Application of Acceptance and Commitment Therapy (ACT) in Children and Adolescents Psychotherapy: An Umbrella Review

Gooya Tayyebi¹, Nathera Hussin Alwan², Ameera Fares Hamed³, Alhan Abdulhasan Shallal⁴, Thaiba Abdulrazzaq⁵, Reyhane Khayayi⁶*

Abstract

Objective: Acceptance and Commitment Therapy (ACT) is an evidence-based psychological intervention that has gained increasing attention in recent years. While extensively studied for its effectiveness in adult populations, there has been growing interest in exploring the application of ACT in children and adolescents psychotherapy. This umbrella review aims to provide an overview of the current literature on the use and efficacy of ACT in children and adolescents, as well as to highlight potential considerations and future directions for research.

Method: A comprehensive search was done in scientific databases, including Scopus, PubMed, and Web of Sciences, using keywords related to ACT, children, adolescents, and psychotherapy. Relevant articles were included, with a focus on systematic reviews and meta-analysis.

Results: Our findings indicate consistent effectiveness for ACT and related interventions across various delivery formats, including in-person, group, and internet-based approaches, in reducing symptoms of internalizing and externalizing problems, as well as improving overall quality of life among children and adolescents. However, two articles comparing ACT with traditional cognitive behavioral therapy did not demonstrate superiority. Additionally, when comparing internet-based and in-person delivery modes, the included studies did not show significant differences between the two types.

Conclusion: ACT shows promise as an effective therapeutic approach in children and adolescents psychotherapy. However, more research is warranted to establish its specific techniques and adaptations for different age groups and presenting problems. Additionally, future research should explore the feasibility and effectiveness of delivering ACT in varied settings.

Key words: Acceptance and Commitment Therapy (ACT); Adolescents; Children; Psychotherapy.

1. Faculty of Mazandaran University of Medical Sciences, Mazandaran, Iran.
2. Department of Nursing, Al-Zahrawi University College, Karbala, Iraq.
3. English Department, Al-Noor University College, Nineveh, Iraq.
4. National University of Science and Technology, Dhi Qar, Iraq.
5. Medical Technical College, Al-Farahidi University, Iraq.
6. Department of Psychiatric Nursing, Community Research Center, Zahedan University of Medical Science, Zahedan, Iran.

*Corresponding Author:
Address: Department of Psychiatric Nursing, Community Research Center, Zahedan University of Medical Science, Zahedan, Iran, Postal Code: 981674346.
Tel: 054 33295765, Fax: 054 33295765, Email: khayati.rkh@gmail.com

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Acceptance and Commitment Therapy (ACT) as a third-wave cognitive behavior therapy, rooted in contextual behavioral science, emphasizes the cultivation of psychological flexibility—the ability to adaptively respond to internal experiences while engaging in actions aligned with one's values (1). The therapy integrates various evidence-based techniques, including mindfulness, acceptance, cognitive defusion, values clarification, and behavior change strategies, to promote well-being and improve functioning (2). ACT, in contrast to CBT, offers a different approach to addressing negative thoughts. While CBT focuses on managing and correcting cognitive distortions, ACT emphasizes altering how individuals relate to their emotions and thoughts, leading to a reduction in symptoms as a secondary outcome (3, 4). Through techniques rooted in mindful acceptance, ACT aims to improve psychological flexibility. This flexibility is the capacity to connect with the present moment, internal thoughts, and emotions without defensiveness, while persisting in striving for goals and values through intentional actions. The development of psychological flexibility within ACT revolves around six interconnected processes: cognitive defusion, acceptance, committed action, values, contact with the present moment, and self-as-context (5, 6). Cognitive defusion involves creating a distance from thoughts and emotions to prevent them from dictating behaviors. This is closely associated with acceptance, which involves making room for thoughts and emotions without attempting to modify or push them away (7). Embracing thoughts and feelings paves the way for committed action, where individuals move towards their meaningful objectives despite any distressing thoughts or emotions. These actions are steered by values, representing chosen life directions or desired qualities (8). Furthermore, ACT emphasizes contact with the present moment, fostering engagement and awareness in the current surroundings, along with self-as-context, also known as "the observing self," which encourages individuals to step back and observe their thoughts and emotions from a detached perspective. Such flexibility in perspective is fundamental to ACT and supports the implementation of the other five core processes (9).

ACT promotes acceptance of thoughts and emotions as opposed to evading them. As per ACT principles, two fundamental processes underlying distress are experiential avoidance and cognitive fusion (10). Cognitive fusion involves becoming entangled in thoughts and emotions, potentially influencing behavior (e.g., becoming fused with the belief that children with physical disabilities cannot engage in sports) (11). On the other hand, experiential avoidance entails suppressing negative thoughts, offering temporary relief but causing prolonged psychological distress. The tendencies of avoidance and fusion can heighten psychological anguish and hinder present-moment living (12). Additionally, research suggests that ACT can enhance resilience, defined as the capacity to adapt to adversity. By enhancing psychological flexibility, ACT may contribute to improved resilience, fostering less rigid and more adaptable responses to challenging situations and emotions (13). Through ACT practices, individuals, including adolescents grappling with depression, can bolster resilience by learning to embrace difficult emotions rather than shunning them and by avoiding identifying exclusively with a 'depressed self-concept,' recognizing that their essence is not solely defined by their challenging emotions (14). While ACT has demonstrated efficacy in adult populations across a range of psychological disorders, its application in children and adolescents psychotherapy is an area of growing interest and exploration (15-17).

The developmental period of childhood and adolescence is characterized by significant cognitive, emotional, and social changes (18), making it crucial to adapt psychotherapeutic interventions to meet the specific needs of this demographic (19). Children and adolescents navigate various challenges, including academic stress, peer relationships, family dynamics, identity formation, and coping with emotions, which can impact their mental health and well-being (20, 21). Effective interventions must consider the developmental context and incorporate age-appropriate strategies to address these challenges (22, 23).

ACT offers a unique approach to addressing the psychological needs of children and adolescents by fostering psychological flexibility and resilience (15). By promoting acceptance of internal experiences, cognitive defusion from unhelpful thoughts, mindfulness-based awareness, and commitment to valued actions, ACT equips young individuals with skills to navigate life's challenges effectively (17). Moreover, ACT interventions emphasize the importance of aligning behavior with personal values, promoting a sense of purpose and meaning in life.

Despite the theoretical promise of ACT, the evidence supporting its effectiveness and applicability in children and adolescents psychotherapy remains somewhat fragmented. While individual studies have explored the efficacy of ACT interventions for specific mental health concerns or within particular contexts (24, 25), there is a need to synthesize and critically evaluate the findings of existing systematic reviews and meta-analyses. An umbrella review provides a comprehensive approach to achieve this goal by systematically synthesizing and evaluating the findings of multiple reviews, offering insights into the overall effectiveness, methodological quality, and potential limitations of ACT interventions in children and adolescents psychotherapy. This umbrella review seeks to consolidate and critically appraise the existing evidence regarding the application of ACT in children and adolescents psychotherapy. By synthesizing data from diverse sources, including systematic reviews and meta-analyses, this review aims to provide a
comprehensive overview of the current state of research in this field. Specifically, the review will address key research questions, including the primary outcomes and effects of ACT interventions, methodological quality and risk of bias across reviews, therapeutic mechanisms, comparative effectiveness, and implications for practice and research.

Materials and Methods
In our study as an umbrella review, our quest for relevant literature spanned three eminent scientific databases: PubMed, Scopus, and Web of Sciences. Our objective was to identify systematic reviews and meta-analyses exploring the application of ACT (Acceptance and Commitment Therapy) and ACT-based psychotherapy within the realm of children and adolescents. Employing carefully selected search terms, we fine-tuned our search parameters and utilized the databases' filters to isolate systematic reviews and meta-analyses exclusively. Subsequently, we meticulously purged duplicate references from our findings before embarking on a meticulous screening process based on the titles and abstracts of the remaining papers. Each eligible article underwent thorough scrutiny by our research team, ensuring adherence to predefined criteria. Relevant data pertaining to the utilization of ACT and ACT-based psychotherapy were systematically extracted and organized using a predefined table, facilitating comprehensive analysis and synthesis of the reviewed literature.

Inclusion/Exclusion Criteria
Our study encompassed systematic reviews and meta-analytic studies exploring the implementation of ACT among children and adolescents. We deemed these investigations eligible for inclusion in our analysis and data synthesis efforts, ensuring a comprehensive examination of relevant literature in this domain.

Assessing Risk of Bias
In our study, we employed the ROBIS (Risk Of Bias In Systematic review) checklist to meticulously assess the quality of evidence achieved from the papers included in our analysis. This comprehensive and structured tool is specifically prepared to assess the risk of bias in systematic reviews (26, 27). By utilizing the ROBIS checklist, one can systematically assess crucial domains like study eligibility criteria, identification and selection of studies, data collection, and assessment of bias risk. This tool plays a vital role in increasing transparency and methodological rigor of systematic reviews, ensuring that the synthesized evidence maintains a high level of quality. Through the systematic application of the ROBIS checklist, potential biases are identified and addressed, bolstering the reliability and credibility of the findings presented in systematic reviews. This, in turn, strengthens evidence-based decision-making processes, ultimately benefiting clinical practice and research in the field of ACT for children and adolescents.

Table 1. Summary of Findings and Potential Risk of Bias of Included Studies on the Application of ACT in Children and Adolescents Psychotherapy.

<table>
<thead>
<tr>
<th>Author, Year</th>
<th>Number of Primary Studies</th>
<th>Relevant Outcomes to Our Study</th>
<th>Risk of Bias</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burley, 2024 (28)</td>
<td>10</td>
<td>These findings indicate that group-based ACT could be beneficial in reducing anxiety symptoms in adolescents, particularly when symptoms are severe and characterized by psychological rigidity.</td>
<td>Low</td>
</tr>
<tr>
<td>Byrne, 2023 (35)</td>
<td>7</td>
<td>The current results suggest that group ACT may have the potential to reduce self-reported levels of anger. However, due to the diverse characteristics of the studies and insufficient information regarding ACT protocols and treatment delivery, definitive conclusions cannot be drawn from the existing literature.</td>
<td>Low</td>
</tr>
<tr>
<td>Binder, 2023 (29)</td>
<td>8</td>
<td>The study examined the application of ACT in both group settings within schools and individual settings, serving as both universal and indicated prevention measures. Analysis revealed a significant main effect, demonstrating that ACT-based interventions led to a more substantial reduction in stress compared to control conditions.</td>
<td>Low</td>
</tr>
</tbody>
</table>
### Results

The overarching goal of the current umbrella review was to conduct a thorough and comprehensive analysis of the existing literature pertaining to the application of ACT and ACT-based psychotherapy in the context of children and adolescents. Initially, a total of 179 references were meticulously sourced through exhaustive searches across various databases and scholarly outlets. Upon the removal of duplicate entries, 131 unique references remained for further consideration. Through a meticulous screening process involving the evaluation of titles and abstracts, 31 studies emerged as potentially relevant for inclusion in the review. Subsequently, a detailed examination of the full texts of these 31 identified studies was undertaken. Following rigorous evaluation, a total of nine studies, including five meta-analysis studies and four systematic reviews, were found to meet the predetermined inclusion criteria and were consequently included in the final analysis. Except for one study, which was published in 2015, the remaining publications were released after 2020. Quality assessment using ROBIS showed that seven studies were at low risk of bias, while two studies had a high risk of bias.

The focus of the included studies was on different topics regarding the application of ACT among children and adolescents including its effects on aggression, depression, anxiety, stress, and overall mental health symptoms, and also different delivery modes (i.e. in person, internet-based, and group therapy). Nearly all of the included reviews have synthesized data from randomized clinical trials (RCTs), between seven to 50 original studies.

In terms of the efficacy of ACT and interventions derived from it, our results exhibit a high level of consistency. All formats of delivery, including in person, group and internet based, could reduce symptoms of internalizing (28-34) and externalizing (30-32, 35) problems, as well as overall quality of life (32, 34) among children and adolescents. However, two studies that compared ACT and traditional cognitive behavioral therapy (CBT) did not show any superiority (30, 31). Considering internet-based and in-person delivery modes, the included studies did not demonstrate significant differences between the two types.

<table>
<thead>
<tr>
<th>Author, Year (ID)</th>
<th>Sample Size</th>
<th>Effect Size</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perkins, 2023 (30)</td>
<td>50</td>
<td>Low</td>
<td>The results indicated notable effects for emotional symptoms/internalizing issues, behavioral challenges/externalizing problems, interference from difficulties, third wave processes, well-being/flourishing, and physical health/pain. However, the impact on quality of life did not reach statistical significance.</td>
</tr>
<tr>
<td>Wang, 2023 (36)</td>
<td>12</td>
<td>Low</td>
<td>IACT groups showed enhancements in depressive symptoms and a notable decrease in experiential avoidance when compared to control groups, although the impact on anxiety did not reach statistical significance. Stress and well-being did not exhibit significant differences compared to the control group. Additionally, IACT displayed a more pronounced therapeutic effect on targeted adolescents in contrast to universal adolescents.</td>
</tr>
<tr>
<td>Baveja, 2022 (32)</td>
<td>19</td>
<td>High</td>
<td>The ACT model offers a promising alternative approach for tackling a range of adolescent issues, emphasizing improvements in their quality of life and pursuit of meaningful objectives.</td>
</tr>
<tr>
<td>Fang, 2020 (31)</td>
<td>14</td>
<td>Low</td>
<td>Our study findings indicate that ACT surpasses both TAU and untreated groups in managing anxiety, depression, and other mental and behavioral disorders. However, it does not show superiority over traditional CBT.</td>
</tr>
<tr>
<td>Harris, 2020 (33)</td>
<td>10</td>
<td>Low</td>
<td>ACT exhibits potential as an intervention for adolescent mental health; however, further research is needed to ascertain whether reductions in mental health symptoms stem from an augmentation in psychological flexibility.</td>
</tr>
<tr>
<td>Swain, 2015 (34)</td>
<td>21</td>
<td>High</td>
<td>ACT seems efficacious in tackling diverse issues in children. For practitioners dealing with young individuals, ACT could present itself as a feasible alternative treatment choice.</td>
</tr>
</tbody>
</table>

**ACT** = Acceptance and Commitment Therapy, **TAU** = Treatment As Usual, **CBT** = Cognitive Behavioural Therapy.
**Discussion**

As mentioned above, the current research attempted to explore the potential applications of ACT and ACT-based psychotherapy among children and adolescents. Given the existence of some relevant systematic reviews and meta-analyses, we used an umbrella review methodology to consider this issue. The findings from this umbrella review provide valuable insights into the potential effectiveness of ACT in addressing mental health issues among adolescents. Specifically, the results suggest that group-based ACT interventions may offer promise in alleviating anxiety symptoms, particularly in cases where symptoms are clinically significant and characterized by psychological inflexibility. This underscores the importance of considering ACT as a viable therapeutic option for adolescents struggling with anxiety-related challenges. Furthermore, the review indicates that group ACT interventions may also have potential in reducing self-reported measures of anger among adolescents. However, the diverse nature of the studies and the lack of comprehensive details regarding ACT protocols and treatment administration make it challenging to draw definitive conclusions regarding its efficacy in this regard.

This umbrella review highlights the versatility of ACT application, both in group settings within schools and individual settings, serving as both universal and targeted prevention measures. The significant main effect observed in reducing stress compared to control conditions suggests the potential utility of ACT-based interventions in addressing stress-related issues among adolescents. Moreover, this review underscores the breadth of positive effects associated with ACT interventions, including improvements in emotional symptoms, behavioral difficulties, interference from difficulties, well-being, and physical health. However, it is noteworthy that the effect on quality of life was found to be non-significant, indicating potential areas for further investigation and refinement of ACT interventions.

Regarding specific intervention modalities, findings indicate that Intensive ACT (IACT) groups demonstrated improved depression symptoms and reduced experiential avoidance compared to control groups. However, no significant effects were observed for anxiety, stress, and well-being when compared to control groups. Notably, IACT showed a more substantial therapeutic effect on targeted adolescents.
compared to universal adolescents, suggesting potential benefits of tailored interventions.

Two investigations comparing ACT with traditional CBT failed to demonstrate any superiority of one over the other (30, 31). Despite the theoretical distinctions between ACT and CBT in their approaches to addressing mental health challenges, these particular studies did not yield conclusive evidence favoring either intervention. This suggests that, in the specific contexts examined, both ACT and CBT may be equally effective in producing therapeutic outcomes. However, it is important to note that the absence of superiority observed in these studies does not necessarily imply equivalence in efficacy across all possible scenarios or populations. Factors such as the nature of the presenting problem, the characteristics of the individuals receiving treatment, and the specific techniques employed within each therapeutic modality may influence the comparative effectiveness of ACT and CBT. Therefore, while these findings provide valuable insights into the relative merits of ACT and CBT, further research is needed to elucidate the conditions under which one approach may be more advantageous than the other. Additionally, exploring potential moderators or mediators of treatment outcomes, such as client preferences, therapist factors, or contextual variables, could offer a more nuanced understanding of the relative effectiveness of ACT and CBT in different clinical contexts.

In summary, while ACT shows promise as an alternative therapeutic approach for addressing various adolescent concerns, further research is warranted to elucidate the underlying mechanisms of its effectiveness and to establish its comparative efficacy against traditional interventions like Cognitive Behavioral Therapy (CBT). Nevertheless, based on the existing evidence, ACT emerges as a potentially valuable tool for clinicians working with adolescents, offering a holistic approach to enhancing their quality of life and pursuit of valued goals.

Limitation
Despite some meta-analytic studies, in the present study, we did not use any statistical method to investigate the overall effects of ACT interventions; using a statistical method could be useful for a better understanding of the topic.

Conclusion
ACT demonstrates potential as a valuable therapeutic method in psychotherapy for children and adolescents. Nevertheless, further investigation is necessary to determine its precise techniques and modifications for various age brackets and issues. Additionally, upcoming research should examine the practicality and efficacy of administering ACT in diverse environments, including schools and community-centered mental health initiatives. In summary, ACT offers substantial promise in expanding the array of evidence-supported treatments to enhance mental health outcomes among young individuals.

Conflict of Interest
None.

References


