Vinyet mekanisme; ilustrasi klinis.

Appendix 8 — Tier-2 — ScienceDirect

Ref (short)	Type/Scope	Population/Context	Labeling role	Key support to Tier-1
Denham et al., 2020 (chapter/review)	Socialization review	Preschool classrooms	Embedded (teacher emotion talk)	Konsensus: emotion talk → emotion knowledge → ER/prosocial.
Kusché, 2020 (Elsevier chapter)	Program chapter (PATHS)	PATHS curriculum	Explicit ("Feeling Faces")	Arsitektur & dosis; dukung pentingnya kosakata emosi awal.