

Effectiveness of Non-Pharmacological Interventions for Improving Sleep Quality in Patients with Chronic Medical Conditions: A Systematic Review

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Abstract

Sleep disturbance in patients with chronic medical conditions is common, and an additional factor is significantly causing distress and delay in recovery. Pharmacological interventions led to more difficulties and reactions to medicines affecting overall health. To improve sleep quality for people with chronic medical disorders, this systematic review evaluated the effectiveness of non-pharmacological therapies. The Critical Appraisal Skills Programme (CASP) instrument was used to evaluate the review's quality, and it complied with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) standards. In individuals with chronic medical illnesses, this systematic review emphasises the potential efficacy of non-pharmacological therapies for improving sleep quality. The overwhelming body of research supports the inclusion of therapies such as cognitive behavioural therapy, relaxation training, and sleep restriction therapy in the comprehensive care of these patients. Three papers were found to be relevant after a thorough search through medical databases including PubMed, Springer, NCBI, ResearchGate, and WILEY Online Library.

The studies included an extensive variety of non-pharmacological therapies, including cognitive behavioural therapy, relaxation techniques, and advice on good sleep hygiene. A wide variety of chronic medical conditions were the focus of these therapies. According to two of the three trials, increases in sleep quality, as determined by approved assessment methods, were statistically significant. Particularly, cognitive behavioural therapy consistently outperformed control groups in investigations, underscoring its promise as a useful treatment. The third research, however, found no appreciable benefits, highlighting the disparity in results, despite variances in results and study limitations. The findings of this analysis indicate that non-pharmacological treatments have the tendency to improve patients' quality of sleep while managing their chronic medical problems. It recommends that further research be done using bigger sample sizes and more exacting procedures in order to increase the strength of

the supporting evidence and enable a more focused therapeutic application.

Introduction

A study conducted in nine countries, revealed that sleep disruption among patients with chronic medical conditions ranges from 2.8% to 17%¹. Meanwhile, in recent research conducted in orthopaedic wards in the UK, 43% of patients reported having trouble sleeping, and nearly half said that this had a negative impact on their ability to recuperate from surgery². Sleep disturbance in patients with chronic medical illnesses is linked to various factors such as pain, shallow respiration, discomfort, and others, according to an investigation³. The high occurrence of sleep disorders in hospital settings is a well-known phenomenon. Hospitalised patients face a decline in sleep quality and duration, with a prevalence ranging from 47% to 67%⁴. Healthy sleep is essential for the body's recuperative and cognitive processes and overall health and well-being⁵. However, it has examined that sleep disturbances and poor sleep quality are frequent in people with chronic medical illnesses, worsening their health issues and lowering their quality of life⁶. The inability to breathe, frequent awakenings, and movement issues in chronic medical conditions can significantly influence the quantity and quality of sleep². It has found that patients with chronic medical conditions with more than four disorders are 7.62 times more likely to experience sleep disturbances than those with non-chronic illnesses (5.88–9.87)⁷. Chronic medical illnesses include respiratory ailments, Parkinson's, multiple sclerosis, diabetes, cardiovascular diseases, and chronic pain syndromes. The research found that sleep disruption would lower the quality of life, increase drug consumption, and raise death rates in haemodialysis patients⁸. Moreover, it has been asserted that worsening chronic obstructive pulmonary disease, higher mortality rates, and emergency room visits are linked to disturbed sleep⁹.

Sleep disruptions are frequently managed and treated with traditional pharmaceutical therapies, such as sleeping medications and sedatives, when a patient has

a persistent medical condition⁵. However, these drugs could have dangers and adverse effects, especially if taken long-term, and might not always treat the root reasons for sleep issues¹⁰. In this situation, non-pharmacological therapies have become an alternative or an additional strategy for improving sleep quality in patients with chronic medical conditions. Several non-pharmacological methods for enhancing sleep quality exist, including exercise, light therapy, mind-body techniques, such as acupressure, yoga and progressive muscle relaxation, chamomile extract beverages, and back massages¹¹. It has concluded that non-pharmacological therapies are secure, efficient, and simple to use. The capacity of a site to conduct interventions will vary depending on the physical architecture, maternal treatment organisation, and staffing issues¹². These therapies emphasise behavioural, mental disorders and environmental changes to improve sleep without drugs. According to a qualitative study, progressive muscle relaxation is the second most popular technique for enhancing sleep quality¹³. ¹⁴discovered that progressive muscular relaxation may have a calming impact by diverting attention, reducing feelings of overall tension, and relaxing the muscles. A study ¹⁵found that for those with chronic pain, cognitive behavioural therapy for insomnia (CBT-I) techniques can be a valuable non-pharmacological method to enhance their sleep quality.

Non-Pharmacological Techniques Significance

A research study found the effectiveness of CBT-I in improving sleep quality among adults with comorbid sleep problem and musculoskeletal pain¹⁶. However, neither the short-term nor the long-term effects of pain may be improved by CBT-PI/I. Additionally, it implies that a short-term increase in sleep quality can have a long-term impact on pain relief¹⁷. Moreover, a comparative study on the efficacy and safety of pharmaceutical and non-pharmacological treatments for adult insomnia found that treatments such as CBT-I, physical activity, mindfulness-based therapy, acupuncture, and bright light therapy have intermediate to high-quality evidence of efficiency for enhancing sleep outcomes¹³. Still, pharmaceutical medications have low to moderate-quality evidence of benefit and a higher risk of adverse effects¹⁸. In addition, studies on improving the sleep of adult patients admitted to intensive care units found that the necessity for patients to be aware of undergoing the therapy may make it challenging for chronically ill patients to employ approaches to promote sleeping through muscular relaxation¹³. The study also suggested that more randomised controlled studies were needed to evaluate the efficacy of music therapy, the environment, therapeutic touch, and calming massage.

Moreover, sleep issues caused by Alzheimer's disease may directly result in abnormal protein formation and accumulation, resulting in neurodegeneration¹⁹. Early stages of Alzheimer's disease may benefit from lifestyle therapies that can improve sleep since they are frequently inexpensive, safe, and effective¹³.

Aromatherapy has been employed as a sleep intervention because it can mitigate psychological stress by reducing the operation of sympathetic nerves, inducing muscle relaxation, and promoting a state of well-being²⁰. Studies examining the biological principles of aromatherapy found that some oils can have hypnotic and relaxing effects and shorten the time animals spend sleeping²¹. In the experimental study²², it has been concluded that other oils, such as orange, jasmine, and Hinoki cypress, have also been revealed to encourage relaxation. In the physical techniques, an eye mask was the best physical sleep aid, whether used alone or in conjunction with earplugs. The quality of sleep did not increase only by using earplugs²³. It provides evidence that both light and noise can interrupt the sleep cycle¹³. However, prior studies have demonstrated that calming music with a moderate pace and soothing melody can improve the sleep of patients ^{24,25,26}. It is due to the fact that, as highlighted²⁷, such music can regulate the sympathetic nervous system, lower cortisol levels, and lessen anxiety and stress reactions.

In addition, a researcher claimed that sleep problems are among the most common non-motor symptoms of Parkinson's disease (PD). Patients and caretakers may bear a heavy burden²⁸. There has been a significant reduction in PD patients' performance and quality of life. Among those with Parkinson's disease (PD), study²⁹ presented insomnia, restless legs syndrome, rapid eye movement, excessive daytime sleepiness, irregular sleep behaviour, and sleep-disordered breathing as most prevalent sleep issues. According to the findings³⁰, the first stage in the therapy of sleep disruptions in Parkinson's disease (PD) should be education about excellent sleep hygiene and effective non-pharmacological therapies. Antiparkinsonian therapy optimisation, especially switching dopaminergic medications, is frequently the first step in pharmacological treatment (Williams et al., 2022). According to a study on sleep, hygiene practises³¹, some people use alcohol as self-medication to help them fall asleep, while others stay up late watching TV or using their phones while they sleep, both of which have a negative impact on getting enough rest. Moreover, it has been assumed that to increase the efficacy of the drugs consumed in chronic medical conditions functions when the sleep-wake cycle is appropriately managed³².

A systematic review³³ discussed that exercise could be separated into broad mass sports and rehabilitation training under the direction of medical experts or professionals. Rehabilitation training is safer and more focused. It may proceed with rehabilitation therapy for sleep problems and motor and non-motor functions simultaneously³⁴. The findings discovered that in mild Parkinson's disease, progressive resistance exercise can simultaneously reduce sleeplessness and increase muscular strength³⁵. In chronic PD patients³⁶, also discovered that cognitive behaviour therapy also proved to be the best option for sleep quality improvement, which often refers to brief talking therapy (6–12 weeks)

that assists patients in identifying their own issues and developing helpful coping mechanisms in person or online. However, cognitive behaviour therapy amalgamates sleep hygiene education, sleep restriction, stimulus control, and relaxation training³⁷. The findings suggest that CBT is effective in treating PD patients' sleeplessness, EDS, and RBD, and it is well-tolerated and well-liked by the patients¹⁰.

Several researches have shown the potential of non-pharmacological treatment for sleep improvement in various medical conditions^{38,39,40}. Among them, the majority of research found that light treatment improves the quality of sleep in people with long-term medical conditions⁴¹. However, numerous studies have attempted to investigate the effectiveness of using relaxation techniques and cognitive behavioural therapy for insomnia (CBT-I) to reduce sleep disruptions in those caring for critically ill patients⁴⁰. Evaluating the efficacy of non-pharmacological sleep quality improvement therapies is becoming increasingly vital, especially for those with chronic medical illnesses. Esposito⁴¹ assert that the effectiveness of each non-pharmacological method differs depending on the individual chronic medical disease at hand. This systematic review aims to summarise and assess the research papers and information on the efficacy of non-pharmacological therapies in enhancing sleep quality in patient groups with chronic medical conditions.

The Rationale of the Study

Patients with chronic medical conditions in adverse situations struggle with sleep disorders due to antibiotics and several drugs reaction or other physiological conditions⁴². The additional medication for sleep improvement creates further challenges for patients. However, unhealthy and poor-quality sleep interferes with the body's normal functioning. In this case, non-pharmacological treatment has been suggested as an effective method of the management of sleep. The efficacy of each method has not been explored collectively in prior studies³⁹. Evidence-based recommendations for clinical practice are becoming more critical as non-pharmacological therapies become more prevalent. To decide on the appropriate course of action for managing sleep disruptions in patients with chronic medical illnesses, healthcare professionals need trustworthy evidence on the efficacy of various therapies.

Aim of the Study

The systematic literature review will examine the "efficacy of non-pharmacological techniques in improving the sleep quality of patients with chronic medical conditions". A systematic review is being conducted to analyse and synthesise the current technique of scientific evidence systematically.

Objectives

The study attempts to explore the multidimensional aspects of non-pharmacological techniques in improving the sleep quality of patients with chronic medical conditions that clinical experts and practitioners in hospitals can adopt. The following objectives will be covered in this study.

- To address the efficiency of non-pharmacological techniques in enhancing sleep quality.
- To explore the patient's experience while receiving sleep treatment through non-pharmacological methods.
- To identify the best and most effective technique for sleep quality improvement in patients with chronic medical conditions, among others

Research Questions using PICO Analysis

The PICO analysis was implemented to derive the research inquiry. PICO analysis, a framework comprising the Population, Intervention, Comparison, and Outcome, is employed to describe the four key elements of a clinical background inquiry. The subsequent research questions that examine the efficacy of non-pharmacological intervention are listed below:

Population	Patients with chronic medical conditions.
Interventions	efficacy of various non-pharmacological techniques, such as chronic behavioural techniques, sleep hygiene education, relaxation techniques, light therapy, etc.
Comparison	pharmacological techniques
Outcome	sleep quality improvement

Methodology

A robust research study must establish a well-defined subject of study, precise inclusion and exclusion criteria, a thorough research methodology, and an analytical technique to integrate data from several studies⁴². This study used a systematic literature review methodology that included a controlled, precise and reproducible process for finding, extracting, and combining prior research on a given topic⁴³. The systematic literature review has been conducted using the PRISMA Framework published in 2020. PRISMA stands for "Preferred Reporting Items for Systematic Reviews and Meta-Analyses"⁴⁴.

Database Sources

For this study, the selected databases are PubMed, Springer, NCBI, ResearchGate, and WILEY Online Library for finding relevant studies in the subject matter. Among the chosen databases is NCBI (National Centre for Biotechnology Information), a comprehensive repository of biological and medical research. PubMed, a leading source for biomedical studies; Springer and Wiley Online Library, both renowned for their extensive collections of scientific publications spanning various disciplines; and ResearchGate, a platform that makes it convenient to access various valuable scholarly

publications⁴⁵. With complete knowledge of the possible efficacy of non-pharmacological therapies in improving sleep quality for chronic medical patient groups, these databases have supported the credibility and consistency of the review's results⁴⁶.

Research Strategy

The purpose of the current study, which uses a qualitative design and a systematic literature review methodology, is to determine the "effectiveness of non-pharmacological interventions for improving sleep quality in patients with chronic medical conditions" by selecting credible, authentic, published, and freely available sources from online databases such as PubMed, ResearchGate, Springer, NCBI, and WILEY Online Library. The ability to obtain relevant research using reliable screening methods and databases is made possible by a well-developed search strategy, which is essential for conducting a systematic literature review⁴⁷.

Additionally, the search strategy has successfully located and acquired important articles by combining keywords and Boolean operators. There are several search phrases that were used, including "non-pharmacological," "sleep quality," "chronic medical conditions," "healthy sleep," "effectiveness of non-pharmacological," "treatment of sleep," and "non-pharmacological interventions." In order to achieve the most effective outcomes, the search approach has been adjusted to the terminology and search features of each database.

Key Term To Find Relevant Peer-Reviewed Articles
Non-pharmacological OR Non-pharmacological interventions AND Non-invasive technique AND Prevention AND effectiveness of non-pharmacological
Sleep Quality AND Sleep measurement AND sleep activity OR sleep duration AND Healthy Sleep
Chronic medical condition OR chronic illnesses OR chronic diseases
Treatment of Sleep AND intervention

Screening

In order to choose which study will be included in the systematic review when the data has been acquired, a two-stage screening method has been created. The titles and abstracts of the articles that have been found are screened in the first step in order to determine their applicability. The full-text papers that fulfil the requirements for inclusion are examined in the second stage to determine their eligibility.

Eligibility Criteria

The initial screening process involved applying inclusion and exclusion criteria to the relevant articles. The exclusion criteria were used to establish the qualities that would prevent future research literature from being included in the systematic review, whilst the inclusion criteria were used to indicate the critical traits the existing literature must hold⁴⁸.

Inclusion Criteria	Exclusion Criteria
Studies in the English language and peer-reviewed	Editorials, blogs, and other forms of surveys and research studies.
Primary studies investigating the efficacy of non-pharmacological interventions in improving sleep quality.	Studies investigating non-pharmacological interventions on other variables rather than sleep.
Studies with qualitative methodology investigating sleep quality in patients with chronic medical conditions	Systematic reviews, meta-analyses, and quantitative studies are not included.
Research papers investigating various "non-pharmacological interventions in improving the sleep quality of chronically ill patients".	Studies on the efficacy of non-pharmacological interventions on the sleep improvement of insomnia and other acute medical conditions.
Studies involving only human participants with chronic medical conditions	Model studies using animals.
Studies conducted within six years	Studies before the previous six years.

Data Extraction Using PRISMA

The systematic review adhered to the PRISMA 2020 framework to achieve an extensive and transparent analytical process. The information on the research issues, methodology, and conclusions required to be gathered and summarised after the studies had been located and chosen as relevant⁴⁹. PRISMA stands for "Preferred Reporting Items for Systematic Reviews and Meta-Analyses". Bigirumurame⁵⁰ claimed that this framework helps outline the various documents that must be found, eliminated, and included, along with why they were done. The structure of the review varies depending on the kind the researcher selects. PRISMA conducted an open selection procedure using the review articles gathered over time.

CASP for Critical Appraisal of Selected Articles

The papers underwent critical appraisal using CASP, which offers a systematic method for assessing research publications' value, applicability, and dependability⁵¹. CASP has created simple critical assessment checklists for the primary research designs⁵². These are intended to serve as an outline and assist memory, not as a substitute for careful consideration and judgement while reading a document. According to Williams⁵², the CASP tool assists the researcher in carrying out a strenuous activity with several phases. Tran⁵³ asserted that ensuring that all significant elements or considerations are considered assists the researcher in being methodical and offering a framework while improving decision-making consistency.

Results

Search Results

In the systematic review, the PRISMA flow chart has been followed for the selection of the study, beginning with key terms searching and followed by database search, removing all duplicates, screening of peer-reviewed articles, categorisation of selective reports, irrelevant report exclusion, selected reports evaluation ensuring eligibility criteria, removal of irrelevant

reports, pertinent and eligible studies becoming systematic literature review.

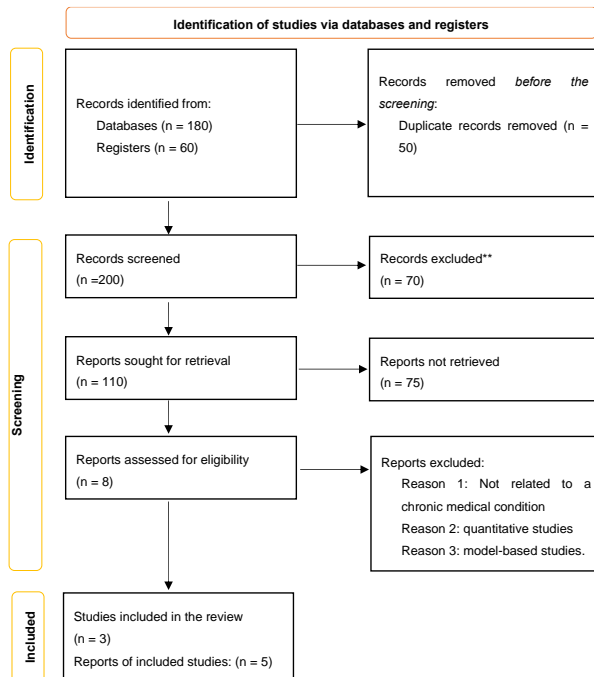


Figure 1 Showing the selection process of papers using PRISMA 2020 flowchart.

Characteristics of Selected Three Articles

S. No	Author name, year and title of article	Study's Origin	Study's Type	Non-Pharmacological sleep quality enhancement techniques
1.	Latocha et al. (2023) Experiences of group-based cognitive behavioural therapy for insomnia among patients with rheumatoid arthritis: a qualitative study	Denmark	Qualitative	CBT-I as a meaningful tool for the treatment of insomnia in patients with rheumatoid arthritis
2.	Savard et al. (2022) Barriers and facilitators to implementing a stepped care cognitive-behavioral therapy for insomnia in cancer patients: a qualitative study	Canada	Qualitative	CBT-I practice implementation in cancer clinics for improving insomnia in cancer patients.
3.	Magdy Mohammed Abd Elsalam (2020) Effects of Sleep Restriction Therapy versus Progressive Muscles Relaxation Technique on Sleep Quality among Older Adults.	Egypt	Qualitative	When compared to the progressive muscular relaxation method, sleep restriction treatment improved the quality of sleep for the older persons who were the subject of the study.

Critical Appraisal of Selected Articles for a Systematic Review

S. No	Questions for Eligibility	Latocha et al. (2023)	Savard et al. (2022)	Magdy Mohammed Abd Elsalam (2020)
1	Did the research possess explicit aims and objectives?	Yes	Yes	Yes
2	Is the methodology chosen appropriate for addressing research goals?	Yes	Yes	Yes
3	Did the author (s) justify the method to use?	Yes	Yes	Yes
4	Do you think the recruitment strategy of participants or other studies are appropriate?	Yes	Yes	Yes
5	Did the data collection method find legitimate to address the research question?	Yes	Yes	Yes
6	Did researcher (s) implicate any changes or suggestion?	Yes	Yes	Yes
7	Do you find researcher consideration ethical issues?	Yes	Yes	Yes
8	Do you find data analysis presented sufficiently?	Yes	Yes	Yes
9	Was there a clear statement of findings? Or are the findings clear?	Yes	Yes	Yes
10	Affirm if the researcher (s) identify the new areas where research is necessary?	Yes	Yes	Yes

Data Analysis

Given the possible variability of the studies included here, a narrative synthesis has been used in the data analysis, allowing for a thorough investigation of the efficacy of non-pharmacological interventions in improving the sleep quality of patients suffering from chronic medical conditions. The data has been ensured to be organised consistently in accordance with the goals and questions of the research, and patterns, parallels, and discrepancies between studies have also been carefully considered.

Findings

A study by Latocha et al. (2023):

According to the conclusions drawn in the paper from qualitative approach, the participants' comprehension pertaining to normal sleep and contributory factors responsible for insomnia was enhanced as a result of sleep education. This education on sleep is a crucial component of CBT-I and is typically administered at the outset of treatment. In the present study, participants achieved success in following the rigorous protocol of leaving the bed when sleep was not forthcoming. It is widely acknowledged that, for many individuals afflicted with insomnia, the bed and associated bedroom have

become linked with arousal rather than rest. The findings, however, showed that by altering one's mindset and bodily experiences, positive cognitive activity was observed. This can be attributed to the conditioning whereby the association between bed and arousal was supplanted by the bed serving as a cure for sleep.

A study by Savard et al. (2022):

The primary objective of this qualitative investigation was to gather pertinent information for the optimal preparation of the implementation of a CBT-I with stepped care in routine cancer care. Despite this, CBT-I is frequently not provided to patients because medical professionals who treat cancer lack a sufficient grasp of this therapy method or rely too heavily on psychologists. However, medical experts and patients have selected CBT-I as the preferred modality of treatment because to its durable benefits and positive impact on overall quality of life. Additionally, they noted that patients should be informed about the programme and sleeplessness as early in the course of their cancer treatment as feasible. These results imply that it is imperative to offer technical as well as clinical assistance to effectively guide patients through the process of utilising web-based Cognitive Behavioral Therapy for Insomnia.

Study Magdy Mohammed Abd Elsalam (2020):

The findings of this study portrayed that the utilisation of sleep restriction therapy and progressive muscle relaxation technique demonstrated a noteworthy enhancement in the quality of sleep among the elderly participants under investigation and also led to a reduction in the duration of time required to initiate sleep. According to the results of this study, behavioural therapy of this kind considerably reduced sleep onset latency using the PMR approach. During the implementation of Sleep Restriction Therapy (SRT), the subjects under study were advised by the researchers to regulate their sleep schedule and gradually increase the duration of their nocturnal sleep cycle based on a standardised record of their sleep patterns until achieving a satisfactory state of rest. The efficacy of SRT was demonstrated in the ability of the subjects to establish a consistent and stable sleep-wake cycle, thereby improving the overall organisation of their sleep pattern.

Discussion

A critical problem that impacts the physical and emotional health of patients with chronic medical illnesses as well as their quality of life is the inadequate sleep they receive. Whereas sleep is important for the healing and recovery of overall health⁵⁴. Lack of sleep is associated with a number of chronic illnesses and ailments, including type 2 diabetes, coronary artery disease, obesity, and depression, according to the CDC⁵⁵. ¹⁷reported that patients with chronic conditions experience poor sleep quality due to a variety of causes, including pain, anxiety, stress, adverse effects of

medications, and environmental disruptions. In comparison to controls or other therapies, cognitive behavioural therapy for insomnia (CBT-I) was shown to be an effective treatment to enhance sleep quality for persons with chronic pain in a comprehensive review and meta-analysis of 42 randomised controlled trials⁵⁶. In contrast, Chen⁵⁷ conducted a qualitative investigation on the experiences of Parkinson's disease patients receiving bright light treatment. Parkinson's disease (PD), a neurodegenerative condition that affects mobility, cognition, and mood, was the subject of this study's interviews with ten patients who took part in a randomised controlled trial of bright light therapy. The study discovered that patients' experiences with bright light treatment were varied and that they had a range of symptoms, including improved mood, reduced fatigue, greater alertness, and improved motor performance. The study also looked at the convenience, comfort, preference, expectations, and feedback that affected patients' adherence to bright light treatment.

According to the study by Latocha⁵⁸, restricted sleep is a dichotomous phenomenon with both advantages and disadvantages. Even though it is the part that patients dislike the least, CBT-I has repeatedly been shown to be the most effective in treating insomnia. A number of clinicians indicated that they struggle to conduct a more comprehensive examination of a patient's sleep when they report having difficulty sleeping (for example, the frequency of such occurrences)⁵⁹. Although introducing non-pharmacological therapies in clinical care to help chronically sick patients sleep better necessitates a multidisciplinary strategy that involves the cooperation of healthcare professionals, patients, and carers⁶⁰. Notably, individuals have stated that neither their main cancer care providers nor anyone else involved in their care informed them that they could encounter sleep problems while receiving treatment for their disease⁶¹. According to a recent study by Clara⁶², patients have emphasised the need to bring up sleeplessness and the programme with patients as early in the cancer care process as is practical.

Moreover, aligned with the study of Savard⁶³, Jensen⁶⁴ also found that the impact persisted for several months and was interpreted as a fundamental shift in one's subjective understanding of sleep, which corroborates the lasting impact of Cognitive Behavioral Therapy for Insomnia. On the other hand, SRT has been demonstrated to be helpful in treating a number of chronic medical diseases, including cancer, chronic pain, and chronic fatigue syndrome, by enhancing the quality of sleep. Other outcomes, including pain, mood, exhaustion, and quality of life, can also be improved by SRT. SRT, however, need patient commitment, motivation, and help from a healthcare professional⁶⁴. The study⁶³ revealed that the participants began to observe improvement in their sleep patterns, apparently resulting from diminished sleep onset latency and heightened sleep consolidation, thereby augmenting sleep efficiency, and the constraints became more pleasant. While using either CBT-I, sleep

restriction therapy or muscular relaxation, non-pharmacological interventions have proven to be a successful method in enhancing the sleep quality of the patient struggling with chronic medical conditions.

Conclusion

The systematic review aimed to explore the effectiveness of the non-pharmacological intervention for enhancing the quality of sleep of chronically ill patients. The effectiveness of these interventions has been identified in cancer patients, rheumatoid arthritis, and older patients with numerous health problems. The systematic review of three studies has found that compared to pharmaceutical therapies, non-pharmacological approaches, particularly CBT-I, provide more substantial and consistent evidence of effectiveness for enhancing sleep quality in individuals with chronic illnesses. However, additional studies are required to compare the effectiveness and safety of various therapies. A thorough, peer-reviewed literature search technique was one of this systematic review's strong points. Following the PRISMA declaration while conducting and reporting this systematic review, and employing clear standards for independent reviewers to conduct data extraction, critical evaluation, and screening There is a need to consider non-pharmacological intervention for sleep quality treatment by doctors and hospital practitioners which requires a multidisciplinary approach. The study particularly focused on the sleep improvement of chronic disorders through non-pharmacological intervention to enhance the knowledge of practices and essentiality in the adoption of these techniques rather than a pharmacological approach.

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