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The Effect of Benson Relaxation Technique on Fatigue among Chronic Disease Patients: A Systematic Literature Review

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Abstract

Introduction: Fatigue often afflicts patients with chronic illnesses, adversely affecting their quality of life and limiting their ability to execute daily activities. The Benson relaxation technique, a non-pharmacological method, seeks to reduce weariness by stimulating the body's inherent relaxation response. Evidence suggests that this therapy is a viable, safe, and effective method for mitigating fatigue in those with chronic illnesses

Objective: This study aims to assess the efficacy of the Benson relaxation technique in mitigating fatigue among individuals with chronic illnesses.

Method: A systematic review was conducted across four databases (PubMed, ProQuest, JSTOR, and Garuda) to identify studies published between 2020 and 2024 examining the application of the Benson relaxation technique among adults aged 18 to 65 with chronic illnesses. Fatigue reduction served as the primary outcome, assessed using validated instruments such as the FSS, MFIS, RPFS, FACIT Fatigue, and CFS. Three independent reviewers performed the search, screening, and quality appraisal following PRISMA guidelines and the CASP Checklist.

Result: An analysis of 14 clinical trials with 813 participants demonstrated that the Benson relaxation technique significantly alleviates fatigue in persons suffering from chronic conditions, including coronary heart disease, cancer, multiple sclerosis, and renal failure. The intervention boosts sleep quality, reduces anxiety, and improves general well-being. Enhanced efficacy was noted with extended durations (1–12 weeks) and when conducted bi-daily for 10–60 minutes, particularly when integrated with aromatherapy, music therapy, or deep breathing techniques.

Conclusion: The Benson relaxation technique has demonstrated efficacy in alleviating fatigue in persons with chronic illnesses. Consequently, nurses can include this method into non-pharmacological tiredness management strategies to enhance patients' overall quality of life.

Keywords: benson relaxation, chronic disease, fatigue

Introduction

Fatigue commonly affects individuals with chronic illnesses, often arising from the interplay of physical and psychological changes associated with these conditions. Goërtz et al. (2021) stated that individuals with chronic diseases tend to have low levels of physical activity, especially in recreational sports, and are more prone to depression and anxiety. As a result, they often experience body pain that interferes with daily activities and show higher scores in neuroticism, which includes anger, hostility, excessive self-consciousness, impulsivity, and emotional vulnerability (Goërtz et al., 2021). Chronic diseases often cause prolonged fatigue and sleep disturbances (Aditya Nugraha et al., 2018a). In addition, individuals with chronic illnesses often experience a diminished quality of life (Rosmiati et al., 2018).

Based on Nugraha statement (2018), Fatigue experienced by individuals with chronic illnesses can negatively impact and lower their overall quality of life (Aditya Nugraha et al., 2018b). This situation results in a decline in patients' capacity to perform everyday tasks and a drop in their work productivity (Kernder et al., 2021). The usual methods for managing fatigue in individuals with chronic illnesses typically include medication and physical therapy. However, relying on medication over an extended period can lead to potential side effects. Moreover, drug-based treatments often fall short in addressing the psychological components of fatigue, such as stress, anxiety, and sleep problems (Hulme et al., 2018).

There is a growing need for a safer and more comprehensive approach to help patients cope with fatigue more effectively. Fatigue commonly affects individuals with chronic illnesses, often arising from the interplay of physical and psychological changes associated with these conditions (Pangastuti et al., 2021). The core concept of this method lies in the body's innate capacity to counteract stress through the parasympathetic nervous system. Stimulating this system can help relieve muscle tension, reduce blood pressure, and improve sleep quality. According to Osman Ali et al. (2022), The Benson Relaxation Technique greatly decreases psychological alleviates stress and enhances sleep quality in older persons (Osman Ali et al., 2022). Adequate and restorative sleep is crucial for replenishing the body's energy and ensuring the normal functioning of the nervous and immunological systems (Franceschini et al., 2020). This aligns with findings from Ismail et al. (2024), which highlight that sleep quality has a strong influence on physical fatigue in older adults, with poor sleep being a major factor contributing to higher fatigue levels (Sasmita Ismail et al., 2024). To help enhance sleep quality, the Benson Relaxation Technique can be a practical option, particularly for patients with chronic conditions who need optimal recovery. One of its key strengths is its simplicity, patients can easily learn and practice it with clear, basic instructions. It requires no special tools or equipment, involves no additional costs, and is safe from side effects since it does not rely on medication or professional supervision (Eka Pujiastutik et al., 2024). Therefore, this method serves as an appealing alternative in caring for individuals with chronic illnesses. Its simplicity and low cost make it accessible to many patient groups, regardless of financial or resource limitations.

As awareness of holistic healthcare continues to increase, the Benson Relaxation Technique offers promising potential as a natural and sustainable way to manage fatigue. In this regard, Healthcare practitioners are integral to instructing and informing clients about its advantages and appropriate implementation. This relaxation method can be incorporated into comprehensive care plans that address not only physical rehabilitation but also stress reduction and better sleep quality. By adopting this holistic approach, patients can more effectively manage fatigue and experience an overall improvement in their quality of life.

Although pharmacological treatments and physical rehabilitation are commonly used to manage chronic illnesses, there is still a considerable demand for non-pharmacological approaches that are both safe and effective in addressing fatigue. The Benson Relaxation Technique provides a physiological and psychological method that can help patients manage fatigue naturally without harmful side effects. This highlights the importance of conducting more research to evaluate its effects on fatigue alleviation and improvement of quality of life. A deeper understanding of its mechanisms and benefits will enable healthcare professionals to integrate this technique into broader and more holistic care strategies for individuals with chronic conditions.

While several earlier studies have reported encouraging outcomes, the available scientific evidence is still limited and lacks standardization. Many existing studies are still exploratory, often involving small sample sizes and diverse methodologies, which limits the ability to make generalizable conclusions. Consequently, more rigorous research, especially randomized controlled trials (RCTs), It is necessary to reinforce the evidence and validate the efficacy of the Benson Relaxation Technique in mitigating fatigue across various populations of patients with chronic illnesses

Objective

This systematic literature review aims to evaluate the effectiveness of the Benson Relaxation Technique in alleviating fatigue among individuals with chronic illnesses. By analyzing existing empirical studies, it seeks to identify its impact on fatigue levels, explore the underlying mechanisms contributing to its effectiveness, and assess its potential as a non-pharmacological intervention. The findings are expected to provide valuable insights for healthcare professionals in integrating this technique into clinical practice to improve patient outcomes.

Method

Design and setting

This systematic literature review was conducted in accordance with the PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. The study protocol was registered in the International Prospective Register of Systematic Reviews (PROSPERO) under its assigned registration number.

The review focused on studies published between January 1, 2020, and December 31, 2024, retrieved from multiple databases including PubMed, ProQuest, Garuda, and JSTOR. The five-year range was intentionally chosen to capture the most current and relevant evidence related to the topic. Limiting the time frame helped ensure that the findings reflected contemporary scientific understanding while maintaining the review's analytical efficiency by reducing the volume of studies requiring synthesis.

The search strategy applied the Medical Subject Headings (MeSH) framework in combination with relevant keywords using advanced search filters, as detailed in Supplementary File 1. Two co-authors (DN and DF) independently performed the electronic searches across the selected databases to enhance reliability and minimize potential bias.

Population and sampling

The population in this review consisted of individuals experiencing fatigue associated with chronic illnesses such as heart failure, cancer, chronic kidney disease, chronic arterial disease, and multiple sclerosis. Participants were included regardless of gender, religion, or ethnicity. Inclusion criteria covered adult participants aged 18–65 years diagnosed with chronic diseases who received the Benson Relaxation Technique (BRT) as an intervention for fatigue reduction. Those with severe medical or psychiatric conditions and studies published in non-English languages were excluded.

The sample included studies with randomized controlled trials, quasi-experimental pre–post designs, and case studies examining the effects of BRT. Control groups comprised participants receiving standard care or placebo interventions. Fatigue was measured using validated instruments such as the Fatigue Severity Scale (FSS), Modified Fatigue Impact Scale (MFIS), Brief Fatigue Inventory (BFI), Revised Piper Fatigue Scale (RPFS), Maastricht Questionnaire (MQ), Functional Assessment of Chronic Illness Therapy–Fatigue (FACIT-Fatigue), and Cancer Fatigue Scale (CFS). Non-empirical works, including literature reviews, conference papers, and opinion articles, were excluded.

Sampling followed a purposive approach by selecting studies focusing on the Benson Relaxation Technique among populations with chronic diseases. This technique, developed by Dr. Herbert Benson, integrates deep breathing, repetition of calming words, and the release of distracting thoughts to reduce stress and improve well-being. It is considered safe, easy to practice, and effective when performed regularly, making it a suitable non-pharmacological intervention for managing chronic fatigue.

Instrument and measurement

Three researchers (DLPA, DN, DF) independently assessed the quality of each study using predefined criteria. Any discrepancies in their evaluations were discussed collectively, and when consensus could not be reached, senior researchers (HS, AN) provided further clarification and made the final decision. This systematic process ensured objectivity and minimized potential bias during the appraisal.

The reliability and validity of both primary and secondary findings were further examined using the Critical Appraisal Skills Programme (CASP) checklist. This framework allowed for a structured evaluation of essential aspects such as research design, methodological consistency, potential bias, clarity of results, and overall accuracy. Through this approach, all included studies were critically reviewed to ensure they met established scientific standards, thereby strengthening the validity of the review's conclusions.

Data collection and analysis

Data collection and analysis in this review were conducted systematically following the PRISMA 2020 guidelines. Three researchers (DLPA, DN, DF) independently screened all titles and abstracts based on predefined inclusion and exclusion criteria. Any discrepancies during the selection process were resolved through discussion, and when necessary, senior researchers (HS, AN) made the final decision regarding study inclusion. For studies that fulfilled the eligibility criteria, data extraction was performed independently by two reviewers (EMJW, NH) using a standardized extraction form to ensure consistency and accuracy. Extracted information covered the author, year of publication, study location, research design, sample size, intervention type, measurement tools, and major findings. When

clarification was needed, the original study authors were contacted to verify or complete missing data.

The extracted data were analyzed descriptively to identify patterns, trends, and variations across the included studies. This process ensured that data interpretation was systematic, transparent, and aligned with the research objectives. All stages of data handling, from screening to synthesis, were carried out rigorously to maintain methodological validity and enhance the credibility of the review findings.

Result

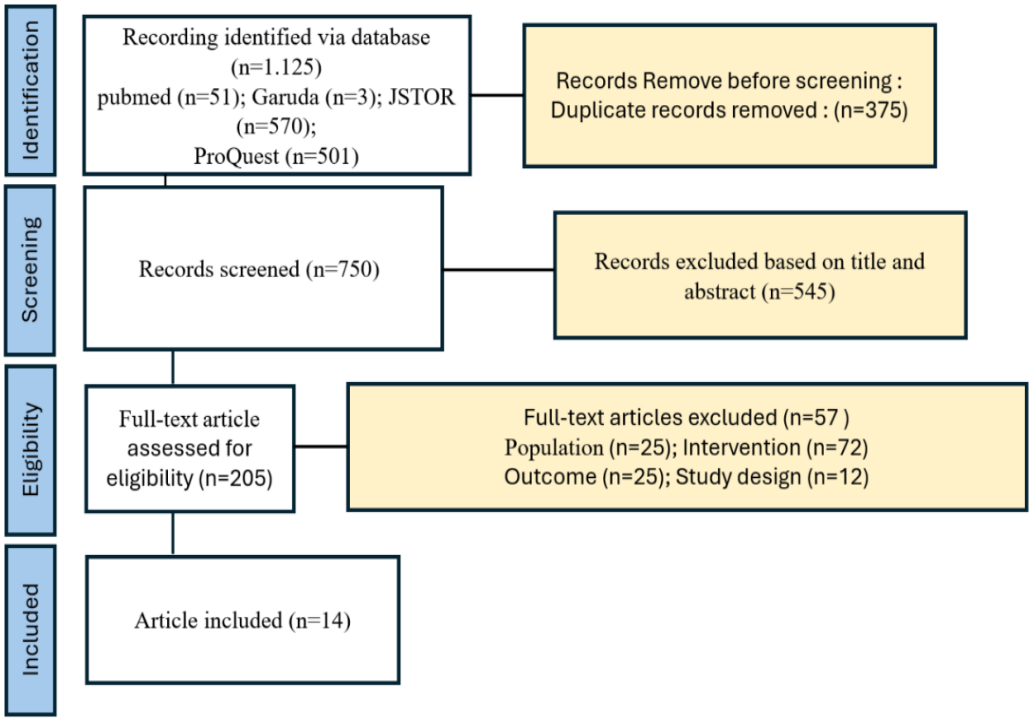

Figure 1. Screening process flowchart by PRISMA

The initial database search yielded 1,125 articles. After removing 375 duplicates, 750 articles remained for screening. Three researchers (DLPA, DN, NH) independently evaluated the titles and abstracts, reducing the pool to 205 articles. A full-text review subsequently identified 14 studies that met the inclusion criteria. Figure 1 provides a detailed summary of this selection process.

Table 2. Characteristics of The Intervention

Author	Intervention And Fasilitator	Number of Session	Duration	Method or Media
Muliatino et al. (2020) Indonesia (Muliantino et al., 2020)	Benson Relaxation Technique (BRT) Researchers	Administered twice daily over a five-day period	20 minutes	Provided through verbal instructions
Fatmawati et al. (2021) Indonesia (fatmawati, 2021)	Benson Relaxation Technique (BRT) and warm-water foot soak Researchers	Five sessions were conducted from December 2019 to January 2020	-	-
Hamdi Kamal Khalil et al. (2021) Egyptian (Hamdi Kamal Khalil et al., 2021)	Benson Relaxation Technique (BRT) Researchers	Administered twice daily over an eight-week period	15–20 minutes	Provided through video, demonstration, and a manual
Alzaghmouri(2021) Jordania (Alzaghmouri et al., 2021)	Benson Relaxation Technique (BRT) Research Team Members	Administered twice daily for a duration of eight weeks	10 minutes	Conducted through a training session using video and CD
Saeed Mirhosseini. (2021) Iran (Mirhosseini et al., 2021)	Benson Relaxation Technique (BRT) Researchers	Administered twice weekly over an eight-week period	20 minutes	Provided through a manual and audio materials for relaxation guidance
Kesik et al, (2022) Turkey (Kesik et al., 2022)	Progressive Muscle Relaxation (PMR) Technique and Benson Relaxation Technique (BRT) Researchers	Conducted for one hour daily over a twelve-week period	60 minutes	Conducted through face-to-face training and a manual on relaxation techniques.
Cahyono et al. (2022) Indonesia (Cahyono et al., 2022)	Benson Relaxation Technique (BRT) Researchers	Administered twice daily over a seven-day period	15 minutes	Provided through the Bens smartphone application and a manual on Benson relaxation techniques
Eroglu et al. (2023) Turkey (Eroglu & Gok Metin, 2022)	Benson Relaxation Technique and Music Therapy Researchers	Administered twice weekly over an eight-week period	20 minutes	Provided through a manual on relaxation techniques and nonverbal classical music (Daniel Kobelco)
Huddar et al. (2023) India (Huddar et al., 2023)	Progressive Muscle Relaxation (PMR) and Benson Relaxation Technique (BRT) Researchers	Conducted once daily for five consecutive days	30-40 minutes	Provided through a manual on relaxation techniques
Krismiadi et al. (2023) Indonesia (Krismiadi et al., 2023)	Benson Relaxation Technique(BRT) and Deep Breathing Relaxation Researchers	Administered twice weekly over a five-week period	30-40 minutes	Provided through a manual on relaxation techniques

Heif et al (2024) Jordanian (Heif et al., 2024)	Benson Relaxation Technique (BRT) Researchers	Administered twice daily over a two-month period	20 minutes	Provided through a BRT manual and a CD containing videos on relaxation techniques
Radiansyah et al (2024) Indonesia (Radiansah et al., 2024)	Benson Relaxation Technique (BRT) Researchers	Administered five times per day	10-15 minutes	The media comprised structured breathing techniques, the FACIT questionnaire, and monitoring forms.
Astaria et al (2024) Indonesia (Astaria et al., 2024)	Benson Relaxation Therapy (BRT) and Aromatherapy Researchers	Twice daily at six-hour intervals, conducted over three consecutive days for a total of six sessions.	-	The media consisted of structured breathing techniques and essential oils (lemon/peppermint)
Luyan et al (2024) China (Luyan et al., 2025)	Benson Relaxation Technique and Lyengar Yoga research investigators and clinical healthcare providers	Administered once daily over an eight-week period	20 minutes	audio-guided relaxation, structured yoga practice, and compliance monitoring through the WeChat platform

Table 2. Characteristics of Studies

Author, year, country	Design (Sample size)	Intervention (Case)	Instrument (outcomes)	Findings
Muliatino et al. (2020) Indonesia (Muliantino et al., 2020)	The study employed a quasi-experimental pre–post test design, involving 15 people in the intervention group who received the Benson Relaxation Technique and 14 participants in the control group who received normal treatment, totaling 29 participants.	Benson Relaxation Technique[a] (Coronary Artery Disease)	Maastricht Questionnaire (MQ): Depression Anxiety and Stress Scale (DASS)	The research indicated that the Benson Relaxation Technique can serve as a nursing intervention or therapeutic approach to alleviate exhaustion in individuals with coronary heart disease.
Fatmawati et al, (2021) Indonesia (fatmawati, 2021)	The research utilized a quasi-experimental, single-group pre–post test design with 17 participants.	Benson Relaxation Technique[a] and WWFT[b] (Chronic Kidney Disease)	Fatigue Severity Scale (FSS)	The study concluded that the Benson Relaxation Technique effectively diminished fatigue levels in hemodialysis patients. The approach was demonstrated to be safe, devoid of adverse effects, and simple to implement.
Hamdi Kamal Khalil et al. (2021) Egyptian (Hamdi Kamal Khalil et al., 2021)	The research employed a quasi-experimental pretest-posttest methodology and involved 40 patients diagnosed with multiple sclerosis.	Benson Relaxation Technique[a] (Multiple Sclerosis)	Pittsburgh Sleep Quality Index (PSQI) Fatigue Severity Scale (FSS):	The study determined that the Benson Relaxation Technique (BRT) effectively enhanced exhaustion and quality of sleep in patients with multiple sclerosis. A statistically significant favorable connection was discovered between fatigue severity levels and sleep

			Modified Fatigue Impact Scale (MFIS):	quality scores both prior to and following the BRT intervention.
Alzaghmouri (2021) Jordania (Alzaghmouri et al., 2021)	The study utilized a quasi-experimental pre–post test design and involved 95 participants diagnosed with multiple sclerosis.	Benson Relaxation Technique[a] (Multiple Sclerosis)	Modified Fatigue Impact Scale (MFIS)	The Benson Relaxation Technique (BRT), which integrates mental focus and muscle relaxation, has been shown to effectively reduce fatigue in patients with multiple sclerosis (MS) and is recommended as a complementary therapy alongside medication. Implementing this technique in specialized care settings may improve early management of fatigue. Further controlled studies, particularly involving long-term MS patients and older adults, are needed to validate its benefits and effects on quality of life.
Saeed Mirhosseini. (2021) Iran (Mirhosseini et al., 2021)	The study was an one-blind controlled trial (RCT) comprising 60 patients with multiple sclerosis (MS), evenly allocated into an intervention group (n = 30) and a control group (n = 30).	Benson Relaxation Technique[a] (Multiple Sclerosis)	Goldberg General Health Questionnaire (GHQ-28)	The findings indicate that the Benson Relaxation Technique can effectively enhance the comprehensive health, physical and psychological well-being, and social functioning of patients with multiple sclerosis. Given its cost-effectiveness and safety, it is recommended that this technique be incorporated into the treatment protocol for MS patients.
Gulsah Kesik (2022) Turkey (Kesik et al., 2022)	The research constituted a three-arm randomized controlled experiment (RCT) with 80 individuals diagnosed with multiple sclerosis (MS), who were allocated to one of three groups: the Progressive Muscle Relaxation (PMR) group, the Benson Relaxation Technique (BRT) group, or the control group (CG).	Benson Relaxation Technique[a] And Progressive Muscle Relaxation[b] (Multiple Sclerosis)	Visual Analog Scale (VAS) Fatigue Severity Scale (FSS): Tampa Scale for Kinesiophobia (TSK)	The results following the interventions showed that both Progressive Muscle Relaxation (PMR) and the Benson Relaxation Technique (BRT) significantly reduced pain and fatigue, with these improvements sustained during follow-up. Both approaches also effectively decreased kinesiophobia, and the benefits were maintained over time. Considering their proven effectiveness, ease of application, and cost-efficiency, these methods can be advocated as evidence-based strategies in clinical settings.
Cahyono et al. (2022) Indonesia (Cahyono et al., 2022)	The research utilized a quasi-experimental pretest–posttest design featuring a comparison group, comprising 56 breast cancer patients receiving chemotherapy. Participants were allocated to the experimental group (n = 28) utilizing the Benson	Bens mobile application and guideline book for the Benson Relaxation Technique (Breast Cancer)	Brief Fatigue Inventory (BFI)	The Benson Relaxation Technique shown efficacy in alleviating fatigue among breast cancer patients through the utilization of either the Bens app or a booklet. Nonetheless, the Bens app demonstrated superior efficacy compared to the booklet, exhibiting a statistically significant higher reduction in weariness. Thus, the Bens

	application or the comparison group (n = 28) employing a guideline book.			app can function as an alternate resource to assist patients in using Benson Relaxation and may be included into palliative care programs for cancer patients. It is essential that information pertaining to nurses' tasks, language options, competencies, and health education content is consistently updated.
Eroglu et al. (2023) Turkey (Eroglu & Gok Metin, 2022)	The research was a randomized controlled experiment (RCT) comprising 61 hemodialysis patients, with 30 individuals allocated to the intervention group and 31 to the control group.	Benson Relaxation Technique[a] and Music Therapy[b] (Chronic Kidney Disease)	Piper Fatigue Scale (PFS): Hospital Anxiety and Depression Scale (HADS):	This randomized controlled experiment demonstrated that the combination of the Benson Relaxation Technique (BRT) and music therapy significantly reduced fatigue, anxiety, and depression in hemodialysis patients. The integrated intervention was positively welcomed, feasible, and pragmatic for patients receiving hemodialysis. These findings highlight the significance of employing relaxation techniques alongside music therapy to alleviate prevalent hemodialysis-related symptoms, including fatigue, anxiety, and despair.
Huddar et al. (2023) India (Huddar et al., 2023)	A quasi-experimental study was conducted with 42 cancer patients, who were evenly assigned to two groups: Group A receiving Progressive Relaxation Technique (n = 21) and Group B receiving Benson's Relaxation Technique (n = 21).	Benson Relaxation Technique[a] and Progressive Muscle Relaxation[b] (PMR) (Cancer)	Hamilton Anxiety Rating Scale (HAM-A) Cancer Fatigue Scale (CFS)	The research indicated that the two techniques Progressive Muscle Relaxation and Benson's Technique significantly alleviated anxiety and fatigue in cancer survivors from Belagavi city. When comparing the two methods, they were found to be equally effective.
Krismiadi et al. (2023) Indonesia (Krismiadi et al., 2023)	A quasi-experimental pre–post test study with a control group was performed on 42 hemodialysis patients, who were allocated to either Group A (Benson Relaxation Technique) or Group B (Deep Breathing Relaxation).	Benson Relaxation Technique[a] and Deep Breathing[b] (Chronic Kidney Disease)	Hamilton Anxiety Rating Scale (HAM-A) Pittsburgh Sleep Quality Index (PSQI) Cancer Fatigue Scale (CFS):	The research indicated that engaging in Benson Relaxation and Deep Breathing Relaxation twice daily for four weeks yielded comparable outcomes regarding anxiety, sleep quality, and tiredness alleviation in hemodialysis patients. These findings can assist nurses in applying relaxing techniques to aid patients in managing anxiety, improved sleep quality, and alleviating fatigue, so improving their overall quality of life and satisfaction with care.
Heif et al (2024) Jordanian (Heif et al., 2024)	A quasi-experimental pre–post test study was conducted with 140 patients diagnosed with heart failure, consisting of an intervention group (n = 68) receiving the Benson Relaxation Technique and a control group (n = 72) receiving standard care.	Benson Relaxation Technique[a] (Heart Failure)	Fatigue Severity Scale (FSS) Short Form (SF-36)	Patients with heart failure reported low quality of life and high fatigue levels. The application of the Benson Relaxation Technique resulted in less fatigue and enhanced quality of life. Besides being applied in clinical settings, patients can also practice this simple and effective technique independently at home to further

				enhance their quality of life, particularly for those with limited access to care.yg
Radiansyah et al (2024) Indonesia (Radiansah et al., 2024)	A case report was conducted on a single patient (Mr. T) confirmed chronic kidney disease (CKD) and undergoing hemodialysis.	Benson Relaxation Technique[a] (Chronic Kidney Disease)	FACIT Fatigue Scale	The results of the Benson Relaxation intervention in chronic kidney disease (CKD) patients undergoing hemodialysis showed that fatigue levels, as measured by the FACIT-Fatigue questionnaire, increased from a baseline score of 17.52 to 21.6 at the final session. These findings suggest that Benson Relaxation Therapy effectively helps reduce fatigue in CKD patients receiving hemodialysis..
Astaria et al (2024) Indonesia (Astaria et al., 2024)	A quasi-experimental pre–post test research was performed with 36 participants, evenly distributed between an intervention group (n = 18) and a control group (n = 18).	Benson Relaxation Technique[a] and Aromatherapy[b] (Coronary Heart Disease)	FACIT (Functional Assessment of Chronic Illness Therapy) version 4:	The research investigating the effects of integrating Benson Relaxation Therapy with aromatherapy on fatigue in individuals with coronary heart disease (CHD) revealed that the intervention group demonstrated a notable enhancement, with mean fatigue scores increasing from 19.96 (±4.57) at pre-test to 30.19 (±2.66) at post-test. Conversely, the control group exhibited no significant alteration (pre-test: 20.14 ±4.06; post-test: 19.37 ±3.78). The intervention group exhibited a substantial decrease in tiredness intensity (p = 0.000), but the control group did not demonstrate a significant effect (p = 0.055). The comparison of post-test scores between the two groups revealed a statistically significant difference (p = 0.000).
Luyan et al (2024) China (Luyan et al., 2025)	A randomized controlled trial (RCT) was conducted with 114 participants, including a control group (n = 37), a group receiving the Benson Relaxation Technique (n = 36), and a group receiving a combination of yoga and the Benson Relaxation Technique (n = 36).	Benson Relaxation Technique[a] Yoga (Breast Cancer)	Revised Piper Fatigue Scale (RPFS): Pittsburgh Sleep Quality Index (PSQI)	The research indicated that both static Benson Relaxation and a hybrid of dynamic and static relaxation therapies significantly alleviated fatigue and enhanced sleep quality in breast cancer patients receiving chemotherapy, with the combined method yielding superior outcomes. These findings highlight the efficacy of non-pharmacological therapies as safe alternatives for addressing fatigue and sleep disruptions without negative consequences. Integrating relaxation therapy into clinical nursing practice is advised to improve the quality of life for patients undergoing cancer treatment.

Discussion

A systematic review of multiple studies indicates that the Benson Relaxation Technique plays a consistent role in alleviating fatigue in a wide range of health conditions. It has been utilized in patients with coronary artery disease, chronic kidney failure, multiple sclerosis, cancer, and several other illnesses. The chosen papers utilized many research methodologies, comprising quasi-experimental approaches, studies with randomized control (RCTs), and case reports, to assess the efficacy of the methodology.

Overall, the Benson Relaxation Technique has demonstrated effectiveness in alleviating exhaustion among individuals with various chronic illnesses. For instance, Muliantino et al. (2020) found that patients with coronary artery disease undergoing cardiac rehabilitation experienced a significant decrease in fatigue, yielding statistically significant results ($p < 0.001$). These findings align with those of Febriyanti et al. (2021), who demonstrated that the Benson Relaxation Technique can effectively reduce the secretion of hormones linked to vascular vasoconstriction . In addition, research by Tri Atmojo et al. (2019) explained that relaxation helps regulate cardiovascular function by suppressing activity in the posterior hypothalamus, resulting in lower blood pressure. It also activates the preoptic area, which decreases arterial resistance and heart rate through the cardiovascular control centers in the medulla . This approach contributes to mitigating the likelihood of coronary artery disease. (CAD). The Benson Relaxation Technique may be incorporated as a complementary intervention in the rehabilitation of patients with cardiovascular conditions. Additionally, Fatmawati et al. (2021) investigated the combined effect of the Benson Relaxation Technique and warm water foot baths on reducing fatigue in patients with chronic kidney failure receiving hemodialysis. The findings showed a significant decrease in fatigue ($p = 0.000$), suggesting that this combination therapy produces a synergistic effect in enhancing patient well-being. Additionally, Setiawan et al. (2022) reported that integrating swallowing exercises with the Benson Relaxation Technique significantly enhanced swallowing function in stroke patients. Applying this combined therapy helps mitigate fatigue while improving swallowing ability, which in turn supports an enhanced the quality of life among persons suffering from chronic illnesses.

The Benson Relaxation Technique has also been shown to have beneficial effects in enhancing the quality of sleep (Dewi et al., 2024; Efendi et al., 2022; Sihombing & Paulina, 2022; Sutrisno & Nursalam, 2022) . Khalil et al. (2021) found that, in patients with multiple sclerosis, this technique not only alleviates fatigue but also significantly enhances sleep quality ($p < 0.001$). Comparable findings were reported by Alzaghmouri et al. (2021), showing that this intervention effectively reduces physical, cognitive, and psychosocial fatigue in individuals with multiple sclerosis. Additionally, research by Krismiadi et al. (2023) evaluated the efficacy of the Benson Relaxation Technique against deep breathing exercises in enhancing sleep quality in hemodialysis patients the research indicated that the Benson Relaxation Technique surpassed deep breathing in alleviating anxiety ($p = 0.000$) and improving sleep quality ($p = 0.000$). The findings substantiate the efficacy of the Benson Relaxation Technique as a viable approach for mitigating sleep problems in individuals with chronic illnesses.

Beyond its effects on fatigue and sleep, research has shown that the Benson Relaxation Technique can also help alleviate pain and anxiety. For instance, Kesik et al. (2022) reported that this technique decreased pain, fatigue and kinesiophobia in individuals with multiple sclerosis, although its effects were slightly less pronounced than those observed with Progressive Muscle Relaxation (PMR). Likewise, research by Huddar et al. (2023) Evaluated

the comparative efficacy of the Benson Relaxation Technique and progressive relaxation in alleviating anxiety and fatigue in cancer survivors. While both methods showed effectiveness, progressive relaxation was more effective in reducing short-term fatigue. Additionally, Cahyono et al. (2022) reported that Bens App, a smartphone-based application, significantly reduced fatigue in cancer patients receiving chemotherapy ($p = 0.001$), highlighting how technology can support patient adherence to relaxation practices. Consequently, telenursing is suggested as an innovative strategy to improve patient compliance with relaxation exercises and overall symptom management. By utilizing telenursing, nurses can offer education, monitor progress, and provide ongoing remote support, helping patients maximize the benefits of their therapy. For instance, The study by Ariyanto et al. (2024) demonstrated that telenursing interventions effectively enhanced the standard of living for those with chronic illnesses, including heart failure patients. Therefore, this method can also be utilized in oncology care to assist patients receiving chemotherapy.

Studies have investigated the effects of combining the Benson Relaxation Technique with additional therapies. Eroglu et al. (2022), for example, studied the impact of integrating Benson Relaxation alongside music therapy on exhaustion, depression, and anxiousness in hemodialysis patients, reporting significant decreases in PFS and HADS scores ($p < 0.05$). While the RCT design increases confidence in the study's findings, one limitation is the absence of separate groups to assess the distinct effects of each therapy. In a related study, Astaria et al. (2024) investigated the integration of Benson Relaxation and aromatherapy in patients with coronary artery disease, reporting a significant decrease in fatigue in the intervention group ($p = 0.000$). This combined therapy provides a comprehensive approach that can amplify the overall relaxation benefits.

While the findings indicate the effectiveness of the Benson Relaxation Technique, several limitations exist within the reviewed studies. Notably, some studies, such as those by Fatmawati et al. (2021) and Cahyono et al. (2022), had small sample sizes, which may restrict the applicability of the results. In addition, the absence of control groups in studies like Alzaghmouri et al. (2021) and Krismiadi et al. (2023) compromises internal validity. In addition, most studies lacked long-term follow-up to assess the sustained effects of the technique. For instance, Heif et al. (2024) conducted a two-month follow-up to assess improvements in quality of life for heart failure patients, but this duration remains insufficient for understanding long-term outcomes.

The findings of this systematic review indicate that the Benson Relaxation Technique is an effective non-pharmacological approach, especially for alleviating fatigue, enhancing sleep quality, and reducing anxiety in patients with diverse health conditions. Its simplicity, cost-effectiveness, and adaptability make it suitable for use either as a standalone approach or alongside other therapies. Nevertheless, further studies with stronger methodological designs, including randomized controlled trials involving larger participant groups and long-term follow-up, are required to solidify the evidence.. In addition, incorporating technology, such as mobile applications, to support patient adherence to relaxation exercises offers a promising avenue for enhancing clinical practice.

The Benson Relaxation Technique has been demonstrated to effectively alleviate fatigue and enhance overall well-being in patients with a range of health conditions. Although the reviewed studies have some limitations, the evidence supports its use as a broadly applicable non-pharmacological intervention. Additional research is needed to reinforce the scientific basis and to explore opportunities for enhancing this technique, including integration with digital tools and combination with other therapeutic approaches.

Conclusion

This systematic review indicates that the Benson Relaxation Technique is effective in reducing fatigue in patients with chronic illnesses. Beyond alleviating fatigue, the technique has been shown to enhance sleep quality, decrease anxiety, and improve overall quality of life. Its effectiveness is greatest when practiced over extended periods and combined with complementary interventions such as aromatherapy, music therapy, or deep breathing exercises. Consequently, the Benson Relaxation Technique represents a safe and accessible non-pharmacological approach for managing fatigue in individuals with chronic conditions. Despite these promising findings, further research with more rigorous study designs and long-term follow-up is necessary to confirm its effectiveness across diverse patient populations.

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Not applicable

Author Contribution

Each author made an equivalent contribution to every aspect of the research. All authors have rigorously evaluated and endorsed the final version of the manuscript and assume full accountability for its content and similarity index.

Conflict of Interest

The authors affirm that there is no conflict of interest associated with either the conduct or the publication of this research. All stages of the study, including planning, data collection, analysis, and report writing, were conducted independently, free from any external influence or coercion. Ethical research principles were consistently upheld throughout the entire process, ensuring transparency, precision, and integrity in the presentation of findings. Participation of respondents was entirely voluntary, based on informed consent, and their confidentiality as well as privacy were safeguarded in accordance with established research ethics standards. Through this declaration, the authors aim to reinforce the credibility of the study and support its use as a reliable reference for advancing scientific knowledge and health practices, particularly in the fields of ethnomedicine and reproductive health.

Ethical Clearance

Not applicable.

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