Mindfulness and Anxiety in Adolescents: Systematic Literature Review Based on Big Data

Dwi Susi Miftakhul Jannah*, Ninik Setiyowati
Universitas Negeri Malang, Indonesia
dwi.susi.2308118@students.um.ac.id*

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Keywords: adolescents; anxiety; intervention; mindfulness


ABSTRACT: Adolescents are a group of individuals who are vulnerable to experiencing anxiety due to various factors that influence them. Anxiety that occurs in adolescents has several negative impacts on physique, psychology, and self-development of adolescents. If this anxiety is not overcome, it will evoke other symptoms and disorders that are more serious. Because of many negative impacts that arise when adolescents experience anxiety, an intervention is needed to overcome it, one of which can be done with mindfulness. This research uses a systematic literature review method using Publish or Perish software to collect articles from several sources such as Google Scholar, Research Gate, SINTA, DOAJ and Scopus. The keywords used are “mindfulness”, “anxiety”, “kecemasan”, “remaja”, “adolescents” and “teenage”. Based on these keywords, more than 500 articles published in 2019-2024 were found. Next, the researcher used 16 articles that were closely related to this research with a total of samples of 6.034. The research results show that mindfulness has proven effective in overcoming adolescents’ anxiety and there is a negative relationship between mindfulness and anxiety that adolescents who have high mindfulness will have low anxiety and vice versa. There are several programs of mindfulness intervention that can be carried out by adolescents, ranging from formal to informal practices that can be practiced when doing daily activities according to needs, situations and conditions.

INTRODUCTION

Adolescence is a transition period from childhood to adulthood with an unstable emotional state in facing several unexpected conditions (Mubin et al., 2021). This transition or transition period also includes several changes in adolescents that make them unable to control their emotions well (Utami & Erfahmi, 2020). The changes experienced by adolescents include biological, cognitive, and socio-emotional changes, so that with these changes that occur, the possibility of experiencing psychological disorders is increasingly open (Putera et al., 2020). This is in line with the opinion of Asroful et al. (2021) who said that adolescents are a group of age that is very vulnerable to psychological conflict, personality confusion, mental instability as well as instability of stance.

At this time, adolescents are very vulnerable to experiencing health problems in the form of anxiety because they do not know for sure what will happen at this stage of adolescent development (Joseph, 2021). Adolescents also experience difficulties in adapting to oneself and a complex society that can lead to confusion, anxiety, internal and external conflicts (Tjukup et al., 2020) as well as difficulty in controlling emotions (Utami & Erfahmi, 2020). Apart from that, adolescents also have new targets from the social environment, and the inability to achieve these targets will affect the
physical condition, especially anxiety in adolescents because they will be considered to have failed to meet the demands that exist in the social environment (Trikusuma & Suarya, 2020). This is in line with the opinion of Susilawati et al. (2023) who said that one of the mental health problems that many adolescents experience is anxiety. Anxiety that is usually experienced by adolescents is a reaction to the changes in themselves, feelings of shame due to negative judgements from other individuals, both physical and achievement judgements, and excessive pressure (Putera et al., 2020).

Based on research results, anxiety is the most frequently experienced emotion in the form of worry or fear that cannot be avoided (Yuliana et al., 2023). In 2018, it was discovered that emotional mental health problems such as depression and anxiety occurred at 9.8%, which showed an increase compared to data in 2013, which was 6% (Khoiriyah & Handayani, 2020). Meanwhile, anxiety in adolescents was found to be 54% high, 43.9% moderate, and 2.1% low (Fitria & Ifdil, 2020). More specifically, adolescents also experience social anxiety in the high category at 55.2% (Diwanda & Wakhid, 2022). Moreover, anxiety is also one of the biggest causes of the burden of illness and disability experienced by adolescents (Muslimahayati & Rahmy, 2021). The anxiety experienced by adolescents occurs because the brain tissue that supports the function of adolescents’ emotional regulation systems is not yet mature (Xie et al., 2021).

According to American Psychological Association (APA, 2022) anxiety is an emotion that is a long-term response that focuses on threats and is characterized by the feeling of high tension, repetitive worrying thoughts, and physical changes such as sweating, dizziness, shaking, fast heartbeat, and increased blood pressure. This is in line with the opinion of Oktamarina et al. (2022) who said that anxiety is a manifestation of mixed emotions and is experienced as a reaction to threats, pressure, worries that affect the physical and psychological. Anxiety symptoms include physical, cognitive and behavioral symptoms (Manurung, 2022). Besides, anxiety is also characterized by feelings of anxious, restlessness, fear and excessive worry, difficulty in concentrating, and irritability (Haikal, 2022).

**Rationale of Study**

Previous research of systematic literature review related to mindfulness and anxiety especially using big data analysis is still limited. Meanwhile, there are several impacts that will be experienced when individuals experience anxiety. Based on a research conducted by Manurung (2022), anxiety will have an impact on having problems in sleep patterns and not being able to rest in peace. This is in line with the opinion of Fitria & Ifdil (2020) who said that anxiety experienced by adolescents will have impact on having sleep problems, difficulty in focusing, frequent forgetfulness, and irritability. Besides, anxiety also makes adolescents completely uncertain, afraid, and unwilling to take actions (Diwanda & Wakhid, 2022). Moreover, the anxiety experienced by adolescents is related to the psychosomatic tendency and, based on research, it was found that adolescent with psychosomatic tendency was 57.96% higher than those without the tendency, which is 42.04% (Yusfarani, 2021).

Based on the many negative impacts that arise when adolescents experience anxiety, an intervention is needed to overcome it, one of which can be done with mindfulness. Mindfulness is one way that can be used to overcome anxiety because it enables individuals to focus their minds to escape negative feelings or thoughts that trigger anxiety (Langelo et al., 2021). Mindfulness is able to increase awareness of the current situation by focusing attention and thoughts on beliefs without giving a reaction of rejection which is useful for reducing psychological and physical symptoms (Sriati et al., 2022).

A research conducted by Widyaningrum & Mansoer (2023) showed that there is a relationship between mindfulness and anxiety where individuals with high levels of mindfulness tend to have low levels of anxiety and vice versa. Furthermore, based on several studies, anxiety can be reduced with
mindfulness (Dhamayanti & Yudiarso, 2020). In addition, mindfulness applied to adolescents can overcome anxiety and provide many positive changes in adolescents, such as increasing their emotional control, feeling more relaxed and calmer when facing problems, and not being careless and still thinking positively when solving problems (Ulandari et al., 2023).

Aims and Hypotheses
This study aims to reveal the relationship between mindfulness and anxiety in adolescents. This is because anxiety experienced by adolescents has a negative impact and will disrupt their mental health. In fact, mental health, especially in adolescents, is very important in order to support the success of adolescents’ survival (Muslimahayati & Rahmy, 2021). Furthermore, based on several studies, anxiety is effectively reduced by practicing mindfulness. Besides, mindfulness is also an alternative that can be done to maintain mental health (Noviyana et al., 2023). There is a relationship between mindfulness and anxiety on adolescent.

METHODS
Design
This study applied systematic literature review method. Systematic literature review is a method of research to identify, study, interpret and evaluate several relevant studies with the topics being studied by determining the questions of research that are relevant, conducting reviews, and identifying journals systematically based on steps that have been determined (Triandini et al., 2019). Besides, systematic literature review also becomes a standard method to obtain the answers aimed to reveal by conducting literature review based on the previous related research (Rozi, 2020).

Eligibility Criteria
The eligibility of several articles to be used in this systematic literature review research is based on the type of publication, namely scientific articles in journals, eligibility of the research topic and research subject, as well as the year of publication of the articles, namely the last 5 years between 2019-2024.

Information Sources and Database
The researchers used Publish or Perish software to find several articles from several sources such as Google Schoolar, Research Gate, SINTA, DOAJ and Scopus. The keywords used are “mindfulness”, “anxiety”, “kecemasan”, “remaja”, “adolescents” and “teenage”. Based on the keywords, it was found more than 500 related articles that were published in 2019-2024.

Data Extraction Process
Based on the keywords used, the researchers used 16 articles that are closely related to this study. The data extraction process carried out in this research used PRISMA graph. Thus, the PRISMA graph for the process of selecting the articles used in this study is shown in the following figure 1. The population of the articles used in this study is shown in the following table 1.
RESULTS AND DISCUSSION

Results

Based on the 450 articles found, the researchers used 16 articles that are closely related to the study. The total number of the samples from these 16 articles are 6,034. The result of the systematic literature review for the 16 articles is shown in the following table.

<table>
<thead>
<tr>
<th>No.</th>
<th>Authors</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Rizwari &amp; Kemala (2022)</td>
<td>176</td>
</tr>
<tr>
<td>2.</td>
<td>Sukmawati et al. (2023)</td>
<td>94</td>
</tr>
<tr>
<td>3.</td>
<td>Serenity et al. (2023)</td>
<td>-</td>
</tr>
<tr>
<td>4.</td>
<td>Dhamayanti &amp; Yudiarso (2020)</td>
<td>-</td>
</tr>
<tr>
<td>5.</td>
<td>Borquist-Conlon et al. (2017)</td>
<td>-</td>
</tr>
<tr>
<td>6.</td>
<td>Fulambarkar et al. (2023)</td>
<td>-</td>
</tr>
<tr>
<td>7.</td>
<td>Ulandari et al. (2023)</td>
<td>30</td>
</tr>
<tr>
<td>8.</td>
<td>Odgers et al. (2020)</td>
<td>-</td>
</tr>
<tr>
<td>9.</td>
<td>Yang et al. (2019)</td>
<td>All of the students in one of high schools in southern China. The total number is not mentioned.</td>
</tr>
<tr>
<td>10.</td>
<td>Zhou et al. (2020)</td>
<td>-</td>
</tr>
<tr>
<td>11.</td>
<td>LaGue et al. (2019)</td>
<td>All of the students in Tehachapi High School. The total number is not mentioned.</td>
</tr>
<tr>
<td>12.</td>
<td>Sherlina (2024)</td>
<td>-</td>
</tr>
<tr>
<td>13.</td>
<td>Kashefinishabouri et al. (2021)</td>
<td>All male adolescents with the age range of 13 to 18 old living in the center group care di Teheran in 2018. The total number is not mentioned.</td>
</tr>
<tr>
<td>14.</td>
<td>Zimmer-Gembeck et al. (2021)</td>
<td>All Australian secondary school student grades 7 to 12. The total number is not mentioned.</td>
</tr>
<tr>
<td>15.</td>
<td>Bazzano et al. (2022)</td>
<td>88 students</td>
</tr>
<tr>
<td>16.</td>
<td>Montero-Marin et al. (2023)</td>
<td>All of the students in 43 UK secondary schools. The total number is not mentioned.</td>
</tr>
</tbody>
</table>
### Tabel 2. The result of systematic literature review

<table>
<thead>
<tr>
<th>No</th>
<th>Title (Author, Year)</th>
<th>Sample</th>
<th>Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mindfulness Based Intervention to Overcome Anxiety in Adolescents (Rizwari &amp; Kemala, 2022)</td>
<td>6 adolescents</td>
<td>Quantitative (repeated-measure design)</td>
<td>Adolescents who took part in the mindfulness-based intervention felt more sensitive to body sensations and the surrounding environment, could identify the source and degree of anxiety as well as physical reactions and how to deal with them. The mindfulness-based intervention could reduce anxiety symptoms within 2-4 weeks after the intervention was given.</td>
</tr>
<tr>
<td>2</td>
<td>The Effectiveness of Giving Cognitive Behavior Therapy (CBT) and Mindfulness Therapy on Adolescents’ Social Anxiety Levels (Sukmawati et al., 2023)</td>
<td>40 adolescents; 20 of them are in the control group and 20 of them are the intervention group</td>
<td>Quantitative (experiment)</td>
<td>The combination of CBT and mindfulness was more effective in reducing social anxiety in adolescents compared to CBT only.</td>
</tr>
<tr>
<td>3</td>
<td>The Implementation of Mindfulness-Based Intervention to Overcome Anxiety in Adolescents: A Narrative Review (Serenity et al., 2023)</td>
<td>-</td>
<td>Qualitative (narrative review)</td>
<td>The Mindfulness-based intervention can be a therapy option for treating anxiety in adolescents. Besides reducing adolescents’ anxiety, the mindfulness-based intervention also helps in overcoming depression, stress, rumination, increasing self-compassion, sleep quality, quality of life, and calmness.</td>
</tr>
<tr>
<td>4</td>
<td>The Effectiveness of Mindfulness Therapy for Anxiety: A Review of Meta Analysis (Dhamayanti &amp; Yudiarso, 2020)</td>
<td>-</td>
<td>Qualitative (meta-analysis)</td>
<td>Mindfulness intervention had an impactful influence for reducing anxiety. In this case, there are various types of mindfulness, but mindfulness based cognitive therapy is an intervention that has an impactful influence for reducing anxiety.</td>
</tr>
<tr>
<td>5</td>
<td>Mindfulness-Based Interventions for Youth With Anxiety: A Systematic Review and Meta-Analysis (Borquist-Conlon et al., 2017)</td>
<td>-</td>
<td>Qualitative (systematic literature and meta-analysis)</td>
<td>Mindfulness intervention was effective for overcoming anxiety in adolescents. Mindfulness intervention in adolescents uses exercises that include sensory activities, body scanning, drawing, writing, and visual practices.</td>
</tr>
<tr>
<td>6</td>
<td>Review: Meta-analysis on mindfulness-based interventions for adolescents’ stress, depression, and anxiety in school settings: a cautionary tale (Fulambarkar et al., 2023)</td>
<td>-</td>
<td>Qualitative (meta-analysis)</td>
<td>Mindfulness intervention in the school environment was effective for adolescents in revealing significant improvements in treating stress, but not depression and anxiety.</td>
</tr>
<tr>
<td>7</td>
<td>Peran Konseling Individual Dengan Metode Mindfulness Dalam Mengatasi Kecemasan Para Remaja Di LPKA Kelas I Palembang (Ulandari et al., 2023)</td>
<td>3 adolescents</td>
<td>Qualitative (descriptive)</td>
<td>Adolescents’ anxiety was characterized by difficulty communicating, getting angry easily, irritability, loving to be alone, getting worried easily, and even being afraid of the shadows of the past.</td>
</tr>
</tbody>
</table>
8. The Limited Effect of Mindfulness-Based Interventions on Anxiety in Children and Adolescents: A Meta-Analysis (Odgers et al., 2020)

Mindfulness intervention tended to have small to moderate, but temporary effects in reducing anxiety symptoms in children (not adolescents), but among Western adolescent populations, the most likely outcome, based on RCTs to date, was that MBIs do not give beneficial effects in reducing anxiety. The results indicate a lack of evidence to support the investment in school-based MBIs to address adolescents anxiety.

9. Mobile Phone Addiction and Adolescents’ Anxiety and Depression: The Moderating Role of Mindfulness (Xiujuan Yang et al., 2019)

Cell phone addiction was positively related to adolescent anxiety and depression. In addition, the relationship between cell phone addiction and anxiety and depression was moderated by mindfulness, where the relationship was stronger in adolescents with lower levels of mindfulness.

10. Effects of mindfulness-based stress reduction on anxiety symptoms in young people: A systematic review and meta-analysis (Zhou et al., 2020)

Mindfulness-Based Stress Reduction (MBSR) helped significantly reduce anxiety symptoms in adolescents. At the same time, MBSR in the adolescents population showed remarkable effects of short-term interventions, but have no long-term effects, which may require high-quality, randomized controlled trials to prove.

11. The impact of mindfulness-based cognitive therapy on math anxiety in adolescents (LaGue et al., 2019)

Mindfulness therapy could reduce anxiety of mathematics in adolescent students.

12. Tingkat Kecemasan pada remaja dalam menghadapi masa depan (Sherlina, 2024)

One of the anxieties experienced by adolescents occurred because they were searching for their identity and have high curiosity so that many feelings of fear arise. This anxiety can be overcome by talking to another trusted individual or mental health professional.

13. The effect of mindfulness-based cognitive therapy and emotion-regulation training on 45 adolescents Quantitative (experimental)

There was a significant effect of mindfulness-based cognitive therapy and emotional regulation training on...
Mindfulness and Anxiety in Adolescents

14. Peer relationships and stress: Indirect associations of dispositional mindfulness with depression, anxiety, and loneliness via ways of coping (Kashefinishabouri et al., 2021)

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample Size</th>
<th>Research Design</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>361 students</td>
<td>Quantitative (Multiple correlation)</td>
<td>Mindfulness was useful in overcoming anxiety, especially social anxiety.</td>
<td></td>
</tr>
</tbody>
</table>

15. Effect of Yoga and Mindfulness Intervention on Symptoms of Anxiety and Depression in Young Adolescents Attending Middle School: A Pragmatic Community-Based Cluster Randomized Controlled Trial in a Racially Diverse Urban Setting (Bazzano et al., 2022b)

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample Size</th>
<th>Research Design</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>44 students as the control group and 42 as the experimental group</td>
<td>Quantitative (experimental)</td>
<td>Symptoms of anxiety and depression decreased in the intervention group, although this difference was not statistically significant. In the control group, anxiety symptoms decreased but depression symptoms increased.</td>
<td></td>
</tr>
</tbody>
</table>

16. Do Adolescents Like School-Based Mindfulness Training? Predictors of Mindfulness Practice and Responsiveness in the MYRIAD Trial (Montero-Marin et al., 2023)

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample Size</th>
<th>Research Design</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,232 students</td>
<td>Mix-method</td>
<td>Mindfulness was useful for increasing awareness of body feelings/sensations and increasing the ability to regulate emotions.</td>
<td></td>
</tr>
</tbody>
</table>

Total of samples 6,034

**DISCUSSION**

Mental health is one of the important things to support individuals’ survival (Rahmy & Muslimahayati, 2021). However, due to several things the individuals can possibly experience mental health disorders, one of which is anxiety. Anxiety is a mental health disorder that is experienced by many people in the world, including Indonesian people (Oktamarina et al., 2022). Anxiety is a condition where an individual feels worried and feels that something bad will happen to him (Oktamarina et al., 2022). In this case, anxiety can also occur when individuals feel unprepared to face something or even because it is their inherent nature (Santoso, 2021). One group of individuals who are vulnerable to experiencing anxiety are adolescents because they are looking for their identity and having high curiosity (Sherlina, 2024) as well as on the ages that are unstable so that their psychological conditions are unsettled (Mubin et al., 2021).

Anxiety is something that adolescents are susceptible to because of various factors that can trigger it (Rizwari & Kemala, 2022). The factors that can influence the emergence of anxiety in adolescents are internal and external factors. These internal factors are factors that originate from within the adolescents, such as feelings of inadequacy, lack of self-confidence, and even feelings of guilt (Santoso, 2021) and motivation (Dewi & Pujiajutthi, 2020). Besides, there are many changes that occur within them and the introverted personality makes adolescents tend to be closed, difficult to adapt, and often overthink (Rahmy & Muslimahayati, 2021). In this case, self-concept is also an internal factor because when adolescents do not know themselves, they will not know their own potential and abilities so that anxiety can arise when they are in trouble (Istiqomah & Amin, 2021).
These internal factors are also closely related to thoughts that arise due to external circumstances, whether in the form of positive or negative thoughts (K. D. Putera et al., 2020).

Another internal factor that can influence anxiety is religiosity because by increasing religiosity, individuals will be more optimistic and have positive coping in facing situations (J. H. Ruskandi, 2021). This is also in line with the opinion of (Rahmy & Muslimahayati, 2021) who stated that increasing religiosity can make individuals more optimistic in facing situations, more peaceful, and protected from various physical and mental illnesses. The result of a research conducted by (Muzakki & Mariyati, 2023) also found that anxiety is related to religiosity with a correlation coefficient of p=-0.362 with a significance value of P=.000.

The coping strategies used by adolescents are things that also influence anxiety, which based on the research result of (Apriyeni & Patricia, 2023) which stated that adolescents use more emotional focused coping strategies, 86.7% of adolescents, compared to problem focused coping, which is only 13.3% of adolescents. Based on the research result of (Kusumadewi et al., 2021) self-efficacy is related to anxiety with a significance value of .031 and a low correlation strength of .298 and a negative correlation direction for the reason that high self-efficacy can make individuals try to control their anxiety so they can focus on achieving something they want to achieve (Kusumadewi et al., 2021).

External factors for anxiety in this case are situational settings or things that naturally always happen and cannot be predicted (K. D. Putera et al., 2020). One of these external factors is factors related to education, such as facing school assignments, exams, choosing a major in college, and friendships (Rizwari & Kemala, 2022). Anxiety can also come from the school environment such as learning methods and teachers (Diana et al., 2020) as well as the classroom environment (Dewi & Pujiasutti, 2020). Besides, anxiety in adolescents can also arise when the surrounding environment is less conducive, the parenting patterns, social, economic and cultural conditions (Istiqomah & Amin, 2021) and extreme weather (Fitriyani & Budiman, 2021). Other individuals and society can also be factors in the emergence of anxiety in adolescents, such as rejection and excessive criticism (Santos, 2021), judging other individuals and being forced to follow other individuals' wishes (Naziha et al., 2023). Besides, providing social support (Pebriyani et al., 2020) and family support is also related to adolescents anxiety, where the higher the family support, the lower the anxiety in adolescents (Apriyeni & Patricia, 2023). This is because adolescents still need guidance from their parents in dealing with problems related to their development process (Romadhoni & Widiatie, 2020).

The recent application of modern technology can also be an external factor for anxiety due to the negative impacts resulting from technology such as cyberbullying among adolescents (Ulfianasari et al., 2022). This is in line with the opinion of Harahap (2020) that one of the symptoms that emerge from victims of cyberbullying is the emergence of anxiety. Besides, the research results of Yang et al. (2019) revealed that cellphone addiction is also positively related to anxiety with a correlation value (r=-.28, p < .001).

Anxiety that is experienced, if no intervention carried out, can trigger symptoms of anxiety and other more serious disorders (Oktamaria et al., 2022). Hence, intervention needs to be carried out to overcome this anxiety and based on several studies, an effective intervention to overcome anxiety in adolescents is mindfulness. Moreover, a research by Kadafi et al. (2021) found that there is a relationship between mindfulness and anxiety where when mindfulness is low then anxiety is high and vice versa. This is in line with the statement of Jaiswal et al. (2019) who stated that several empirical studies consistently show that mindfulness and anxiety are inversely related to each other both at the state and trait levels. Based on the research results of Rizwari & Kemala (2022), mindfulness-based interventions can reduce adolescents’ anxiety symptoms in two weeks to four weeks after the intervention is given.
Mindfulness is one way to regulate emotions by thinking fully and focusing on daily activities so that you can develop awareness of negative feelings and thoughts (Langelo et al., 2021). Noviyana et al. (2023) also stated that mindfulness is a consistent attitude and strong belief in remaining aware of the situation or circumstances faced and accepting the situation or circumstances as a whole. This is in line with the opinion of Dhamayanti & Yudiarso (2020) who stated that mindfulness works with meditation and cognitive principles so that individuals learn to develop awareness of negative feelings and thoughts and individuals do not try to avoid them, thereby making individuals increasingly able to release themselves from thoughts. Negative thinking, of course, the therapy process is not short and requires several meetings. Besides, mindfulness will make individuals assume that there are many positive or true things within themselves rather than negative things or mistakes so that negative thoughts can be changed to positive thoughts (Romadhoni & Widatie, 2020).

A research by Bazzano et al. (2022) conducted on 86 adolescents revealed that adolescents who practiced mindfulness felt the benefits in reducing anxiety and symptoms of depression. This is in line with the research results of Yang et al. (2019) conducted on 1,258 adolescents found that mindfulness was negatively correlated with anxiety (r=−.32, p < .001) and depression (r=−.36, p < .05). In addition, a research by Zimmer-Gembeck et al. (2021) conducted on 361 adolescents also stated that mindfulness is related to social anxiety because it is useful as a coping strategy to overcome social anxiety, including loneliness. This is also in line with the research results of Kashefinshabouri et al. (2021) which revealed that social anxiety can be reduced by applying mindfulness to adolescents.

Adolescents who take part in mindfulness-based interventions feel more sensitive to body feelings or sensations (Montero-Marin et al., 2023), the surrounding environment, can identify the source and degree of anxiety as well as physical reactions and how to deal with them (Rizwari & Kemala, 2022). Besides, a research conducted by Ulandari et al. (2023) found that the mindfulness method given in 4 meetings made adolescents able to control their emotions, be more relaxed and calm in facing problems, keep thinking positively and not be careless in solving problems. Furthermore, practicing mindfulness also has good effects, such as becoming a more alert and open person, being able to be aware of the current situation, being able to respond and breathe with full awareness, no longer judging other situations and individuals and reducing the tendency to respond reactively (Noviyana et al., 2023). Mindfulness practiced by adolescents can also increase the ability to manage emotions, increase focus and concentration on learning, and strengthen overall mental well-being (Af’idah et al., 2022).

Mindfulness interventions in adolescents use exercises that include sensory activities, body scanning, drawing, writing, and visual practices (Borquist-Conlon et al., 2017). Furthermore, the most widely used types of mindfulness-based interventions are L2B (Learning to Breathe), sleep sense, and Mindfulness Martial Arts (MMA) (Serenity et al., 2023). Besides, there are also several other mindfulness programs such as the Mindfulness Awareness Program (MAP), Mindfulness-Based Stress Reduction (MBSR), Mindfulness-Based Intervention (MBI), and Mindfulness-Based Cognitive Therapy (MBCT), all of which actually have principles. which is the same, namely mindfulness, but the program will be adjusted to the situation or conditions (Firdaus et al., 2023). This mindfulness practice can be done formally and informally, informal practice can be done during daily activities, washing dishes, bathing, paying attention to nature, breathing (Apriyeni & Patricia, 2023). Besides, mindfulness can also be practiced when waking up, while eating, while working, and before going to sleep by realizing that we are fully present in all these activities (Noviyana et al., 2023).
Implications
The findings show that mindfulness is related to anxiety and mindfulness is an effective intervention to overcome anxiety in adolescents. These findings can be used as a reference to schools, teachers, parents, etc. when their children or adolescents show symptoms of anxiety. Based on several previous studies, mindfulness interventions have several types according to needs. Therefore, the type of mindfulness intervention that will be given to adolescents can be chosen according to the adolescent's needs.

Limitations and Recommendations for Further Research
This research has limitations that can be considered by future researchers. First, this research only focused on adolescent subjects so that other subjects such as children or adults might not necessarily have the same results. Second, the search for sources or articles carried out for systematic literature reviews was only limited to 2019-2024. Therefore, future researchers are expected to look for the relationship or effectiveness of mindfulness with anxiety in different subjects such as children or adults.

CONCLUSION
Adolescents are a group of individuals who are vulnerable to experiencing anxiety due to various factors that influence them. Anxiety is a feeling of worry, fear, and the emergence of negative thoughts regarding something in the future. Anxiety that occurs in adolescents has several negative impacts ranging from physical, psychological and self-development to adolescents. If this anxiety is not overcome, it will cause other, more serious symptoms and disorders. Due to the many negative impacts that arise when adolescents experience anxiety, an intervention is needed to overcome it, one of which can be done with mindfulness. Mindfulness is a way to regulate emotions by thinking fully and focusing on the current situation and activities so that individuals can be fully aware and accept the situation as a whole. Based on several previous studies, mindfulness has been proven to be effective in overcoming adolescents’ anxiety and there is a negative relationship between mindfulness and anxiety where adolescents who have high mindfulness will have low anxiety and vice versa. There are several mindfulness intervention programs that can be carried out by adolescents, ranging from formal to informal practices that can be practiced when doing daily activities according to needs, situations and conditions.

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AUTHOR CONTRIBUTION STATEMENT
All authors have read the final version of the manuscript and agreed.

REFERENCES


