Review Article: Systematic Review, Meta-Analysis, Integrative Review, Scoping Review

THE INFLUENCE OF MINDFUL THOUGHT ON EMOTIONAL REGULATION IN ADULTS: A LITERATURE REVIEW

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Abstract
Background: Mental disorder is one of the most difficult problems to overcome in the world and one of the causes is about the low emotional regulation. Emotional regulation is influenced by a person's awareness in managing his emotions. For increasing the emotional regulation need some interventions to enhance mindful thought and the benefits will appear.

Objectives: This article aimed to explain the benefits of mindful thought in emotion regulation and the type of intervention can be used to improve mindful thought in adults.

Design: This study used a scoping review to review the articles the influence of mindful thought on emotional regulation in adults.

Data Sources: Data based used were Science Direct, Scopus, SpringerLink, PubMed and Emerald Insight from 2017 to 2021. The literature obtained by using the Boolean operators “OR/AND” search. The keywords in the search were “mindfulness” OR mindfulness breathing AND “emotion regulation” OR control emotion AND ”adult”.

Review Methods: The analysis used was the Preferred Reporting Items for Systematic Reviews and Meta-Analyzes for Scoping Review (PRISMA-SR).

Results: The results after screening consisting of 4 quantitative articles. This article summarizes about mindfulness intervention can increase the ability to respond to negative emotions, reduce depression, stress and also increase important components in mindful thought that can influence emotional regulation.

Conclusion: High level of mindful thoughts will influence daily life in adults for reappraisal, acceptance, problem solving and parenting. The kind of mindfulness intervention can be used for increasing quality of mindful that can affect emotion regulation in adults such as Mindfulness Meditation, Mindfulness Based Cognitive Therapy and Mindfulness Based Stress Reduction.

Keywords: Mindful Thought, Mindful, Mindfulness, Emotion Regulation, Adult.

INTRODUCTION

Mental disorders are one of the most difficult problems to overcome in the world and in Indonesia. The World Health Organization (WHO) reports that about one in four people worldwide have been affected by mental illness during their lifetime (World Health Organization Regional Office for Europe,
Data obtained from the Basic Health Research (Badan Penelitian dan Pengembangan Kesehatan Kementerian Kesehatan RI, 2013) in 2018, 9.8% of the Indonesian population aged over 15 years experienced emotional disorders. This proves that emotional disorders are a serious problem in adults.

Adults have many burdens and responsibilities to improve family welfare through a sufficient economy, illness, family problems and others (Tong et al., 2019). These problems can affect a person's emotional regulation. Emotion regulation is needed in everyday life to regulate changes in the quality, intensity and duration of emotional responses (Gross, 1998) (Gross & Thompson, 2007). Lack of ability to reduce negative emotions will lead to depression, personality disorders, substance use, eating disorders and various other psychopathological symptoms (Berking & Wupperman, 2012). Each individual has a different way of regulating positive and negative emotions they have (Rebecca A. Bloorea, Paul E. Josea, 2020). The response in conveying an emotion has a great influence on the environment, perception, decision making, intelligence to socialization relationships between humans. The tendency to convey emotions must be adjusted to the demands that apply in the surrounding environment so that if it is not appropriate, it will cause a depressed feeling (Hassan et al., 2018).

Low emotional regulation will cause mental disorders so that a way is needed to improve it. Emotion regulation can be improved by increasing mindful thinking. Mindful thinking, also known as mindfulness, is a state in which a person focuses attention and is aware of what is happening now. Mindful thoughts can increase attention and awareness of the current reality (Brown & Ryan, 2003). Lack of control on mindful thoughts can make emotions occur outside of awareness so that it encourages someone to act out of control. Mindful thoughts are very important to release a person from unhealthy thought habits, patterns and behaviors so that well-being is maintained (Ryan & Deci, 2000). Mindful thoughts contribute to well-being and happiness.

There are several interventions that can be used to improve the quality of mindful thoughts in regulating one's emotions, such as physical activity intervention and mindfulness interventions. There are some exclusion criterions for people want to apply physical activity intervention for instances neurological disease, musculoskeletal issues, under surgery, pregnancy and breast feeding. The exclusion criterions were intended to reduce bias and also ensure that these physical interventions were safe and did not cause accidents. (Sadeghi Bahmani et al., 2020).

On the other hand, mindfulness interventions train the mind not to judge a condition related to thoughts, feelings or sensations that arise at this time and lead to a process of acceptance of the situation (Petranker & Eastwood, 2021). Acceptance of good circumstances can improve emotional balance and well-being (Saway et al., 2021). Acceptance is closely related to feelings, thoughts and physical sensations. This intervention can be used by with people who have pregnancy, breast-feed and problem with their body (Shahbaz & Parker, 2021). Mindfulness interventions are effective strategies to improve physical and mental well-being that focus on improving behavior, attention and awareness. Individuals who have a mindful thought have higher life satisfaction, well-being, optimism and a good quality of life (Prakash et al., 2017). This scoping review aims to find the benefits of mindful thinking and obtain various types of mindfulness interventions that can reduce negative emotions that arise, reduce depression and stress and increase important components in mindful thoughts that can affect emotion regulation.

**METHODS**

*Design*

This scoping review uses the Arksey and O'Malley models. There are 4 methods used by Arksey and O'Malley (2005), among others: identifying research questions, identifying
literature that is appropriate to the topic, selecting literature that is appropriate to the topic, extracting data from the literature obtained, concluding the findings. This article has a review question, “What are the benefits of mindful thoughts on emotion regulation and what mindfulness interventions can increase mindful thoughts that can affect emotion regulation?”.

**Search Methods**

The data based used were Science Direct, Scopus, SpringerLink, PubMed and Emerald Insight. The articles used are from 2017 to 2021. The literature obtained by using the Boolean operators “OR/AND” search. The keywords in the search were "mindfulness" OR mindfulness breathing AND "emotion regulation" OR control emotion AND "adult".

**Search Outcome**

There some inclusion and exclusion criterions were as follows:

**Table 1. Literature criterions**

<table>
<thead>
<tr>
<th>Research Characteristic</th>
<th>Inclusion criterions</th>
<th>Exclusion criterions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>Quasi experimental and Randomized control trial design.</td>
<td>Descriptive study, prevalence, diagnostic and case study.</td>
</tr>
<tr>
<td>Respondents</td>
<td>Adults</td>
<td>Children and teenagers.</td>
</tr>
<tr>
<td>Intervention</td>
<td>Mindfulness therapy interventions</td>
<td>Not kind of Mindfulness intervention.</td>
</tr>
<tr>
<td>Measurement result</td>
<td>There included a measure of mindful thought on emotion regulation in adults.</td>
<td>There are no reports of Mindful Thought on Emotional Regulation in Adults.</td>
</tr>
</tbody>
</table>

Data that selected by deleted duplicate articles, reports, only contain the theory, out of topic, not in English. The crucial part of selection included mindful thought, emotional regulation in adults.

**Figure 1.** The PRISMA Flow Diagram is Depicting the Flow of Information through the Different Phases of the Scoping Review.

**Quality Appraisal**

In this scoping review, the search for independent literature uses reliable data based. The articles obtained were then analyzed to find the required data, analyzed for similarities and differences. Titles, abstracts, and articles were reviewed according to the inclusion and exclusion criterions. The data used in each article found are full text, year of study, type of intervention, population and results. Figure 1 describes the process of searching and selecting articles used by using Preferred Reporting Items for Systematic Review and Meta-analysis for Scoping Review (PRISMA-SR) (Selcuk, 2019).

**Data Abstraction**

First and second authors analyzes the citation of the articles that have been obtained
from the data based. Search and find full text articles related to this article. The articles that suitable the inclusion criterions were extracted by both investigators using a standard data extraction template. Third author completed extraction discrepancy.

**Data Analysis/ Synthesis**

5618 articles have been collected from five data based such as Science Direct 2224 articles, Scopus 321 articles, SpringerLink 2616 articles, PubMed 237 articles, Emerald Insight 220 articles. There were 37 similar articles on several databases which were then excluded and left to be 5581 articles. About 5581 articles, 3194 articles were excluded because they were in the form of reports, in the form of theories, not on topic and not in English. Then the results of filtering articles obtained 2388 and rescreening related to mindfulness and emotional regulation, obtained 4 related articles.

**RESULTS**

There were 4 articles that will be analysed, there are 4 types of quantitative articles. The research to be analysed comes from 1 Italy, 1 Germany, 1 America, and 1 Los Angeles. This article covers the theme of the benefits of having mindful thoughts in emotion regulation and interventions that can increase mindfulness in emotion regulation.

**Table 3. Summarizes of Articles Mindful Thought on Emotion Regulation in Adults.**

<table>
<thead>
<tr>
<th>Author, Year, Country</th>
<th>Title</th>
<th>Design and Sample</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iani, et al., 2019 Italy</td>
<td>Associations Between Mindfulness and Emotion Regulation: The Key Role of Describing and Nonreactivity</td>
<td>Quantitative. 211 volunteers (adults)</td>
<td>Mindfulness Based Intervention was related reappraisal, acceptance and problem solving.</td>
</tr>
<tr>
<td>Beblo et al., 2018, Germany</td>
<td>Breath Versus Emotions: The Impact of Different Foci of Attention During Mindfulness Meditation on the Experience of Negative and Positive Emotions</td>
<td>Quantitative 65 respondents (adults)</td>
<td>Breathing meditation and emotion focused meditation (part of the MBCT intervention) are able to control emotions when faced with situations that have negative stimuli.</td>
</tr>
<tr>
<td>Biyle et al., 2017 Los Angeles</td>
<td>Improvements in Emotion Regulation Following Mindfulness Meditation: Effects on Depressive Symptoms and Perceived Stress in Younger Breast Cancer Survivors</td>
<td>Quantitative, 47 respondents (adult women with cancer)</td>
<td>Mindfulness Meditation interventions such as Mindful Awareness Practices (MAPs) can reduce maladaptive emotions and increase adaptive emotions.</td>
</tr>
<tr>
<td>Yan et al., 2021 USA</td>
<td>Associations from Parental Mindfulness and Emotion Regulation to Child Emotion Regulation Through Parenting: The Moderating Role of Co-parenting in Chinese families</td>
<td>Quantitative 2237 respondents (parents)</td>
<td>Parents who have a good mindful mind will have little problem in overcoming their emotional regulation so that in parenting it will have a</td>
</tr>
</tbody>
</table>
Benefits of Mindful Thought on Emotion Regulation Strategies

A total of four literatures were obtained, three of which explain that having a mindful thought will help in everyday life in adults. Mindful thinking ability is related to emotion regulation strategies. The bivariate test conducted was found to have a relationship with adaptive emotion regulation. Mindful thoughts increase the ability to reappraisal, acceptance and problem solving (Iani et al., 2019).

Parents who have a good mindful thought will have little problem in overcoming the regulation of their emotions. Emotional regulation in parents is closely related to the mental development of their children. Children with parenting patterns who have mindful thoughts have good emotional quality, as evidenced by filling out the Emotion Regulation Checklist (ERC), the results are ($t$ (704.30) = 4.23, $p < .001$, $d = 0.23$). How to regulate emotions can have an impact on the next generation (Yan et al., 2021). Individuals who have a high mindful thought are able to control their emotions. Research conducted (Beblo et al., 2018) to improve mindful thoughts, respondents were given a brief training first, then asked to do breathing meditation and emotion focused meditation (part of the MBCT intervention) followed by watching movies, the results showed that respondents were able to control their emotions when faced with situations that have negative stimuli.

Interventions That Can Improve Mindful Thinking in Adults

There were four articles that were found discussing interventions used to increase mindfulness and were strongly related to the development of emotion regulation in adults. Mindfulness Meditation interventions such as Mindful Awareness Practices (MAPs) are able to reduce rumination which is part of maladaptive emotion regulation that can trigger depression and stress reduction, and can increase self-kindness which is an adaptive emotion regulation. This intervention was given for 6 weeks and 2 hours per session, in adult cancer patients (before 50 years) (Boyle et al., 2017). Breathing Meditation and Emotion Focused Meditation (based on Mindfulness-Based Cognitive Therapy (MBCT)) are able to maintain a mindful mind in the face of negative and positive stimuli. Meditation can also be used in Mindfulness Based Therapy programs such as Mindfulness Based Stress Reduction (MBSR) (Beblo et al., 2018). MBSR can increase reappraisal in the same way as MBCT. MBSR reduces fatigue, stress, anxiety and depression (Iani et al., 2019).

Mindfulness with a spiritual approach shows that there was an improvement in the emotional control of adult TB patients by preventing patients from experiencing severe emotional disturbances so that the healing process progresses significantly.

The findings in this study stated that there was a very significant increase in emotional control with the mean before the intervention was given from 29.75 to 36.99. These results are consistent with previous studies which say that a spiritual approach can reduce anxiety and
DISCUSSION

This scoping review provides an overview of the benefits of mindful thoughts affecting emotion regulation as well as any interventions that can increase mindful thoughts so that they can improve emotional regulation in a person. Emotion regulation has an important role in cognitive and emotional action (Brehl et al., 2021). There are nine emotion regulation strategies that can be controlled with mindful thoughts including expression, problem-solving, rumination, reappraisal, avoidance, acceptance, suppression of emotional experience, activities and social support and distraction, which are types of adaptive and maladaptive emotion regulation. The high quality of mindful thoughts will lead to adaptive emotion regulation that is closely related to unpleasant emotions, while the low quality of mindful thoughts will create maladaptive emotion regulation that can exacerbate levels of anxiety, stress, low mental well-being and reduce interpersonal functioning (Brehl et al., 2021).

The results of the study show that acceptance, reappraisal, and problem solving are adaptive emotion regulations that are interconnected (Brehl et al., 2021). Acceptance is the key to the function of emotion regulation and can automatically control reactions that can arouse feelings of discomfort. This acceptance makes a person’s emotional regulation learn to recognize differences in emotional experiences that have occurred and can restrain themselves. The ability to respond to the problems encountered and also the choice of how to react to a situation can be induced by increasing the quality of good mindful thoughts. Mindful thought is defined as a person's ability to deal with the present moment and not to judge experiences and situations that have been done (Tatar et al., 2021). people who have mindful thoughts are able to control emotions when facing situations that have negative stimuli (Beblo et al., 2018). Negative things can have an influence on beliefs and attitudes.

Emotional regulation that is not good for parents in child care can lead to violence in children, neglect and exposure to violence in the family. Parents are providers of welfare for children (Chu et al., 2021) should have a good emotional strategy in the parenting model. Research from (Yan et al., 2021) states that parents who have good quality of mindful thoughts will experience less problems in regulating their emotions during parenting. High emotional regulation in parents is closely related to the mental development of their children. Mindful thought for adults can increase by mindfulness intervention. The kind interventions can be used are MBCT, MBSR and Mindfulness Meditation interventions such as MAPs.

Mindful thinking in adults can be enhanced through mindfulness interventions. The types of interventions that can be used include MBCT, MBSR and Mindfulness Meditation such as Maps. MBCT processes cognitively and affectively develops non-judgmental observations. The focus of MBCT is on modifying the relationship between thoughts, feelings and internal experiences. Research (Beblo et al., 2018). Breathing Mediation and Emotion Focused Meditation which are part of MBCT are able to maintain a mindful mind in the face of negative and positive stimuli. The standard MBCT intervention was carried out for 8 weeks with 2 hours of sessions, trained by trainers who had three years of experience. In MBCT, they are also guided to do a body scan, sitting meditation and also teaching of cognitive-behavioral skills (Docteur et al., 2020).

The MBSR intervention can reduce symptoms of anxiety, depression, stress and improve well-being. MBSR focuses on accepting cognitions, emotions, sensations and actions rather than fighting negative thoughts and unpleasant emotions. The basic mechanisms of MBSR leading to good health include emotional regulation, value clarification, cognitive, emotional, and
behavioral flexibility, and exposure. Research (Iani et al., 2019) also describes that MBSR can increase reappraisal. MBSR reduces fatigue, stress, anxiety and depression. This intervention was administered with 90 minutes per session for 8 weeks (Norouzi et al., 2020)

This Mindfulness Meditation (MM) intervention strengthens attention and emotion regulation systems. The focus is reducing stress and improving well-being, physiological reactivity, and aspects of cognitive functioning (Eichel & Stahl, 2020). An example of the type of MM in research (Boyle et al., 2017) is Mindful Awareness Practices (MAPs) are able to reduce maladaptive emotion regulation and enhance adaptive emotion regulation.

The limitations of this study are mainly related about difficulty in finding sources that match the topic and the sources that have been used do not explain the contents in detail.

CONCLUSION
The presence of emotional disorder is currently high, which can lead rates of mental disorders, especially in adults. Adults have a hard burden and responsibility so that these things can be a source of stress and mental illness. Mindful thoughts are needed in order to help adults regulate the emotions arise. This article aims to examine the influence of mindful thoughts on emotion regulation in adults using a scoping review approach. The themes obtained benefit from mindful thoughts and also what kind of mindfulness intervention can increase mindful thought so that people can do good emotional regulation.

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DECLARATION OF CONFLICTING INTEREST
There is no conflict of interest in this study.

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AUTHOR CONTRIBUTION
Haryati Septiani: Contributed to found the idea, searched, selected and analyzed literatures that were appropriate to the topic.

Meidiana Dwidiyanti: Contributed to discussing and monitoring in compiling this study.

Megah Andryani: Contributed to discussing and improving the quality in this study.

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