



## The Effectiveness of Autogenic Training on Stress, Anxiety, and Quality of Life Among Elderly : A Systematic Review

Puji Setya Rini<sup>1,2</sup>, Santhna Letchmi Panduragan<sup>1</sup>, Fatimah Yahya<sup>1</sup>, Hafizah Che Hassan<sup>1</sup>, Dewi Pujiana<sup>2</sup>

<sup>1</sup>School of Nursing & Applied Science, Lincoln University Collage, Malaysia.

<sup>2</sup>Nursing Science Study Program, UMAD, Palembang, Indonesia.

Email : pujipujisetyarini@gmail.com

### Abstract

**Introduction:** Older adults are vulnerable to increased stress and anxiety due to physiological, psychosocial, and spiritual changes experienced with aging. These conditions negatively impact the quality of life (QoL). Autogenic Training (AT), a self-suggestion-based relaxation technique, is known to activate the body's relaxation response and reduce psychological tension. However, the effectiveness of AT on stress, anxiety, and quality of life in the elderly still requires comprehensive scientific evidence to be established. **Methods:** This study used a systematic review design based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines. Articles were searched for in the PubMed, ScienceDirect, and Google Scholar databases using the keywords: "Autogenic Training," "Stress," "Anxiety," "Quality of Life," and "Elderly." Of the 287 articles identified, 48 were reviewed in full text, 12 met the methodological criteria, and 5 were not RCTs, were not experimental studies, and were not studies literature. Seven open-access articles (2020–2025) were included in the final analysis. **Results:** Seven studies showed consistent results that Autogenic Training is effective in reducing stress and anxiety and improving the quality of life of the elderly. **Conclusion:** Autogenic Training has been proven effective in reducing stress and anxiety and improving the quality of life of the elderly through physiological relaxation and psychological regulation mechanisms. This intervention is recommended as a non-pharmacological complementary therapy in gerontological nursing practice and for promoting mental health in older adults.

Academic Editor: Yohanes Andy Rias

Received: 05 Desember 2025

Accepted: 08 January 2026

Published: 16 February 2026

**Publisher's Note:** HNP stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



**Copyright:** © 2026 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

**Keywords:** Autogenic Training, Stress, Anxiety, Quality of Life, Elderly

### Introduction

The phenomenon of global population aging has become one of the greatest public health challenges of the 21st century. According to the World Health Organization (WHO), the number of older adults worldwide will double from 1 billion in 2020 to 2.1 billion by 2050. The increase in global life expectancy has led to a

growing number of older adults. As individuals age, they experience various biological, psychological, and social changes that can disrupt their balance of life and reduce their quality of life (QOL). Conditions such as the loss of a spouse, decline in physical function, social isolation, and an increase in chronic diseases have the potential to cause psychological stress, which can lead to increased anxiety and a decline in the quality of life (Subbiah et al., 2025).

Chronic stress and anxiety experienced by older adults can lead to a weakened immune system, cognitive impairment, sleep disturbances, and an increased risk of cardiovascular diseases. In the long term, these conditions cause a decline in health-related quality of life (QoL). A low quality of life in the elderly is often characterized by feelings of helplessness, loss of meaning in life, and decreased satisfaction with daily life (Ramirez-Garcia et al., 2020). Therefore, promotional and preventive efforts to maintain the psychological well-being of older adults are an important focus in public health and gerontological nursing practices.

To date, pharmacological approaches, such as antidepressants or anxiolytics, have often been used to treat anxiety and stress disorders. However, long-term side effects, dependence, and high costs make this therapy less ideal for older adults. As an alternative, various non-pharmacological interventions have been developed to improve emotional regulation and reduce psychological stress, one of which is Autogenic Training (AT).

Autogenic Training is a relaxation technique developed by Johannes Heinrich Schultz in 1932. AT uses the principles of autosuggestion and directed concentration to achieve a deep state of physiological and mental relaxation. Participants are trained to focus their attention on bodily sensations, such as warmth, heaviness, and rhythmic breathing, which aims to normalize autonomic nervous system activity, decrease sympathetic activity, and increase parasympathetic activity (Breznoscakova et al., 2023).

AT consists of six basic exercises: body heaviness, warmth, heart regulation, breathing regulation, abdominal warming, and forehead cooling. This combination of exercises produces a deep relaxation effect, increases peripheral blood flow, stabilizes blood pressure, and lowers stress hormone levels, such as cortisol (Seo & Kim, 2019).

In recent decades, Autogenic Training has been increasingly applied in clinical and non-clinical contexts, including for older adults. A study by Subbiah et al (2025) showed that four weeks of AT intervention reduced depression levels by 60% and anxiety by 41% in a community-based group of older adults. This study confirms that autosuggestion-based relaxation is effective in improving emotional stability, sleep quality, and life satisfaction in the elderly (Subbiah et al., 2025). Similar results were obtained in a systematic study by Ramirez Garcia et al. (2020), which showed that AT plays an important role in improving psychological well-being and quality of life in patients with chronic conditions, including the elderly. This technique strengthens body awareness, reduces perceptual stress, and improves psychological self-regulation (Ramirez-Garcia et al., 2020).

In addition to psychological benefits, AT provides beneficial physiological effects. Neurophysiological research has shown that AT training can reduce sympathetic nervous system activity, increase heart rate variability, and stimulate areas of the brain associated with relaxation and emotional balance (Breznoscakova et al., 2023; Litwic-Kaminska et al., 2022). Furthermore, Rivera et al. (2021) showed that AT participants during the COVID-19 pandemic experienced significant improvements in their perception of physical and psychological health, as well as improvements in social skills and interpersonal relationships. This confirms that AT is not only a physiological relaxation technique but also a means of psychotherapy that supports the mental and social recovery of the elderly (de Rivera et al., 2021; Sutrisno & Nursalam, 2022).

From a gerontological nursing perspective, Autogenic Training offers a cost-effective, safe, and self-directed intervention solution for implementation in community settings. According to Caponnetto et al. (2019), a 16-week AT-based stress management program was able to increase motivation, reduce emotional exhaustion (burnout), and improve the quality of life of medical workers in a population with psychological pressures similar to those of the elderly. This mechanism can be generalized to increase the self-efficacy of older adults in coping with everyday stress (Caponnetto et al., 2019).

Although empirical evidence shows the significant benefits of AT on stress, anxiety, and quality of life, there have not been many studies that systematically integrate these results in the context of the elderly population. Based on the results of these studies, it can be concluded that Autogenic Training is a promising intervention for reducing stress and anxiety and improving the quality of life in the elderly population. However, a

systematic review is still needed to consolidate the existing empirical evidence and evaluate the extent of AT's effectiveness in the specific context of older adults. Therefore, this study was conducted to review and analyze the latest scientific evidence regarding the effectiveness of Autogenic Training on stress, anxiety, and quality of life in the elderly.

## Methods

This Systematic Review was compiled based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021). The systematic review method was used to collect, assess, and synthesize relevant research results related to the effectiveness of Autogenic Training (AT) on stress, anxiety, and quality of life in the elderly. This approach was chosen to ensure that the analysis was comprehensive, transparent, and replicable by other researchers (Breznoscakova et al., 2023).

The article search process was conducted online using several international scientific databases, namely: ScienceDirect, PubMed, and Google Scholar. The keywords used in the search process were: "Autogenic Training" AND "Stress" AND "Anxiety" AND "Quality of Life" AND 'Elderly' OR "Older Adults" OR "Geriatric".

The search strategy was designed following the PICO (Population, Intervention, Comparison, Outcome) framework as follows:

Population (P): Elderly or individuals aged  $\geq 60$  years.

Intervention (I): Autogenic Training (AT) or Autogenic Relaxation Technique.

Comparison (C): No intervention or use of other relaxation interventions.

Outcome (O): Changes in stress levels, anxiety, and quality of life.

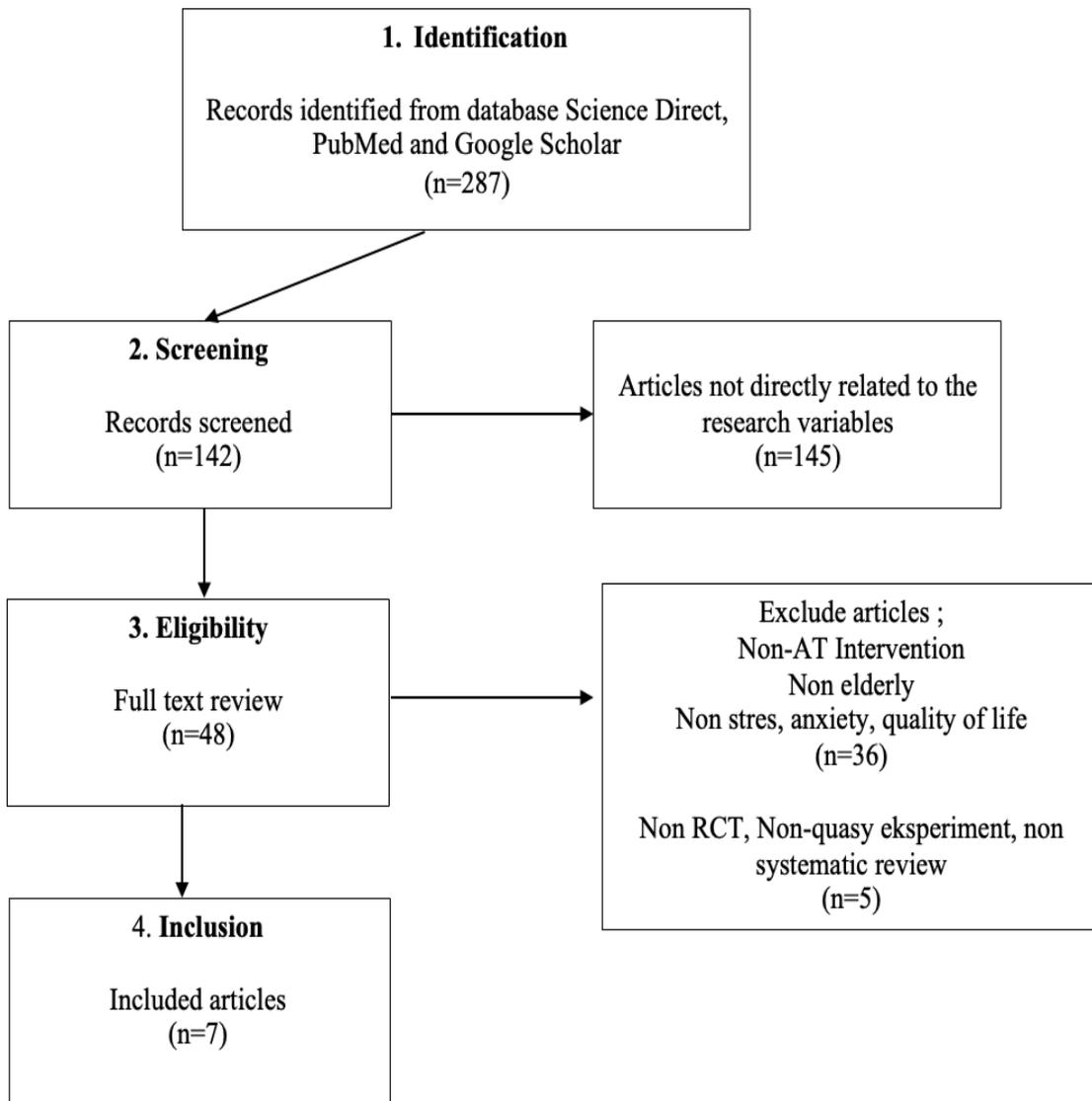
The search was limited to articles published between 2000 and 2025 with full access (open access). All data obtained were stored and managed using the Mendeley Reference Manager software to facilitate citation and eliminate article duplication. This approach follows the principle of a comprehensive search strategy, as described in the systematic protocol by Breznoscakova (2023) (Breznoscakova et al., 2023).

Articles were included if they met the following criteria: (1) articles discussing Autogenic Training or Autogenic Relaxation as the primary intervention; (2) the study population consisted of elderly people ( $\geq 60$  years) or adult populations with high levels of stress and anxiety; (3) measuring stress, anxiety, or quality of life as the primary outcome variables; (4) publications between 2020 and 2025, with open access; and (5) study types: Randomized Controlled Trials (RCT), quasi-experimental, or systematic review.

Studies were excluded if they: (1) were not empirical research results (such as editorials or opinions); (2) involved non-human populations or did not include psychological data; or (3) used mixed intervention methods that did not separate the effects of AT. These criteria were established to ensure that only studies with strong and relevant designs were included in the analysis (Subbiah et al., 2025).

## Results

The literature selection process in this study followed four stages in accordance with the PRISMA 2020 guidelines. In the Identification stage, articles were searched for in the main databases, namely ScienceDirect, PubMed, and Google Scholar, using the keywords “Autogenic Training,” “Stress,” “Anxiety,” “Quality of Life,” and “Elderly,” resulting in 287 relevant articles (including duplicates). Next, in the Screening stage, duplicates were removed, and the relevance of the titles and abstracts was examined, leaving 142 articles that were considered relevant to the research focus. The Eligibility stage was carried out by reviewing the full text of the remaining articles based on the criteria of the elderly population, the main intervention of Autogenic Training, and the results of stress, anxiety, and quality of life measurements using valid instruments. From this process, 48 articles were further reviewed, and 12 articles were found to meet the criteria. However, five articles were found to be methodologically flawed as they did not use a research design (RCT, quasi-experimental, systematic review). The final stage, Inclusion, resulted in seven open-access articles (2020–2025) that were suitable for analysis.



**Figure 1. PRISMA 2020 Flow Diagram**

Source : (Page et al., 2021)

**Table 1. Result of Article Analysis**

No	Author	Method	Result
1	Subbiah et al., 2025	A quasi-experimental study involving 120 elderly individuals experiencing mild to moderate depression and anxiety. The Autogenic Relaxation Training intervention was administered	The results showed a significant reduction in depression of 60.47% and anxiety of 41.80%, as well as a significant improvement in emotional well-being and quality of life. AT is recommended as an effective and safe non-pharmacological therapy for the elderly.

			for 4 weeks, 30 minutes per session, 3 times a week.
2	Breznoscakova et al., 2023	et	Systematic Review of AT studies on mental disorders (depression, anxiety, PTSD). Data was collected from 18 scientific publications using narrative analysis.
			It was found that AT decreased sympathetic nervous activity, improved <i>autonomic balance</i> , and improved emotional regulation. This intervention is effective as a complementary therapy to reduce stress and anxiety in elderly and adult populations.
3	Yumkhaibam et al., 2023		A meta-analysis of 29 RCT studies (n > 1000 participants) on the effectiveness of AT in reducing anxiety.
			The results show that AT has a large effect (Cohen's d > 0.8) on reducing anxiety and stress, with consistent results in the elderly, young adult, and chronic patient groups. It is concluded that AT is an effective relaxation therapy across populations.
4	Ramirez-Garcia et al., 2020	et	Systematic Review (PRISMA) of RCTs evaluating AT in patients with chronic physical illness.
			The results showed a significant improvement in psychological well-being and quality of life, as well as a reduction in stress and anxiety symptoms. AT was identified as an effective complementary therapy for elderly patients with chronic medical conditions.
5	Munir, 2020		Cross-sectional pre-post study on elderly flood victims experiencing post-traumatic stress.
			After receiving AT therapy for two weeks, stress levels decreased significantly (p=0.008). Participants reported increased emotional calmness and the ability to control negative thoughts.
6	Sutrisno & Nursalam, 2022	&	Quasi-experimental pre-post test on 20 elderly hypertensive patients.
			The combined intervention of <i>Benson relaxation</i> and AT for 2 weeks resulted in a decrease in blood pressure, stress, and anxiety (p<0.001). This shows that AT has positive physiological and psychological effects on the elderly.
7	de Rivera et al., 2021		Cross-sectional survey of 140 participants (aged 22–71 years) during the COVID-19 pandemic who attended online AT sessions.
			Approximately 88% of participants reported improved psychological health and social relationships. AT helped maintain emotional stability during the

---

stressful times of the pandemic and increased feelings of self-control.

---

Based on the seven studies above, all research shows that Autogenic Training consistently has a positive effect on reducing stress and anxiety and improving quality of life, both in elderly populations and adults with certain psychological or medical conditions. Experimental studies, such as those by Subbiah et al. (2025) and Sutrisno and Nursalam (2022), show significant physiological results (decreased blood pressure and cortisol levels), while systematic review and meta-analysis studies, such as Breznoscakova (2023) and Yumkhaibam (2023), strengthen the scientific evidence by combining results across populations. Overall, consistent results indicate that AT is a safe, affordable, and effective non-pharmacological intervention for improving mental well-being and quality of life in the older adults (Breznoscakova et al., 2023; Subbiah et al., 2025; Sutrisno & Nursalam, 2022; Yumkhaibam et al., 2023).

## Discussion

The results of the synthesis of the seven studies analyzed show that Autogenic Training (AT) has a significant effect on reducing stress and anxiety, as well as improving quality of life (QoL) in the elderly population. In general, all studies showed consistent results that the application of AT as a non-pharmacological relaxation intervention can stimulate the body's relaxation response through interrelated physiological and psychological mechanisms. These effects are demonstrated by a decrease in sympathetic nervous system activity, an increase in parasympathetic balance, and the emergence of emotional calmness, which contribute to a reduction in stress and anxiety levels. In addition, AT has been proven to improve mental balance, increase feelings of self-control, and strengthen the ability to cope with psychosocial pressures often experienced by older adults. With reduced stress and anxiety, there is a significant improvement in various dimensions of quality of life, including physical, psychological, social, and spiritual, as found in the results of open-access Scopus research from 2020 to 2025.

Autogenic Training (AT) has been shown to have a strong association with reduced stress levels in older adults through integrated physiological and cognitive mechanisms. Several studies have shown that autogenic training can trigger a relaxation response that is opposite to the stress response, namely, by decreasing sympathetic nervous system activity and increasing parasympathetic nervous system activity. The results of a study by Subbiah et al. (2025) showed that four weeks of Autogenic Relaxation

Training resulted in a significant reduction in stress and depression levels in older adults, followed by an increase in emotional well-being and quality of life (Subbiah et al., 2025). Similar findings were obtained by Munir (2020), who reported a significant decrease in stress levels ( $p=0.008$ ) in elderly disaster victims after attending AT sessions for two weeks (Munir, 2020). In addition to psychological effects, Sutrisno and Nursalam (2022) proved that AT affects blood pressure reduction and physiological stress response through increased parasympathetic activity (Sutrisno & Nursalam, 2022). Overall, these results show that AT can change the body's stress response to a calm, controlled, and adaptive state, which is beneficial for maintaining emotional stability and mental health in the elderly.

In addition to reducing stress, Autogenic Training (AT) has been shown to have a significant effect on reducing anxiety in older adults. Through the mechanisms of self-suggestion and body awareness, AT helps individuals achieve a calm and stable state by re-regulating their thought patterns, breathing, and physiological responses to stress. The results of a meta-analysis by Yumkhaiban et al (2023) show that AT has a large effect (Cohen's  $d > 0.8$ ) in reducing anxiety in various age groups, including the elderly, patients with chronic diseases, and healthy populations (Yumkhaibam et al., 2023). These findings are reinforced by Breznoscakova (2023), who found that autogenic training reduces sympathetic nervous activity and improves autonomic balance, thereby suppressing anxiety symptoms and improving emotional regulation (Breznoscakova et al., 2023). Ramirez Garcia et al. (2020) also support these findings, providing evidence that AT improves psychological well-being in patients with chronic physical illnesses by reducing mental tension and anxiety (Ramirez-Garcia et al., 2020). Thus, it can be concluded that Autogenic Training reduces anxiety through a combination of cognitive effects (self-regulation and positive autosuggestion) and physiological effects (activation of the parasympathetic system and reduction of stress hormones), which synergistically foster a sense of calm, self-control, and emotional balance in the elderly.

The reduction in stress and anxiety achieved through Autogenic Training (AT) directly contributes to an improvement in quality of life (QoL) in older adults. Theoretically, chronic stress and anxiety can reduce the quality of life by disrupting physiological balance, reducing sleep quality, decreasing social motivation, and affecting overall physical and mental health. Therefore, when AT reduces stress and anxiety, there is an automatic improvement in various dimensions of ((QoL) physical, psychological, social, and spiritual. The

results of a study by de Rivera et al. (2021) showed that 88% of participants reported improved psychological health and social relationships after participating in AT exercises during the COVID-19 pandemic (de Rivera et al., 2021).

This intervention helps individuals maintain emotional stability and strengthens their interpersonal skills in dealing with stressful situations. Similar findings were obtained by Ramirez Garcia et al. (2020), who showed that AT significantly improved emotional and social well-being in elderly patients with chronic diseases by strengthening coping mechanisms and self-control (Ramirez-Garcia et al., 2020). In addition, Subbiah et al. (2025) found an increase in quality of life (QoL) scores after four weeks of AT intervention, along with a significant decrease in symptoms of depression and anxiety (Subbiah et al., 2025). The link between reduced stress and anxiety and improved quality of life can be explained through the mechanism of psychophysiological homeostasis, in which AT helps restore the balance between the body and mind. As stress and anxiety decrease, older adults experience increased energy, better sleep, and more harmonious social relationships, all of which contribute to positive perceptions of life. Thus, it can be concluded that Autogenic Training improves the quality of life not only by reducing negative psychological symptoms but also by strengthening the emotional, social, and spiritual aspects of well-being, which are important indicators in the lives of older adults.

This study has several limitations that need to be considered. The number of studies that met the inclusion criteria was relatively small, namely nine open access articles from the period 2020–2025, so the generalization of the results is still limited. Varied research designs and the use of different measuring instruments caused methodological heterogeneity that could affect the consistency of the findings. In addition, most studies used subjective assessment instruments, which had the potential to cause perception bias in elderly respondents. Focusing only on English-language articles may also cause publication bias. Furthermore, most studies did not report long-term follow-ups, so the sustainability effects of Autogenic Training on stress, anxiety, and quality of life have not been fully tested. However, the existing findings still provide strong evidence that Autogenic Training is an effective non-pharmacological intervention for improving the psychological well-being and quality of life of older adults.

## Conclusions

Based on a systematic review of seven open-access research articles analyzed in the period 2020–2025, it can be concluded that Autogenic Training (AT) is an effective and safe non-pharmacological intervention for reducing stress and anxiety levels while improving quality of life in the elderly population.

Physiologically, Autogenic Training stimulates the activation of the parasympathetic nervous system and decreases the activity of the sympathetic nervous system, resulting in a relaxation response in the form of decreased blood pressure, heart rate, and secretion of stress hormones such as cortisol. These physiological effects play an important role in reducing chronic stress often experienced by older adults due to biological and psychosocial factors.

Psychologically, AT increases self-awareness and self-regulation, enabling individuals to better control their emotions, reduce negative thoughts, and strengthen their ability to cope with external stressors. This process has a significant impact on reducing anxiety, as evidenced by the results of experimental studies and meta-analyses in older adult and adult populations with mild to moderate psychological disorders.

Holistically, the reduction of stress and anxiety through AT has direct implications for improved quality of life in the physical, psychological, social, and spiritual dimensions. Elderly people who regularly participate in AT exercises show increased calmness, better sleep, more harmonious social relationships, and better self-control in their daily lives.

Therefore, Autogenic Training can be recommended as an effective relaxation-based complementary therapy to be applied in gerontological nursing practice and elderly mental health promotion programs, as it has been proven to enhance overall well-being and quality of life.

## References

- Breznoscakova, D., Kovanicova, M., Sedlakova, E., & Pallayova, M. (2023). Autogenic Training in Mental Disorders: What Can We Expect? *International Journal of Environmental Research and Public Health*, 20(5), 4344. <https://doi.org/10.3390/ijerph20054344>
- Caponnetto, P., Magro, R., Inguscio, L., & Cannella, M. C. (2019). Quality of life, work motivation, burn-out and stress perceptions benefits of a stress management program by autogenic training for emergency room staff: A pilot study. *Mental Illness*, 10(2), 67–70. <https://doi.org/10.4081/mi.2018.7913>

- de Rivera, L., Ozamiz-Etxebarria, N., Dosil-Santamaría, M., & de Rivera-Monterrey, L. (2021). Autogenic Training Improves the Subjective Perception of Physical and Psychological Health and of Interpersonal Relational Abilities: An Electronic Field Survey During the COVID-19 Crisis in Spain. *Frontiers in Psychology, 12*. <https://doi.org/10.3389/fpsyg.2021.616426>
- Litwic-Kaminska, K., Kotyśko, M., Pracki, T., Wiłkość-Dębczyńska, M., & Stankiewicz, B. (2022). The Effect of Autogenic Training in a Form of Audio Recording on Sleep Quality and Physiological Stress Reactions of University Athletes—Pilot Study. *International Journal of Environmental Research and Public Health, 19*(23), 16043. <https://doi.org/10.3390/ijerph192316043>
- Munir, M. (2020). The Effect of Autogenic Relaxation Therapy on Post-Flood Stress in Communities in Widang District, Tuban District. *Jurnal Midpro, 12*(1), 5–9. <https://doi.org/10.30736/md.v12i1.137>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ, 372*, n71. <https://doi.org/10.1136/bmj.n71>
- Ramirez-Garcia, M. P., Leclerc-Loiselle, J., Genest, C., Lussier, R., & Dehghan, G. (2020). Effectiveness of autogenic training on psychological well-being and quality of life in adults living with chronic physical health problems: a protocol for a systematic review of RCT. *Systematic Reviews, 9*(1), 74. <https://doi.org/10.1186/s13643-020-01336-3>
- Seo, E., & Kim, S. (2019). Effect of Autogenic Training for Stress Response: A Systematic Review and Meta-Analysis. *Journal of Korean Academy of Nursing, 49*(4), 361. <https://doi.org/10.4040/jkan.2019.49.4.361>
- Subbiah, S., Ethiraj, T., Rajendran, S. S., Mathankumar, V., Marudan, A., Marianathan, A., & Balasubramanian, S. (2025). Autogenic Relaxation: A Gateway to Improve Mental Health for the Elderly with Depression and Anxiety. *Journal of Pharmacy and Bioallied Sciences, 17*(Suppl 1), S694–S696. [https://doi.org/10.4103/jpbs.jpbs\\_1618\\_24](https://doi.org/10.4103/jpbs.jpbs_1618_24)
- Sutrisno, S., & Nursalam. (2022). The Effect of Benson and Autogenic Relaxation Therapy on Sleep Quality, Blood Pressure and Anxiety of Hypertension Patients. *Journal Of Nursing Practice, 6*(2), 214–220. <https://doi.org/10.30994/jnp.v6i2.379>

---

Yumkhaibam, A. H., Farooque, S., & Bhowmik, S. K. (2023). EFFECTIVENESS OF AUTOGENIC TRAINING ON REDUCING ANXIETY DISORDERS: A COMPREHENSIVE REVIEW AND META-ANALYSIS. *European Journal of Physical Education and Sport Science*, 10(3). <https://doi.org/10.46827/ejpe.v10i3.5059>