



## Mindfulness therapy on adolescent's anxiety and depression: a systematic review

### Terapi mindfulness terhadap ansietas dan depresi pada remaja: tinjauan sistematis

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#### ABSTRACT

**Background:** The prevalence of mental health issues among 10 to 19-year-olds is estimated to be 1 in 7 (14%) globally, despite the fact that most of these conditions go undiagnosed and untreated. Mindfulness techniques have been employed consistently, and has suggested associated criteria for the treatment of depression.

**Objective:** This systematic review was carried out to analyze relevant articles about the effectivity of mindfulness therapy to anxiety and depression on adolescent.

**Methods:** The Preferred Reporting Items For Systematic Review And Meta-Analysis (PRISMA) and the Joanna Briggs Institute (JBI) checklist provided as a guidance. The data conducted in Science Direct, ProQuest, SAGE, and Pubmed databases. The articles were published in the last five years.

**Results:** In the final review, twelve articles were include. The articles were heterogeneous, RCT designs was used the most. Some of them also use mindfulness therapy that have been combined. Significant impacts of mindfulness therapy on adolescents have been found, particularly in the areas of anxiety and depression.

**Conclusion:** It is crucial to understanding how mindfulness works during childhood and adolescence, as well as what type, dose, and frequency of therapy are most recommended.

**Keywords:** *Adolescent; Anxiety; Depression; Mindfulness Therapy; Systematic Review*

#### ABSTRAK

**Latar Belakang:** Prevalensi masalah kesehatan mental di kalangan anak usia 10 hingga 19 tahun diperkirakan 1 dari 7 (14%) secara global, terlepas dari kenyataan bahwa sebagian besar kondisi ini tidak terdiagnosis dan tidak diobati. Terapi mindfulness telah digunakan secara konsisten, dan telah menyarankan kriteria terkait untuk pengobatan depresi.

**Tujuan:** Tinjauan sistematis ini dilakukan untuk menganalisis artikel yang relevan tentang efektivitas terapi mindfulness terhadap kecemasan dan depresi pada remaja.

**Metode:** The Preferred Reporting Items For Systematic Review And Meta-Analysis (PRISMA) dan daftar periksa Joanna Briggs Institute (JBI) disediakan sebagai panduan. Data dilakukan di database Science Direct, ProQuest, SAGE, dan Pubmed. Artikel tersebut diterbitkan dalam lima tahun terakhir.

**Hasil:** Dalam tinjauan terakhir, dua belas artikel dimasukkan. Artikelnya heterogen, desain RCT paling banyak digunakan. Beberapa di antaranya juga menggunakan terapi mindfulness yang sudah digabungkan. Dampak signifikan terapi mindfulness pada remaja telah ditemukan, khususnya di bidang kecemasan dan depresi.

**Kesimpulan:** Sangat penting untuk memahami bagaimana terapi mindfulness dapat dilakukan pada anak-anak dan remaja, serta jenis, dosis, dan frekuensi terapi apa yang paling direkomendasikan.

**Kata kunci:** *Ansietas; Depresi; Remaja; Terapi Mindfulness; Tinjauan Sistematis*

## INTRODUCTION

The adolescence stage are special and essential. Due to physical, psychological, and social changes including enduring poverty, abuse, or violence, adolescents are more vulnerable to mental health problems. The protection of adolescents from harm, the promotion of socio-emotional learning, psychological well-being, and guaranteeing access to mental health services are all essential for their health and welfare throughout adolescence and into adulthood. Despite the fact that the majority of these problems go undetected and untreated, the prevalence of mental health difficulties among those between the ages of 10 and 19 is estimated to be 1 in 7 (14%) globally.<sup>1</sup> Adolescent with mental health problems are more likely to experience social exclusion, discrimination, stigma (which may reduce their motivation to seek treatment), educational difficulties, risk-taking activities, physical illness, and human rights abuses. Behavioural disorders are one of the leading causes of illness and disability in adolescents, followed by anxiety-related conditions and depression. Adults' psychological and physical wellness as well as their capacity to lead satisfying lives may suffer long-term consequences if difficulties with adolescents mental health are not addressed.<sup>2</sup>

There is a rise in mental health problems everywhere.<sup>3</sup> A 13% rise in mental health disorders over the previous 10 years has mostly been attributed to demographic changes. Today, 1 in 5 persons have a

handicap brought on by mental health problems. Mental health problems can have a profound influence on many parts of life, including involvement in the community, interactions with family and friends, and academic or professional achievement. Anxiety and sadness, the two most common mental health issues, hurt the global economy.<sup>4</sup> There has been a rising understanding of the critical role mental health plays in accomplishing global development goals in recent years, as indicated by the recognition of mental health in the Sustainable Development Goals.<sup>5</sup>

Emotional problems are common among adolescents.<sup>1</sup> The most frequent issues in this age range are anxiety-related disorders, which can cause panic attacks or excessive worrying. Adolescents who are older than they are are more likely to get these illnesses. 3.6% of young people aged 10 to 14 and 4.6% of young people aged 15 to 19 are estimated to have anxiety disorders. Estimates indicate that 1.1% and 2.8%, respectively, of young people aged 10 to 14 and 15 to 19, respectively, suffer from depression.<sup>1</sup> One of the symptoms shared between depression and anxiety is sudden and abrupt mood swings. Depression and anxiety disorders have a big influence on academic performance and school attendance. If social withdrawal is place, isolation and loneliness could worsen. Depression may contribute to suicide.<sup>1</sup>

Adolescents live within a complex biopsychosocial framework of risk variables,

such as their homes, schools, peer groups, and neighbourhoods, all of which may be linked to a mental health condition.<sup>6</sup> Any factors that raise the likelihood that a particular child or adolescent may have psychopathology are considered risk factors, whereas protective factors lower the likelihood of psychopathology. Seldom does the genesis and prevention of a psychiatric condition result from a single risk factor. Adolescents' mental health is significantly impacted by recent sociocultural changes, insufficient social support, the breakdown of nuclear and extended families, uncertainty of society norms, the growing gap between aspirations and realistic objectives, drug abuse, etc.<sup>7</sup>

One of the reasons people seek psychiatric advice is because of the stigma associated with mental illness and a lack of knowledge and awareness. The attitudes and behaviours of persons who seek care are influenced by ideas about mental diseases, above all. Hardly a third of the families of children and adolescents with mental problems believed that their kids had any psychiatric issues. At the stakeholder level, the limitations of the current policies and programmes, the lack of coordination between them, and the division of the governance of adolescent mental health between ministries and departments are likely to pose significant obstacles to their effective and efficient implementation.<sup>8</sup>

In psychotherapy, mindfulness techniques have been employed consistently, and NICE has suggested associated criteria

for the treatment of depression.<sup>2</sup> The benefits of mindfulness in the treatment of chronic pain, anxiety, and depression.<sup>9</sup> The increases on measures of physical well-being as well as consistent improvement and reasonably high effect sizes across scales evaluating components of mental health (such as sadness, anxiety, and coping style) (e.g. medical symptoms, sensory pain, physical impairment and functional quality-of-life estimates). Many different people could benefit from using mindfulness to deal with both clinical and non-clinical issues. A potentially effective set of interventions for a variety of child and adolescent issues is provided by mindfulness-based techniques.<sup>10</sup> Therefore, the objective of this systematic review is to analyze the effectivity of mindfulness therapy to anxiety and depression on adolescent.

## METHODS

In order to analyze relevant studies about mindfulness therapy to anxiety and depression on adolescent, a systematic review was conducted. The checklist from the PRISMA (Preferred Reporting Items for Systematic Review and Meta-Analysis) and the Joanna Briggs Institute (JBI) checklist was utilized as a guide. The study is taken into consideration if the critical assessment criteria are met with a cut-off point value decided upon by the researcher and a score of at least 50%. This systematic review used a descriptive method with a narrative approach as its analytical approach. Utilizing secondary data, a systematic review was conducted in

January-February 2023. Searching for credible journal articles as secondary data sources in four databases, including Science Direct, ProQuest, SAGE, and Pubmed. MeSH terms like (((anxiety) OR (depression)) AND (mindfulness therapy) AND ((adolescent) OR (teenager))) were being used as keywords. The articles were written in English and released within the previous five years (2019-2023). The inclusion criteria using Population, Intervention, Comparison, Outcome, and Study design (PICOS) framework as shown in Table 1.

Table 1. PICOS framework

PICOS framework	Inclusion Criteria	Exclusion Criteria
Population	Population related to mindfulness therapy on adolescent	Not related to mindfulness therapy on adolescent
Intervention	Consisted of mindfulness therapy	Not consisted of mindfulness therapy
Comparison	No comparison	
Outcome	Showing the mindfulness therapy on adolescent	Not showing the mindfulness therapy on adolescent
Study Design	Original research articles	Review articles

## RESULTS AND DISCUSSION

In the course of the article screening process, we created common exclusion standards. After adjusting the 80 articles that were discovered through the article search for eligibility and inclusion criteria, as indicated in Figure 1, the remaining 12 articles will be used.

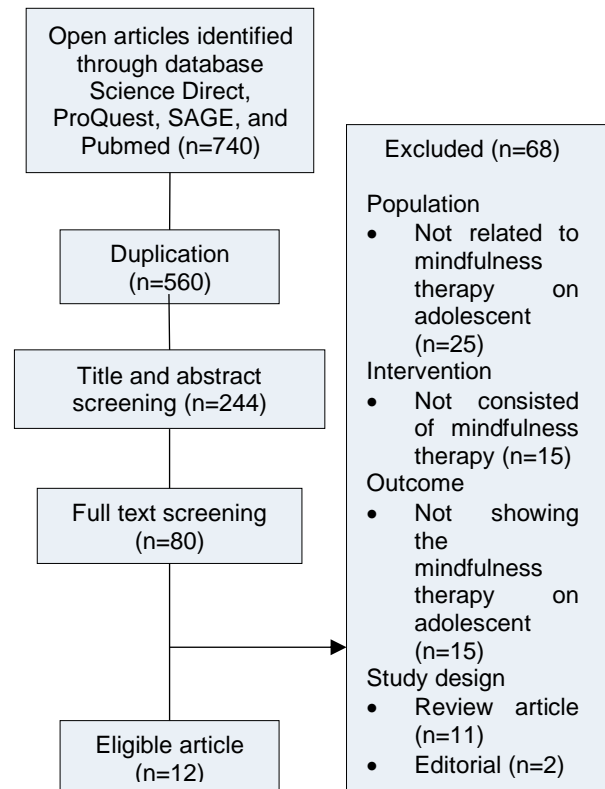


Figure 1. Flow chart

The studies in this systematic review were heterogeneous, most of the articles used RCT designs. Some of them also use mindfulness interventions that have been combined. The results of the 12 articles found that mindfulness with various durations of these interventions can reduce anxiety and depression in adolescents as shown in Table 2.

The prevalence, disability, and frequent onset of anxiety and depression in young people emphasize the need for efficient, readily available early therapies.<sup>11</sup> Finding the "active components" of therapeutic change (factors that, when targeted, help to reduce symptoms) can help to design new mechanism-based interventions or improve existing treatments. Giving people the ability to

employ their attention more flexibly—allowing them to focus on information that is positive rather than frightening or negative—as well as a propensity to choose positive or benign interpretations of unclear situations—could be considered active components. Young people may benefit from helpful attention and interpretation habits that can help them better handle the emotional challenges of everyday life. As adolescence is a period where maladaptive thought habits and their connections to anxiety and depression cement.<sup>12</sup>

Research have indicated that 30–40% of teenagers now experience subthreshold depression.<sup>13</sup> Although subthreshold depression does not fit the diagnostic criteria for a clinical depressive episode, it nonetheless has an impact on people's physical and mental health, making early intervention extremely important. Schools and colleges may be important in adolescent development and offer a space and opportunity for assistance. Families as a social institution continue to have a significant influence on young people in all spheres of society. Healthy parenting and parental support have been identified as factors that improve mental health outcomes and lower obstacles to children seeking treatment. Early detection of mental health concerns can also be aided by teachers and counsellors being made more aware of and trained to address teenage mental health difficulties.<sup>14</sup>

The state of being purposeful and paying nonjudgmental attention to the current

moment is referred to as mindfulness, which originated in Buddhist meditation.<sup>15</sup> The capacity to focus on the present and the maintenance of an inquisitive, receptive attitude are its fundamental components. The term "awareness intervention" refers to a group of psychological training techniques that are based on "mindfulness" and can be used to assist people nurture and improve their mindfulness.<sup>21</sup>

According to studies, mindfulness training helps people avoid experiencing psychological discomfort, which fundamentally alters how negatively they experience events and states.<sup>23,25</sup> Focusing on the present without making any judgements is the essence of mindfulness. Training in mindfulness teaches people how to consciously choose and recognise their thoughts, emotions, and feelings without triggering habitual responses. This can improve their capacity for emotion regulation and gradually get rid of the automatic evaluation of negative emotions, which lowers the depression rate. Studies have linked higher levels of responsiveness and activity of the hypothalamic-pituitary-adrenal (HPA) axis and sympathetic-adrenal-medullary (SAM) system with stress, depression, and anxiety; mindfulness practises are thought to reduce the hyperactivity of these systems, which in turn lowers stress levels.<sup>23</sup>



Table 2. The summary of the articles

No	Author, Year	Study design	Sample size	Duration time	Findings
1	Bazzano AN, et al. 2022	Cluster Randomized trial	86 middle school students	8 weeks	Although not statistically significant, anxiety and depressive symptoms lessened. The resulting time impact showed a strong trend in depression symptoms, whereas the time by group effect showed a significant decrease in anxiety symptoms.
2	Juul L, et al. 2021	Cluster Randomized trial	204 students	1 year	The ability to manage one's emotions, behaviour, well-being, and social skills may be enhanced via the training of mindfulness. Thus, mindfulness teaching may promote mental health and protect students from mental illness in the classroom.
3	Cohen ZP, et al. 2021	Randomized controlled trial	40 adolescents	3 weeks	This study showed that mindfulness helps both young people and adults achieve better cognitive and social outcomes while reducing the symptoms of depression and anxiety. There was some evidence of symptomatic effectiveness and possible mild biochemical alterations.
4	Sousa GM de, et al. 2021	Randomized controlled trial	40 university students	2 weeks	Higher trait mindfulness is associated with lower levels of psychological discomfort, and an initial mindfulness-based intervention tends to help decrease distress assessments in university students.
5	Siffredi V, et al. 2021	Randomized controlled trial	164 young adolescents	8 weeks	According to the study, mindfulness-based interventions (MBI) can help children and adolescents with their executive, behavioural, and socioemotional skills.
6	Lyzwinski LN, et al. 2019	Randomized controlled trial	90 university students	11 weeks	Although the impact sizes were tiny, a mindfulness app showed promise for managing stress, eating habits, mindfulness, and mindful eating.
7	Peter A, et al. 2022	Randomized controlled trial	200 adolescents	12 weeks	According to the research, a psychological intervention focused on mindfulness led to significant improvements in resilience and mindfulness, as well as a decrease in anxiety symptoms. The post hoc t-test revealed a significant change in variables across all assessment durations, and the impact size found is large.
8	Ewais T, Begun J, et al. 2020	Randomized controlled trial	64 adolescents	20 weeks	The progression of inflammatory bowel disease and depression may both be helped by kids receiving mindfulness-based cognitive treatment.

No	Author, Year	Study design	Sample size	Duration time	Findings
9	Cotton S, et al. 2020	Randomized controlled trial	24 youth	12 weeks	The findings suggest that mindfulness-based cognitive therapy for children (MBCT-C), which could decrease the overall clinical severity of young people with anxiety disorders who are also at risk for bipolar illness, may be beneficial.
10	Kang Y, Rahrig H, Eichel K, et al. 2018	Randomized controlled trial	100 students	6 weeks	Self-reported measures of emotional wellbeing, including affect, mindfulness, and self-compassion, were gathered. More people reported improvements in their emotional wellness. For females but not for males, changes in affect were directly connected to increases in self-reported self-compassion. These findings attest to the efficacy of school-based mindfulness initiatives and programmes made to accommodate the various developmental needs of teenage males and girls.
11	Jia-Yuan Z, Ji X-Z, Li-Na M, Yun-Jiang C. 2019	Randomized controlled trial	56 adolescents	8 weeks	By reducing desperation and rumination and fostering mindfulness, a personalised mindfulness-based stress reduction (MBSR) intervention enhances the psychological health of young individuals with sub-threshold depression.
12	Firth AM, et al. 2019	Randomized controlled trial	92 university students	3 weeks	In addition to influencing pain intensity and unpleasantness, self-efficacy significantly predicted academic achievement. Mindfulness had mixed results in terms of its impact on self-efficacy. Although the mindfulness intervention significantly decreased self-efficacy, it had long-term benefits for wellbeing and reduced stress.

Overthinking and habitual thinking can be reduced with the use of effective mindfulness techniques. Training in mindfulness causes our brain's default method of thinking to shift from "activity mode" to "existence mode." Action mode is a natural byproduct of automatic thinking in the brain. As habitual thought patterns become ingrained, our consciousness will be focused with the past, the present, and the future rather than the here and now.<sup>23</sup> The existence mode

offers a fresh approach to stopping automatic thought. It advises subjects to lessen their concentration on themselves and place their consciousness on the present experience rather than being stuck in automatic thought, which can assist to relax the body and mind.<sup>26,27</sup>

Stress increases in the adolescent years and frequently follows conflicts with increases in the teen years and frequently follows tensions with in the teen's life.<sup>18</sup>

Adolescents may benefit from interventions with a mindfulness focus that attempt to reduce stress. Stress-related problems in children and adolescents are on the rise. In the absence of a known medical condition, high-risk middle school children who participate in mindfulness-based programmes and live in metropolitan locations report fewer physical complaints. When compared to students who only get health education, students who participate in mindfulness programmes also show lower levels of negative affect, coping, depression, self-harm, rumination, and post-traumatic stress disorder.<sup>14</sup>

Maintaining the mental health of adolescents is a shared responsibility. Synergy between many stakeholders is necessary for any intervention to be successful. Rapid, thorough, top-notch interdisciplinary mental health care are necessary to effectively screen, treat, and assist adolescents with mental health difficulties and disorders. Although historically viewed as a personal or family duty, it is critical to emphasise that young people's mental health should be preserved and promoted on a much bigger scale. The growth of community services for mental disorders is one of the public health initiatives that must be used to promote the idea of positive health.<sup>14</sup> This systematic review has a problem since it concentrates on the effectiveness of mindfulness treatment rather than the intervention itself, which implies that the results may not be completely intervention-focused. We could have overlooked some

crucial publications for this investigation. The publications concentrate on adolescents' anxiety and depression, thus it is impossible to generalise from them..

## CONCLUSION

In conclusion, significant impacts of mindfulness therapy on adolescents have been found, particularly in the areas of anxiety and depression. However, given the wide range of intervention kinds, evaluation methods, and skill definitions, it is important to proceed with caution when analysing these findings because it is virtually hard to compare the effects of mindfulness. It is crucial to understanding how mindfulness works during childhood and adolescence, as well as what type, dose, and frequency of therapy are most recommended and which skills can benefit from mindfulness the most at each developmental period.

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