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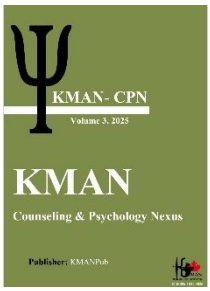

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Comparison of the Effectiveness of Emotion Regulation-Based Play Therapy and a Child-Centered Mindfulness-Based Intervention on Executive Functions in Children with Attention-Deficit/Hyperactivity Disorder

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1. Round 1

1.1. Reviewer 1

Reviewer:

In the introduction paragraph stating that “Executive functions occupy a central position in current explanations of ADHD,” the theoretical framework is appropriate, but the manuscript should define whether executive functions are treated as mechanisms, outcomes, or both. At present, the paragraph describes executive functions broadly, but because executive functions are the only dependent variable in this study, the authors should provide a clearer operational definition aligned with the Barkley Executive Functioning Scale used later in the methods section.

In the introduction paragraph discussing non-pharmacological interventions, the sentence “Consequently, psychosocial and non-pharmacological interventions have received increasing attention as complementary or alternative approaches” is relevant, but the manuscript should be cautious in using the term “alternative.” Unless the authors intend to position the interventions as replacements for medication, it may be more accurate to describe them as complementary psychosocial interventions. This distinction is clinically important in ADHD research and prevents overstatement of the role of psychological interventions.

In the introduction paragraph on play therapy, the authors write that "Play therapy is one of the most developmentally appropriate psychological interventions for children because play is the natural medium through which children communicate." This is a useful rationale, but the manuscript should explain more specifically how emotion regulation-based play therapy differs from general play therapy or child-centered play therapy. Since the intervention is labeled "emotion regulation-based," the theoretical and procedural components that make it distinct should be more clearly explained in relation to executive functions.

In the introduction paragraph on mindfulness, the statement "Mindfulness-based interventions represent another promising approach for improving executive functions in children with ADHD" is scientifically appropriate, but the paragraph should better explain the neurocognitive pathway linking mindfulness practice to executive-function improvement. The authors mention attention control and response inhibition, but they should expand the mechanism by discussing sustained attention, cognitive flexibility, inhibitory control, and metacognitive monitoring as specific executive processes likely to be affected by mindfulness practice.

In the methods paragraph under "Study Design and Participants," the sentence "The present study was conducted using a quasi-experimental pretest–posttest design with a control group and a one-month follow-up" is clear, but the authors should specify whether allocation to the three groups was randomized after purposive sampling or whether matching was used without random assignment. This distinction is methodologically important because internal validity depends heavily on how participants were assigned to experimental and control conditions.

In the "Child-Centered Mindfulness-Based Intervention Protocol" paragraph, the statement "Parents were actively involved in the process and were asked to support daily home practice and record brief practice notes" is important, but the manuscript should clarify how parental involvement was standardized and monitored. If parent participation differed substantially across families, it could have influenced child outcomes. The authors should state whether home practice completion was recorded, whether adherence was analyzed, and whether parents in the two intervention groups received comparable levels of guidance.

In the "Data Analysis" paragraph, the authors state that "To test the research hypotheses and compare the effectiveness of the two interventions over time, repeated-measures analysis of variance was used." This is an appropriate general approach, but the manuscript should clarify whether the analysis was conducted on total executive-function scores only or whether subscales were also examined. Since the Barkley scale includes several executive-function domains, the authors should either justify focusing only on the total score or report domain-level analyses if they were part of the original analytic plan.

Response: Revised and uploaded the manuscript.

1.2. Reviewer 2

Reviewer:

In the methods paragraph stating that "The final sample consisted of 45 children with attention-deficit/hyperactivity disorder, selected through purposive sampling according to the inclusion and exclusion criteria and then matched and assigned to three groups of 15 participants," the manuscript should describe the matching procedure in more detail. The authors later report comparability in age and gender, but it remains unclear whether matching was performed only on demographic variables or also on baseline executive-function scores and ADHD symptom severity. This information is necessary for evaluating baseline equivalence.

In the methods paragraph mentioning that "The sample size was determined using G*Power software, with an alpha level of 0.05, statistical power of 0.95, and an effect size of 0.70," the authors should specify the exact statistical test selected in G*Power. Repeated-measures ANOVA has several possible input models, and the required sample size depends on assumptions such as number of groups, number of measurements, correlation among repeated measures, and nonsphericity correction. Reporting only alpha, power, and effect size is not sufficient for reproducibility.

In the methods paragraph listing the inclusion criterion "a formal diagnosis of attention-deficit/hyperactivity disorder based on DSM-5 criteria," the manuscript should clarify who made the diagnosis and by what procedure. It is important to state

whether diagnosis was confirmed by a child psychiatrist, clinical psychologist, structured clinical interview, clinical records, or only screening through the Conners Parent Rating Scale. Since Conners is a screening and symptom-rating instrument rather than a stand-alone diagnostic tool, the diagnostic pathway must be described more rigorously.

In the "Data Collection Tool" paragraph, the manuscript states that "Data were collected using the Conners Parent Rating Scale and the Barkley Executive Functioning Scale." This section would benefit from separating screening and outcome assessment more explicitly. The Conners scale appears to have been used for ADHD screening, whereas the Barkley scale served as the primary outcome measure. The authors should make this distinction more precise to avoid the impression that both tools were analyzed as dependent variables.

In the "Data Collection Tool" paragraph, the sentence "The main research outcome was assessed using the Barkley Executive Functioning Scale for children and adolescents, developed by Barkley in 2012" is appropriate, but the scoring interpretation should be emphasized more strongly. Since higher scores indicate greater executive-function difficulties, improvement is reflected by a decrease in scores. This point is essential because throughout the findings and discussion, terms such as "improving executive functions" must be clearly linked to reduced impairment scores.

In the "Emotion Regulation-Based Play Therapy Protocol" paragraph, the intervention description is rich and clinically useful, but it would be strengthened by adding information about therapist qualifications, treatment fidelity, and protocol adherence. The authors should specify who delivered the intervention, whether the therapist had formal training in child psychotherapy or play therapy, whether sessions were supervised, and whether a checklist was used to ensure that the core components were delivered consistently.

Response: Revised and uploaded the manuscript.

2. Revised

Editor's decision after revisions: Accepted.
Editor in Chief's decision: Accepted.

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