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## Teachers' beliefs and strategies in facilitating children's risky play: A systematic literature review

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### Abstract

Risky play poses a dilemma for early childhood educators, raising concerns about children's safety and institutional accountability. Teachers' tolerance toward risky play is often influenced by their beliefs, confidence, and pedagogical competence. This study examines teachers' beliefs and strategies in facilitating risky play through a Systematic Literature Review (SLR) guided by PRISMA procedures. Eleven empirical studies published between 2021 and 2025 were selected from major academic databases. The findings indicate that teachers employ strategies such as creating supportive environments, providing responsive supervision, offering physical and verbal scaffolding, explaining potential risks, and encouraging children's autonomous exploration. Teachers' beliefs significantly shape the implementation and sustainability of risky play practices. Educators with strong confidence in the developmental value of controlled risk tend to adopt facilitative roles rather than restrictive ones, enabling children to assess risks, build resilience, collaborate with peers, and develop independence. The review highlights the importance of strengthening teachers' professional competence and institutional support to optimize meaningful risky play experiences.

### Keywords

Early childhood education, risk management, risky play, systematic literature review, teacher beliefs

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## Introduction

Play is a fundamental component of early childhood development and serves as a primary medium through which children acquire knowledge, develop skills, and explore their interests (Armstrong et al., 2025). Through play, children strengthen their social, emotional, physical, cognitive, and intellectual capacities. It provides opportunities for experimentation, creativity, and problem-solving, while also fostering resilience and self-confidence. Among the various forms of play, risky play has attracted increasing scholarly attention for its developmental significance and the ongoing debate over its implementation in educational settings.

Risky play refers to thrilling and challenging activities that involve uncertainty and the possibility of minor physical injury yet remain within developmentally appropriate and supervised limits (Gray et al., 2023; Sandseter et al., 2023). In this context, risk is not synonymous with danger. Rather, it involves situations in which children can identify, evaluate, and respond to challenges based on their abilities (Dodd et al., 2021). Sandseter (2021) categorizes risky play into six types: play at heights, high-speed play, use of potentially dangerous tools, rough-and-tumble play, play involving disappearing or getting lost, and exploratory play in natural environments. These forms of play provide children with opportunities to test physical limits, regulate emotions, and develop risk assessment skills.

A growing body of research highlights the developmental benefits of risky play. Engagement in challenging and unstructured play environments promotes motor competence, social interaction, and emotional regulation (Dodd & Lester, 2021; Yogman et al., 2025). Risky play allows children to make mistakes and learn from them within relatively safe boundaries (Visser et al., 2024). It supports children in confronting fears, building endurance, and developing adaptive coping mechanisms (Gray, 2020). Furthermore, exposure to manageable risks has been associated with improved decision-making skills and reduced anxiety symptoms, as children learn to navigate uncertainty with increasing confidence (Beaulieu & Beno, 2024). Outdoor risky play has been linked to enhanced self-control and, over time, a reduction in injury severity as children become more competent at assessing their capabilities (Cho et al., 2023).

Despite these documented benefits, risky play remains controversial. Over recent decades, heightened societal concern about child safety has led to increasingly risk-averse attitudes among families and educational institutions (Ball et al., 2019). Protective policies, liability concerns, and cultural norms emphasizing safety have contributed to restrictive supervision practices that limit children's freedom to explore (Iskandar, 2021). Children's daily routines are increasingly structured, with limited opportunities for autonomous outdoor play, compounded by excessive screen use and reduced interaction with natural environments (Rahayu & Azima, 2025). Empirical evidence suggests that restricted opportunities for active play are associated with declines in motor development and physical health among young children (Rakhmawati, 2022).

This tension between developmental benefits and safety concerns creates a persistent dilemma for adults. On one hand, risky play supports holistic development; on the other, it raises concerns about injury, responsibility, and accountability. Child development scholars argue that excessive protection may result in "well-meaning overprotection," potentially limiting children's resilience and long-term adaptive capacities (Gray et al., 2023). Thus, rather

than eliminating risk, the challenge lies in managing it appropriately within educational contexts.

Within early childhood education settings, teachers play a critical role in mediating this balance. Educators are responsible for designing environments that are both safe and sufficiently challenging to promote meaningful learning. Teachers' decisions regarding supervision, intervention, and environmental design directly influence the extent to which children engage in risky play (Van Rooijen et al., 2020; Višnjić-Jevtić et al., 2021). However, research indicates that teachers often demonstrate low tolerance for risk, particularly when activities involve equipment perceived as dangerous (LeMasters & Vandermaas-Peeler, 2023). Even when playgrounds meet safety standards, opportunities for authentic risky play may remain limited due to restrictive adult practices.

Teachers' responses to risky play are shaped by multiple interrelated factors, including personal beliefs, professional training, childhood experiences, cultural expectations, institutional regulations, and parental pressures (Martins et al., 2024). Teacher beliefs function as cognitive frameworks that guide pedagogical decision-making. According to educational psychology research, teachers' beliefs significantly influence classroom practices, learning environments, and student outcomes (Leng et al., 2021). In the context of risky play, beliefs about children's competence, vulnerability, and autonomy shape whether teachers act as facilitators or controllers.

Bandura's concept of self-efficacy further illuminates this relationship. Teachers with high professional confidence are more likely to implement innovative and child-centered strategies, whereas those with lower confidence may adopt restrictive approaches to avoid perceived risks. Facilitating risky play requires not only awareness of developmental benefits but also the pedagogical competence to distinguish between acceptable risk and unacceptable danger. Effective facilitation involves responsive supervision, scaffolding, and reflective dialogue rather than direct prohibition.

Although existing research has examined either teachers' attitudes toward risky play or specific facilitation strategies, limited studies have systematically integrated these two dimensions. Most empirical investigations focus separately on belief systems or environmental practices without fully exploring how teachers' beliefs inform the strategies they adopt in practice. This fragmentation limits a comprehensive understanding of how pedagogical decisions are shaped and enacted within early childhood settings.

Addressing this gap is particularly important given the growing emphasis on child-centered, play-based learning. Understanding the interplay between teachers' beliefs and facilitation strategies can provide insight into how educational systems can balance safety with developmental challenges. Moreover, identifying effective strategies grounded in positive beliefs may inform teacher training programs and institutional policy development.

## **Methodology**

This study employed a qualitative Systematic Literature Review (SLR) to synthesize empirical evidence on teachers' beliefs and strategies in facilitating risky play in early childhood education. A systematic review design was selected to ensure transparency, methodological rigor, and replicability in identifying and analyzing relevant research. The review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework to guide the identification, screening, eligibility assessment, and inclusion of studies (Tricco et

al., 2018). The PRISMA approach is widely recognized for enhancing clarity and minimizing bias in systematic reviews.

The literature search was conducted across four major academic databases: Google Scholar, ScienceDirect, Springer Nature, and Taylor & Francis. These databases were selected to ensure access to peer-reviewed national and international journals in the fields of early childhood education, educational psychology, and outdoor learning. The search focused on articles published between 2021 and 2025 to capture recent developments in research related to risky play and teacher beliefs. Keyword combinations included “risky play,” “teacher belief,” “teacher attitude,” “teacher strategy,” and “early childhood education.” Boolean operators were used to systematically refine and combine search terms, following structured search principles commonly applied in systematic reviews (Schiavenato & Chu, 2021).

The initial search yielded 30 articles. Titles and abstracts were screened to determine relevance to the research focus. Studies were considered eligible if they met the following criteria: empirical (qualitative, quantitative, or mixed-methods), focused on early childhood education contexts, explicitly discussed teachers’ beliefs or strategies related to risky play, and published in peer-reviewed journals, nationally or internationally. Articles were excluded if they were purely conceptual, focused solely on parental perspectives without reference to teachers, unrelated to risky play in early childhood settings, or unavailable in full text.

Following the initial screening process, 22 articles remained for full-text assessment. During the eligibility phase, 11 articles were excluded because they did not sufficiently address both teachers’ beliefs and facilitation strategies, or because they did not meet the empirical criteria. Ultimately, 11 studies met all inclusion criteria and were included in the final review. The complete selection process is illustrated in Figure 1, which presents the PRISMA flow diagram of identification, screening, eligibility, and inclusion stages (Tricco et al., 2018).

Data from the selected studies were systematically extracted to ensure consistency in the analysis. The extracted information included authorship, year of publication, country of study, research design, participant characteristics, key findings related to teachers’ beliefs, reported facilitation strategies, and contextual factors influencing implementation. The analysis employed thematic synthesis to identify recurring patterns and conceptual connections across studies. Thematic synthesis enables researchers to move beyond simple description by grouping findings into broader analytical categories and interpreting relationships among themes (Ardoin & Bowers, 2020).

Through iterative reading and coding, the findings were organized around two central analytical domains aligned with the research questions: teachers’ beliefs about risky play and pedagogical strategies used to facilitate it. Additional attention was given to contextual influences, such as institutional policies, cultural norms, and parental expectations, that shaped teachers’ practices. This analytical process enabled comprehensive integration of evidence while maintaining conceptual coherence.

As this study relied exclusively on previously published research, it did not involve direct interaction with human participants and therefore did not require ethical clearance. All sources were cited appropriately to maintain academic integrity. By adhering to PRISMA procedures and applying systematic screening and synthesis methods, this review ensures methodological transparency and strengthens the credibility of its findings.

## Findings

This systematic review analyzed 11 empirical studies published between 2021 and 2025 to examine teachers’ beliefs and strategies in facilitating risky play in early childhood education.

The findings reveal a strong interconnection between teachers' belief systems, pedagogical strategies, and contextual influences. Rather than functioning independently, these elements operate as an integrated framework shaping how risky play is interpreted and implemented in educational settings. Three major themes emerged from the synthesis: teachers' beliefs and professional confidence, pedagogical strategies for facilitating risky play, and contextual and institutional influences.

### ***Teachers' beliefs and professional confidence***

Across the reviewed studies, teachers' beliefs were identified as the primary determinant of risky play implementation. Educators who viewed risky play as developmentally beneficial demonstrated higher tolerance for uncertainty and were more willing to provide children with challenging experiences. These teachers understood risky play as a mechanism for fostering resilience, autonomy, motor competence, and decision-making skills.

Conversely, teachers who perceived risk primarily through a safety lens tended to adopt restrictive approaches. Their concerns centered on potential injury, institutional accountability, and parental reactions. Even when recognizing developmental benefits, fear of negative consequences often resulted in limited facilitation.

Professional self-efficacy significantly influenced these belief patterns. Teachers with strong confidence in classroom management and child supervision reported greater comfort in allowing children to engage in controlled risk. In contrast, educators with lower confidence expressed hesitation in balancing safety and autonomy.

Cultural and policy contexts also shaped belief systems. In countries where risky play is culturally normalized and supported by educational frameworks, teachers demonstrated greater openness toward risk-taking activities. In more risk-averse contexts, beliefs were characterized by ambivalence, reflecting tension between developmental ideals and safety regulations. These findings indicate that teachers' beliefs function as cognitive filters that influence how risk is interpreted, tolerated, and managed.

### ***Pedagogical strategies for facilitating risky play***

The review identified multiple strategies teachers use to facilitate risky play while maintaining appropriate supervision. Effective practice did not involve eliminating risk but rather structuring and scaffolding it. A central strategy involved designing supportive environments that balance safety and challenge. This included incorporating loose parts, climbing structures, natural elements, and varied terrains to stimulate exploration. Environmental design was frequently mentioned as a foundational factor enabling risk engagement.

Responsive supervision was another common strategy. Teachers observed from a distance, intervening only when necessary. This approach allowed children to independently assess risk while maintaining adult oversight.

Physical and verbal scaffolding were also widely reported. Teachers provided minimal assistance during challenging tasks such as climbing or balancing. Verbal prompts encouraged children to reflect on their actions, assess potential hazards, and make informed decisions rather than receiving direct prohibitions.

Some studies highlighted intentional teaching frameworks, such as sustained shared thinking, collaborative problem-solving, and guided reflection. In these contexts, risky play

was integrated into broader learning goals, including science education and social-emotional development. Importantly, effective educators distinguished between “risk” and “danger.” Risk was understood as a manageable challenge within children’s capacity, whereas danger represented unacceptable harm. This conceptual distinction was critical for balanced facilitation.

***Contextual and institutional influences***

Although many teachers acknowledged the benefits of risky play, implementation was frequently constrained by external factors. Institutional policies emphasizing injury prevention, liability concerns, and strict safety regulations limited opportunities for authentic risk-taking. Parental expectations also played a significant role. In several studies, teachers reported tension between educational philosophy and parental safety. Inconsistent perceptions of acceptable risk levels created uncertainty in practice.

Environmental constraints further affected implementation. Playgrounds designed primarily for safety compliance often lacked diversity and complexity, reducing opportunities for exploration. Limited professional development on risk management contributed to teacher hesitation. However, targeted training and reflective practice were shown to improve teacher confidence and expand facilitation strategies. Action research interventions demonstrated that when institutional support aligned with positive belief systems, teachers adopted more complex and facilitative approaches.

**Table 1.** *Thematic synthesis of teachers’ beliefs and strategies*

Themes	Key Patterns Identified	Implications
Teachers’ Beliefs	Beliefs shape tolerance for risk; influenced by self-efficacy, culture, training, and personal experiences	Positive beliefs increase facilitative practices; restrictive beliefs limit autonomy
Professional Confidence	Higher self-efficacy associated with greater willingness to allow controlled risk	Confidence enhances balanced supervision
Environmental Design	Use of loose parts, natural elements, varied terrains	Structured environments support safe exploration
Supervision Strategies	Responsive observation, minimal intervention, scaffolding	Encourages independent risk assessment
Intentional Teaching	Reflective questioning, shared thinking, peer collaboration	Promotes cognitive and social development
Institutional Constraints	Safety policies, liability concerns, parental expectations	External pressures may reduce implementation consistency

***Synthesis of findings***

Overall, the findings demonstrate that teachers’ beliefs are foundational in shaping risky play practices. Belief systems influence pedagogical choices, supervision styles, and environmental design decisions. When supported by professional confidence and institutional

alignment, teachers adopt facilitative approaches that promote autonomy, resilience, and holistic development.

Conversely, restrictive belief patterns combined with external pressures reduce children's opportunities to engage in meaningful risk-taking experiences. The synthesis suggests that optimizing risky play requires not only environmental modification but also strengthening teacher competence, aligning institutional policies, and fostering shared understanding among stakeholders. Risky play implementation is therefore not merely a matter of playground design; it reflects deeper pedagogical beliefs and systemic influences that shape educational practice.

## Discussion

This systematic review examined teachers' beliefs and strategies in facilitating risky play in early childhood education. The findings highlight that risky play implementation is not merely a pedagogical choice but a reflection of deeper belief systems, professional confidence, and institutional structures. This discussion elaborates on these dimensions by linking the findings to contemporary theoretical and empirical literature.

### *Teachers' beliefs as the foundation of risky play facilitation*

The findings demonstrate that teachers' beliefs function as a foundational framework that shapes their interpretation of risk and their pedagogical decisions. Educators who perceive risky play as developmentally beneficial tend to facilitate rather than restrict children's exploratory behavior. This aligns with research indicating that teacher cognition strongly influences classroom practice and learning environments (Leng et al., 2021).

From a social cognitive perspective, beliefs operate as internal filters that guide professional judgment (Bandura, 1997). Teachers with high self-efficacy are more likely to interpret risk as a learning opportunity rather than a threat. Recent studies reinforce this connection, suggesting that teacher confidence predicts openness to child-led and exploratory learning approaches (Jerebine et al., 2024). When educators trust their ability to manage uncertainty, they are more willing to let children test limits in developmentally appropriate ways.

The distinction between risk and danger is critical in this context. Risk involves manageable challenges within a child's capacity, whereas danger entails hazards beyond control (Beaulieu & Beno, 2024). Teachers who internalize this distinction are better equipped to balance autonomy and safety. However, when beliefs are dominated by fear of injury or liability, risk becomes conflated with danger, resulting in overly restrictive practices.

Cultural and systemic factors further shape belief systems. Research comparing international contexts indicates that risk tolerance varies significantly across countries, influenced by societal attitudes toward childhood, safety norms, and policy frameworks (Liu & Birkeland, 2022). In environments where risky play is institutionally supported, teachers are more confident in facilitating it. Conversely, in highly regulated settings, educators may experience cognitive dissonance between developmental theory and institutional expectations. Thus, teachers' beliefs should not be viewed as isolated psychological constructs but as situated within broader sociocultural and institutional ecosystems.

### *Professional self-efficacy and pedagogical agency*

A consistent finding across the reviewed studies is the relationship between professional self-efficacy and the use of facilitation strategies. Teachers with strong professional confidence are more likely to adopt facilitative roles, shifting from controllers of behavior to guides of exploration. This transformation reflects a move toward constructivist pedagogy, in which learning emerges through experience and reflection (Gautam & Agarwal, 2023).

Recent empirical research suggests that professional development interventions can significantly increase educators' confidence in facilitating risky play (Higginbottom et al., 2023). Through reflective practice and collaborative dialogue, teachers learn to reassess risk perceptions and adopt intentional strategies. Action research models have shown measurable increases in children's engagement in challenging activities when teachers receive structured support (Higginbottom et al., 2023).

Moreover, teacher agency plays a central role in mediating policy constraints. Even within restrictive regulatory frameworks, educators with a strong professional identity may reinterpret guidelines to preserve children's autonomy (Cooke et al., 2020). The agency allows teachers to navigate tensions between accountability and developmental appropriateness.

Recent findings by Meijer et al. (2024) emphasize that risk-positive pedagogies require not only teacher competence but also systemic alignment. When institutions provide clear guidelines distinguishing acceptable risk from negligence, teacher self-efficacy strengthens. Conversely, ambiguous policies may undermine confidence and reinforce defensive practices. Therefore, strengthening teacher agency and self-efficacy emerges as a key strategy for promoting balanced risky play implementation.

### *Pedagogical strategies: balancing autonomy and supervision*

The findings indicate that effective facilitation of risky play involves a nuanced balance between autonomy and supervision. Teachers do not eliminate risk; rather, they scaffold it. This approach aligns with Vygotskian perspectives on guided participation, where adults provide temporary support that gradually diminishes as competence increases.

Responsive supervision is a central strategy identified in the review. Rather than constant intervention, teachers observe from a distance and intervene selectively. This approach fosters independent risk assessment and internal regulation. Similar patterns have been reported in outdoor education research, which emphasizes the importance of "watchful presence" rather than intrusive control (Harper & Obee, 2021).

Environmental design also plays a critical role. Natural and flexible play environments encourage exploratory behavior and creative problem-solving. Recent studies suggest that environments rich in loose parts and natural materials stimulate higher levels of physical activity and collaborative engagement (Brussoni et al., 2022). Conversely, overly standardized playgrounds may limit authentic risk-taking experiences.

Intentional teaching strategies further enhance risky play. Frameworks such as sustained shared thinking promote dialogue-based risk assessment and collaborative problem-solving (Siraj-Blatchford, 2009). Encouraging children to reflect on potential outcomes supports metacognitive development. Recent research indicates that integrating reflective questioning into risky play strengthens children's executive function and emotional regulation (Cho et al., 2023).

Importantly, facilitation strategies must remain developmentally appropriate. As [Dodd and Lester \(2021\)](#) argue, adventurous play reduces anxiety when children perceive challenges as manageable rather than overwhelming. Teachers, therefore, function as regulators of challenge intensity, calibrating difficulty to align with children's abilities.

### *Institutional and parental influences*

Despite recognizing developmental benefits, teachers often operate within institutional environments that prioritize minimizing risk. Liability concerns, safety audits, and standardized equipment regulations can restrict pedagogical flexibility ([Ball et al., 2019](#)). This tension reflects a broader societal shift toward risk aversion in childhood.

Recent scholarship highlights the role of parental attitudes in shaping educational practice. [Jerebine et al. \(2024\)](#) found that parental perceptions of risk significantly influence institutional decision-making regarding outdoor play. When parents express anxiety about injury, administrators may adopt restrictive policies to avoid conflict. However, evidence suggests that transparent communication between teachers and parents can reduce misunderstandings. [Harper and Obee \(2021\)](#) report that when educators articulate the developmental rationale for risky play, parental trust increases. Collaborative dialogue fosters shared understanding of acceptable risk levels.

Additionally, urban planning and playground design influence institutional practices. [Meijer et al. \(2024\)](#) argue that child-friendly urban spaces require policy frameworks that move beyond safety compliance toward developmental enrichment. Without systemic change, teachers may struggle to consistently implement risk-positive pedagogies.

Therefore, risky play facilitation must be understood as a multi-level phenomenon involving classroom practice, institutional governance, parental engagement, and broader societal norms.

### *Implications for early childhood education*

The synthesis suggests several implications for policy and practice. First, teacher education programs should explicitly address risk literacy, equipping future educators with conceptual tools to differentiate risk from danger. Integrating practical simulations and reflective case studies may strengthen professional confidence.

Second, institutions should develop clear risk management frameworks that balance accountability with developmental appropriateness. Ambiguous policies contribute to defensive teaching practices. Clear guidelines may empower educators to act confidently within defined boundaries.

Third, professional development initiatives should incorporate collaborative reflection on belief systems. Challenging underlying assumptions about safety and competence can transform practice. Research indicates that belief-oriented interventions are more effective than procedural training alone ([Higginbottom et al., 2023](#)).

Finally, broader advocacy is needed to reframe public discourse around childhood risk. As [Brussoni et al. \(2022\)](#) emphasize, protecting children from all risks may inadvertently undermine resilience and independence. A balanced perspective recognizes that controlled exposure to challenge is essential for healthy development.

All in all, the discussion supports a conceptual model in which teachers' beliefs function as cognitive determinants of pedagogical strategies, mediated by self-efficacy and constrained

or supported by institutional contexts. This model aligns with ecological systems theory, which situates individual practice within nested social structures.

At the individual level, beliefs and self-efficacy shape how people interpret risk. At the interpersonal level, parent–teacher relationships influence tolerance thresholds. At the institutional level, policy and regulation define structural boundaries. Finally, at the societal level, cultural norms regarding childhood safety frame acceptable practice.

Understanding risky play facilitation through this multi-layered lens allows for more comprehensive intervention strategies that address both cognitive and systemic dimensions.

## **Conclusion**

This systematic review confirms that teachers' beliefs and professional confidence are central determinants in the facilitation of risky play in early childhood education. Educators who recognize the developmental value of controlled risk are more likely to adopt facilitative roles, encouraging autonomy, reflective decision-making, and resilience rather than enforcing restrictive supervision. The findings demonstrate that effective implementation of risky play depends not only on environmental design but also on teachers' capacity to distinguish between manageable risk and unacceptable danger.

Pedagogical strategies such as responsive supervision, structured scaffolding, reflective dialogue, and intentional environmental planning enable children to engage in meaningful challenges while maintaining safety boundaries. However, the sustainability of these practices is influenced by institutional policies, parental expectations, and broader sociocultural norms. Strengthening teacher self-efficacy, clarifying risk management frameworks, and fostering collaborative understanding among stakeholders are therefore essential.

Overall, balancing safety with developmental challenges requires both professional competence and systemic support. By aligning teacher beliefs with evidence-based practice, early childhood settings can create environments that promote holistic development through appropriately managed risky play.

## **Disclosure Statement**

No potential conflict of interest was reported by the authors.

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