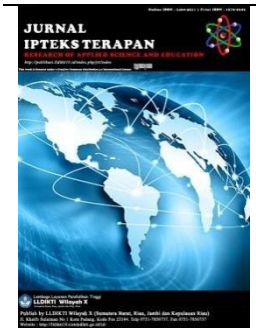

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BENEFITS OF AUTOGENIC TRAINING THERAPY FOR TEENAGERS: A SYSTEMATIC REVIEW

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Abstract

Introduction: Autogenic Training (AT) is a relaxation technique which is a structured process of automatic suggestion like self-hypnosis. This activity can be used to reduce several complaints, both physical and psychological. The purpose of writing this article is to find out the benefits of autogenic training in teenagers. **Method:** Systematic review of articles from nine databases, namely ClinicalKey, EBSCOhost, EMBASE, ProQuest, ScienceDirect, Scopus, Oxford Journals, Pubmed and Google Scholar . Article searches were carried out using the keywords Autogenic Training, Autogenic Relaxation, Child, Adolescent and were limited to the years 1992-2022. **Results:** From the results of the data base search, 8,105 articles were identified, of which there were 10 articles that were relevant for systematic review. Autogenic training is able to reduce pain in adolescents, especially in cases of migraines, other headaches and dysmenorrhea. In addition, this intervention can be used to reduce behavioral and emotional disorders such as anxiety and stress. Autogenic training can also be used to control self-control or self-regulation. **Conclusion:** Autogenic training provides many benefits for teenagers, such as reducing pain, anxiety and stress responses, increasing attention, increasing the ability to control emotional regulation or self-control and maintaining a good mood.

Keywords: Children, Autogenic Training, Autogenic Relaxation, Teenagers

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INTRODUCTION

Autogenic training is a relaxation technique that utilizes self-suggestion. This suggestion is generated from within a person and is carried out every day to produce positive energy or calm (Kanji, 2000). Autogenic Training was developed by Dr Johannes Heinrich Schultz in the 1920s, where he was a neurologist and psychiatrist from Germany. Schultz (1959) explained that autogenic training developed from Oskar Vogt's research on sleep and hypnosis, where Vogt concluded that patients who underwent hypnosis under his guidance were able to place themselves, for self-determined periods, into a state similar to a hypnotic state or called " autohypnotic ". This condition has a tremendous healing effect in reducing stress. From here, Schultz began to develop therapeutic hypnosis in the form of suggestions to reduce patient passivity and patient dependence on the therapist. Schultz developed a therapeutic method using a series of stages of suggestion to transmit sympathetic to parasympathetic nerves by relaxing the body's muscles which are then used to control the body's muscles, circulatory system, breathing and stomach. Six formulas were developed in autogenic training which are physiologically oriented as training standards. At the beginning of the training the patient will be invited to enter a condition where the limbs are heavy, feeling warm in the limbs, concentrating on heartbeat and breathing, followed by thinking about the feeling of warmth in the stomach area and on the forehead (Schultz & Luthe 1959).

Autogenic training is an alternative intervention It has been widely used for various conditions, both physical and psychological. In a meta-analysis study, autogenic training is a relaxation technique that is effective in reducing pain (Kohlert et al., 2022), in the literature review it is also explained that autogenic training is an interventional psychotherapy technique that is quite promising in treating mental disorders (Breznoscakova et al. , 2023). Autogenic training has an effect on autonomic cardiorespiration which is paralleled by modification of psychological activities which is consistently able to reduce anxiety and have a positive impact on mild-moderate depressive disorders, bipolar disorders, psychotic disorders and acute stress.

In adolescents, autogenic training has been believed to be able to overcome emotional problems and behavioral problems (Klott, 2013). Teenagers have good imagination, therefore it is very easy to change unpleasant situations into pleasant ones. For adolescents with emotional problems, autogenic training is a process of self-reflection in increasing self-awareness which can help increase adolescent independence. Various studies on the effectiveness of autogenic training in adolescents are still very limited. Therefore, this systematic review aims to analyze the benefits of autogenic training in adolescents.

RESEARCH METHODS

The method used in this study is a literature review which begins by determining PICO (Population, Intervention, Comparison and Outcome). The population determined is teenagers,

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the intervention determined is Autogenic Training. In this study, the intervention was not compared with other interventions and all outcomes will be looked at to make the literature search richer. A literature search was carried out systematically through eight databases, namely ClinicalKey, EBSCOhost, EMBASE, ProQuest, Science Direct, Scopus, Oxford Journals, Pubmed and Google Scholar using the keywords Autogenic Training, Autogenic Relaxation, Child, and Adolescent. The search for articles was limited according to predetermined inclusion and exclusion criteria. The inclusion criteria in this article are: English language research articles, research conducted on adolescents with publication years ranging from 1992-2022. The exclusion criteria used are articles that cannot be accessed in full text and research articles.

From the database, 8,105 articles were found which were then limited according to the inclusion and exclusion criteria, then the articles were assessed for relevance based on the title and abstract. The next stage, the researcher read all 14 articles. There were 4 duplicate articles, so the total number of articles analyzed was 10 articles. All articles that were obtained were then reviewed using *the Joanna Briggs Institute* (JBI) *critical appraisal tools* . All articles were declared good so they could be included in this systematic review.

RESULT

The results of the study regarding the benefits of autogenic training in adolescents can be seen in table 1.

No	Author/Year	Article Title	Objective	Method	Sample	Results
1	Elise E. Labbe 1995 Alabama	Treatment of Childhood Migraine with Autogenic Training and Skin Temperature Biofeedback: A Component Analysis	Assessing the potential of skin temperature biofeedback components in the treatment of migraine in adolescents	RCT	30 teenagers (7-18 years) Divided into 3 groups (skin temperature biofeedback with autogenic relaxation, autogenic relaxation, and control)	Skin temperature biofeedback therapy with autogenic relaxation or autogenic relaxation only reduces the frequency and duration of migraines. Headache intensity did not decrease significantly
2	Joyce M. Engel, Ph.D., Michael A. Rapoff, Ph.D. and Alice Rogot Pressman, MS 1992 Kansas	Long-term Follow-up of Relaxation Training for Pediatric Headache Disorders	Assessing the long-term effects of relaxation training in adolescents with headache disorders	Quasi Experiment	17 teenagers Divided into 3 groups (Autogenic relaxation, progressive relaxation, autogenic + progressive relaxation,	Relaxation exercises are effective for long-term treatment (frequency and severity) of migraine, tension and mixed headac

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					and control)	hes in adolescence. produces other benefits such as stress management, sleep induction and increased exercise capacity
3	Dina Fithriana, Eva Marvia, Ageng Abdi Putra 2016 Indonesia	Comparison of Providing Autogenic Relaxation Therapy and Aromatherapy on Reducing the Level of Menstrual Pain (Dysmenorrhea)	Analyzing the comparison of providing aromatherapy and autogenic relaxation therapy to reduce the level of menstrual pain	pre-experimental pre-post test	Sample 30 (12-15 years)	Autogenic relaxation therapy has a stronger effect on reducing menstrual pain when compared to providing aromatherapy to adolescents
4	Lutz Goldbeck and Katharina Schmid 2003 German	Effectiveness of Autogenic Relaxation Training on Children and Adolescents with Behavioral and Emotional Problems	To determine the effectiveness of autogenic relaxation training in adolescents with aggressive, impulsive or attention deficit disorders	RCT	50 children (6-15 years)	Autogenic relaxation training had no effect on somatic complaints, but significantly reduced behavioral and emotional symptoms
5	Shin Youjin, Kim Sungjae 2022 Korea	The Effects of Autogenic Training on Stress Response, Self-control and Internet Addiction of Adolescent Internet Addiction Risk Group	Examining the effect of using autogenic training as an intervention method on adolescents at risk of internet addiction	Quasi Experiment	46 teenagers Divided into 3 groups (24 experimental, 22 control)	Autogenic training is an effective intervention method to reduce stress responses, increase self-control, and reduce the level of internet addiction
6	Tracey Atkins & Ben Hayes 2019 English	Evaluating the impact of an Autogenic Training relaxation intervention on levels of anxiety among adolescents in school.	Looking at the impact of group-based Autogenic Training relaxation interventions on adolescent anxiety levels at school	mixed methods	Quantitative: 66 teenagers (14-15 years old) Divided into 2 groups (intervention and control) Qualitative: 12 teenagers	The Autogenic Training relaxation intervention significantly reduced anxiety levels among adolescents
7	Endang Lestiawati, Anita Liliana	Progressive and Autogenic Muscle	To determine the effectiveness	quasi experiment	51 teenagers Divided into 3	Progressive muscle relaxation and

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	2019 Indonesia	Relaxation to Reduce Adolescent Stress at SMKN 1 Depok Sleman Yogyakarta	of progressive and autogenic muscle relaxation training on stress in adolescents		groups (17 progressive muscle relaxation, 17 autogenic relaxation, 17 control)	autogenic relaxation are effective in reducing stress scores in adolescents
8	Yulia Fitriani, Asmadi Alsa 2016 Indonesia	Autogenic Relaxation to Improve Emotion Regulation in Middle School Students	Empirically testing the effect of relaxation training autogenic to increased emotional regulation	quasi experiment	35 students Divided into 2 groups (16 intervention and 19 control)	Autogenic relaxation can significantly improve emotional regulation in junior high school students
9	Hairul Anuar Hashim, Hazwani Hanafi, and Ahmad Yusof 2011 Malaysia	The Effects of Progressive Muscle Relaxation and Autogenic Relaxation on Young Soccer Players ' Mood States	Comparing the effects of progressive muscle relaxation and autogenic relaxation techniques on the mood of young soccer players	RCT	16 teenagers (Age 13-15 years)	Both techniques significantly reduce confusion, depression, fatigue and tension
10	Juan M. Guiote, Vanessa Lozano, Miguel Ángel Vallejoa, and Blanca Mas 2022 Spanish	Autogenic meditation training in a randomized controlled trial: A framework for promoting mental health and attention regulation in children	Testing the effectiveness of autogenic meditation training as a strategy for increasing attention, reducing anxiety and promoting mental health	RCT	70 teenagers (Mage =9.77) Divided into 3 groups (Autogenic meditation training, nature reading training and control group)	Autogenic meditation training is an effective method in increasing attention, reducing anxiety, and promoting better mental health in adolescents

Table 1. Summary of literature review results.

The results of a search for database articles from 1992-2022 yielded 10 articles, namely one article from Embase, one article from Sciencedirect, two articles from Scopus, one from Pubmed, three from Google Scholar, and two articles from hand searching. Based on the year of publication, the last or most recent article is the article from Guiote et al. in 2022 while the oldest article is the article from Engel et al. in 1992. The articles that have been collected currently have almost the same research design, namely experiments and most of them are RCTs. From the entire article, a total sample of 411 teenagers with an age range of 6-18 years was obtained, divided into several intervention groups and control groups (without intervention). The interventions carried out included nine articles about autogenic training (Engel et al., 1992; Labbe, 1995; Goldbeck & Schmid, 1994; Fitriani & Alsa, 2015; Fithriana et al., 2016; Atkins & Hayes, 2019; Lestiawati & Liliana , 2019; Sungjae & Youjin, 2020; Hashim et al., 2011), one article on autogenic meditation training (Guiote et al), one article on the combination of skin

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temperature biofeedback and autogenic training (Labbe, 1995), one article on progressive relaxation (Engel et al. al., 1992), one reading training article (Guiote et al., 2022), two progressive muscle relaxation articles (Lestiawati & Liliana, 2019; Hashim et al., 2011), and one aromatherapy article (Fithriana et al., 2016). In accordance with the aim of the systematic review, this article will focus on providing autogenic training interventions. The results of the study show that autogenic training can be applied to teenagers who are physically and psychologically ill. Three studies (Labbe, 1995; Engel et al., 1992; Fithriana et al., 2016) stated that autogenic training can be applied to adolescents with pain, such as migraines, other headaches and dysmenorrhea. In migraine conditions, it is stated that this therapy does not significantly reduce the intensity but is significant in reducing the frequency and duration of migraines. In the condition of dysmenorrhea, autogenic training is said to be able to reduce the level of pain from moderate pain to mild pain.Psychological problems, especially emotional and behavioral disorders in adolescents, can include aggression, impulsivity, attention deficit, anxiety, tension, stress and depression. Goldbeck & Schmid, (1994) stated that providing autogenic training therapy to adolescents can reduce behavioral and emotional symptoms. Other benefits that can be felt are being able to increase attention (Guiote et al., 2022), reduce anxiety (Guiote et al., 2022; Atkins & Hayes, 2019), and reduce stress levels (Sungjae & Youjin, 2020; Lestiawati & Liliana, 2019).

Based on the 8 trials that have been carried out in this research, it can be concluded that in segmentation for pattern identification using texture analysis and shape analysis, the results of leaf identification using the K-Means clustering method can be carried out from 8 trials without any identification errors.

Meanwhile, the aim of improving mental health can be exemplified by the application of autogenic training to young soccer players so that they are always in a good mood so they can compete well (Hashim et al., 2011). Apart from that, this therapy is also felt to be able to improve emotional regulation in adolescents (Fitriani & Alsa, 2015), increase self-control abilities (Sungjae & Youjin, 2020), and as a medium for promoting better mental health (Guiote et al., 2022).

Autogenic training according to Nursing Interventions Classification (2018) is an alternative therapy to help clients by giving self-suggestions about feelings of heaviness and warmth with the aim of encouraging relaxation. Relaxation is a condition of the body in a calm state resulting from a conscious state. Various relaxation techniques are believed to be able to reduce pain, however the effectiveness of autogenic training for controlling pain is inconsistent (Cooney & Colwell, 2021). Labbe's (1995) study in Alabama reported that in adolescents with migraines this therapy did not significantly reduce the intensity of pain, but could reduce the frequency and duration.

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Reducing psychological problems in teenagers cannot be separated from the aim of autogenic training . The Centers for Disease Control and Prevention states that many teenagers have fears and worries that develop over time for many reasons, where these fears and worries form conditions of anxiety and depression (CDC, 2022). As many as 9.4% of children or around 5.8 million children aged 3-17 years have received a diagnosis of anxiety. Several literatures show the use of stress management techniques in children and adults that can be used to reduce stress and anxiety. Engel et al. (1992) said that in their study on the long-term effectiveness of autogenic training in adolescents with headaches, not only did the frequency and severity of headaches decrease, but with autogenic training adolescents were able to experience other benefits such as stress management. Kanji & Ernst (2000) in a systematic review study on stress and anxiety in general were unable to provide firm conclusions about autogenic training, this was due to a flaw in the testing method. In contrast to research by Atkins & Hayes (2019) which was conducted on teenagers at school, the results of the study stated that the autogenic training intervention was able to significantly reduce teenagers' anxiety levels. This is supported by research by Guiote et al. (2022) where autogenic meditation training was able to reduce anxiety levels in adolescents. Another benefit of autogenic training in adolescents is to reduce behavioral and emotional symptoms including increasing attention (Guiote et al., 2022). In the process of autogenic training, sustained attention to body parts can lead to concentration, so this supports the notion that autogenic training supports concentration (Kanji, 2000). Increased attention is also related to the activity of self-regulation processes that are formed from autogenic states into better attitudes. Other research states that carrying out autogenic training can make teenagers develop inner relaxation and self-control over negative responses. Adolescents with low self-defense and high levels of stress tend to have non-adaptive coping (Agustini et al, 2019). For example, stressful conditions in school teenagers result in teenagers looking for ways to eliminate or avoid stress by surfing the internet, which ultimately results in a condition of addiction. From this condition, teenagers are basically invited to manage their stress response so that it does not have an impact on negative things such as internet addiction (Sungjae & Youjin, 2020).

In line with research by Fitriani & Alsa (2015) where autogenic training was able to increase emotional regulation in students by 34.9%. Emotional regulation is a person's ability to express one's emotions in the form of good and bad behavior and feelings. The ability to manage emotions in adolescents is still unstable, many factors influence both internal and external. With autogenic training, it is hoped that teenagers will be able to be more relaxed in controlling their emotions and behavior and can build their own strength so that they are not influenced by external factors (Klott, 2013).

Autogenic training also has a role in promoting mental health, namely acting as a barrier to the occurrence of

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psychopathology (Guiote et al., 2022). We know that autogenic training has a role in dealing with teenagers with behavioral and emotional problems (Goldbeck & Schmid, 1994), therefore prevention programs using this technique are considered good enough to be implemented. This is also supported by research by Hashim et al., (2011) where autogenic training was able to improve the mood of young soccer players.

CONCLUSION

From this study it can be concluded that autogenic training provides many benefits for teenagers, both healthy and sick, namely: reducing the frequency and duration of migraines or other headaches, reducing pain, reducing anxiety or tension, reducing stress responses, increasing attention, increasing ability. controlling emotional regulation or self-control, maintaining a good mood, and as a medium for promoting mental health

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