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Nature-based play therapy: A protocol for a scoping review V.1

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Keywords: play therapy intervention, outcomes of play therapy intervention, based play therapy intervention, centered play therapy intervention, play therapy, play therapy integrate, based play therapy integrate, based play therapy, reduced outdoor play, outdoor play, exposure to natural environment, youth mental health, including intervention, therapy approach, intervention design, natural environment, including nature, changes in children, daily activity, therapy, intervention feature, mental health, social development, nature, such as park, park, regarding child, objective of this scoping review, children, reviewed study, scoping review, child, natural setting

Abstract

Objective: The objective of this scoping review is to describe the scope of evidence on nature-based play therapy interventions. This review aims to examine the populations included, study designs, implementation characteristics, and reported outcomes of play therapy interventions delivered in outdoor or natural environments.

Introduction: Nature-based play therapy integrates play therapy approaches with outdoor or natural environments, such as parks, forests, and green spaces, to support children's emotional, cognitive, and social development. Concerns regarding child and youth mental health have increased in recent decades, alongside changes in children's daily activities, including increased screen time and reduced outdoor play. Evidence suggests that both play therapy and exposure to natural environments are associated with positive psychological outcomes; however, studies combining these approaches remain limited and heterogeneous. The existing literature varies in terminology, intervention design, settings, and outcomes, and has not yet been comprehensively synthesized.

Inclusion criteria: This review will use the Population, Concept, and Context (PCC) framework. The population will include children and adolescents aged 0 to 18 years, with studies involving other age groups considered where relevant to support discussion. The concept will include play therapy and child-centered play therapy interventions implemented in outdoor or natural settings, including nature-based play therapy and related approaches. The context will be broad, including interventions conducted in schools, clinics, or other settings, with no restrictions on country or setting.

Methods: This scoping review will follow the framework proposed by Arksey and O'Malley, with enhancements by Levac et al., and will be conducted in accordance with JBI guidance and PRISMA-ScR reporting standards. Searches will be conducted in APA PsycInfo, CINAHL, ERIC, LILACS, PubMed, and SciELO, using predefined keywords limited to titles and abstracts. Peer-reviewed studies published in English, Portuguese, and Spanish between 2000 and 2026 will be included, encompassing qualitative, quantitative, and mixed-methods designs. All eligible studies will be imported into Covidence and screened by two independent reviewers. Data will be extracted to summarize study characteristics, intervention features, and reported outcomes. Results will be synthesized using descriptive numerical analysis and narrative mapping to identify key patterns and gaps in the literature.

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General Information

2 **Authors:** Harper N, Fabrini G, TBD...

Background

3 Nature-based play therapy is an emerging therapeutic approach that integrates play therapy techniques with natural or outdoor environments such as forests, parks, and green spaces to support children's emotional, cognitive, and social development. Play therapy has long been recognized as a developmentally appropriate intervention for children, using play as a medium through which they can express emotions, process experiences, and foster psychosocial growth (Koukorikos et al., 2023). When combined with exposure to natural environments, this approach is theorized to amplify therapeutic benefits by drawing on psychological and physiological effects of nature contact.
In recent decades, concerns about child and youth mental health have intensified. A report by Waddell and Shepherd indicated that approximately 15% of children and youth in British Columbia experience mental health disorders, including depression, anxiety, and attention-deficit/hyperactivity disorder, representing nearly 140,000 young people (as cited in Beames et al., 2025). Similar trends have been observed across Western societies, with rising prevalence rates over the past decade (McGorry et al., 2025). At the same time, children's daily activities have shifted markedly, with increased screen time replacing outdoor play and face-to-face social interaction. Evidence suggests that children now spend less time outdoors per week than the amount of time they spend on screens each day, a pattern associated with negative psychological outcomes (Oswald et al., 2020).

A growing body of literature highlights the mental health benefits of exposure to natural environments. Studies have shown that time spent in nature is associated with reduced stress, improved mood, enhanced emotional regulation, and restoration of attentional capacity (Kaplan, 1995; Olafsdottir et al., 2018; Kotera et al., 2021). Nature-based interventions, including structured activities such as mindfulness and nature-connection practices, have also demonstrated extended health benefits across physical and psychological domains (Kelly et al., 2018; Nguyen et al., 2023). Nature therapy has been broadly defined as a set of practices aimed at promoting physiological relaxation and preventing disease through exposure to natural stimuli (Song et al., 2016).

Despite increasing interest in nature-based and outdoor interventions for children's mental health (Sugiyama et al., 2023; Walker et al., 2024), the literature on interventions that combine play therapy with outdoor settings remains fragmented. Existing studies vary widely in terminology, intervention design, settings, and targeted outcomes, and are predominantly situated within school contexts. Moreover, there is limited synthesis regarding how these interventions are implemented, which populations are included, and what outcomes are reported. Given this heterogeneity and the emerging nature of the field, a scoping review would be useful to systematically map the extent, characteristics, and gaps in the existing evidence on nature-based play therapy interventions.

Research Question

4 What is the scope of evidence on nature-based play therapy interventions, including their population, designs, implementation, and reported outcomes?

Inclusion Criteria

5 To address the inclusion criteria, the Population, Concept and Context (PCC) approach will be used as recommended by the JBI group (Peters et al., 2024).

5.1 **Population**

The review will include study participants that have children and adolescents aged 0 to 18 years old. Insights on studies with different age groups might be included to enrich de discussion.

5.2 **Concept**

Studies that had play therapy or child centered play therapy (CCPT) as the main concept or as intervention for the population in outdoor settings will be included. Known approaches include nature-based play therapy and nature-based child centered play therapy (NBCCPT), but studies that relate outdoor settings with play therapy will also be included.

5.3 **Context**

This review will include every approach that focuses on children and adolescents, meaning that the context is flexible and could include interventions implemented in or out of schools or clinics.

Method

6 **Study design**

This scoping review will follow the Arksey and O'Malley (2005) 5-step framework with the addition of Levac et al. (2010) enhancements.

7 **Search strategy**

The search strategy will consist of specific keywords in determined databases. The search will limit the keywords to titles and abstracts to filter studies that do not have nature-based play therapy as one of the main topics. The databases selected for this

study include APA Psycinfo, CINALHL, ERIC, LILACS, PubMed and Scielo. See the Appendix for the initial search strategy for APA Psycinfo.

Peer-reviewed studies published in English, Portuguese and Spanish will be included in the review. Articles' publish date will be restricted from 2000 to 2026. Qualitative, Quantitative and mixed studies will be included.

Additionally, during the screening process we might include studies that fit the criteria found in the references of the included articles.

8 **Data extraction**

All the found eligible studies will be imported to Covidence software and then screened by two independent researchers. Using the software's tools, Data extraction will be performed to provide key information from the studies.

9 **Synthesis of results and reporting guidelines**

Extracted results will be synthesized, analyzed, and reported through three steps: data analysis, reporting, and applying meaning to the results. The proposed analysis includes a descriptive numerical summary, which consists of outlining the overall number of studies included, type of study design, years of publication, types of therapeutic intervention (how researchers name the intervention), characteristics and context of the study population and countries where studies were conducted (Arksey & O'Malley, 2005). Reporting will adhere to PRISMA-ScR reporting guidelines (Page et al., 2021). To address this proposal's objective and contribute to the legitimacy of scoping study methodology, this study will include implications of the findings in the broader context, meaning that the Results section will present insights into how future researchers could better describe the implementation of the play-therapy into natural environments, and provide suggestions to how gaps could be addressed in future studies.

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Appendix

11 **APA Psycinfo search strategy**

S1 - XB (natur* N4 based or outdoo* or greenspace*) - 13,767 results
S2 - XB (play N5 therapy or theraplay or sandplay N5 therapy or filial therapy) - 5,578 results
S3 - (S1 AND S2) - 52 results