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# Possibilities for treating patients with chronic diseases using music therapy

## Możliwości leczenia pacjentów z chorobami przewlekłymi za pomocą muzykoterapii

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### Abstract

**Introduction and objective:** The 21<sup>st</sup> century has seen a rapid increase in chronic diseases. The growth trend concerns mainly lifestyle diseases related to psychosocial and emotional conditions of human life. Therefore, the number of individuals seeking medical help due to acute or chronic stress or emotional tension has been rising. Treatment of such chronic conditions is mainly the domain of psychiatrists/psychotherapists, and sometimes general practitioners. Music therapy, or therapy through music, is increasingly being used to support the treatment of various chronic disorders (including somatic diseases). This study aims to objectively analyse the available literature on the use of music therapy for the treatment of patients with chronic conditions. **Materials and methods:** The research method used in this study was a literature review based on recent publications (books, articles) and research reports (studies and meta-analyses). Many recent studies have confirmed the effectiveness of music therapy in treating these conditions. **Results:** There are several benefits of music therapy in the treatment of chronic conditions due to its ability to influence both the psychological and physical aspects of health. Chronic conditions in which psychological factors such as stress, anxiety, or depression exacerbate physical symptoms can be effectively alleviated through the use of music in therapy. **Conclusions:** The conclusions include recommendations for the more frequent use of music therapy in managing chronic diseases, especially those with somatic symptoms.

**Keywords:** chronic illness, treatment, patients, psychotherapy, music therapy

### Streszczenie

**Wprowadzenie i cel:** W XXI wieku obserwujemy gwałtowny wzrost zapadalności na choroby przewlekłe. Wzrost ten dotyczy w szczególności chorób cywilizacyjnych związanych z psychospołecznymi i emocjonalnymi uwarunkowaniami życia człowieka, stąd też zwiększa się liczba osób poszukujących pomocy medycznej z powodu ostrego bądź przewlekłego stresu lub napięcia emocjonalnego. Leczenie takich stanów, które objawiają się jako choroby przewlekłe, jest głównie domeną psychiatrów i psychoterapeutów, a niekiedy także lekarzy pierwszego kontaktu. Muzykoterapia, czyli terapia za pomocą muzyki, jest coraz częściej wykorzystywana w leczeniu różnych zaburzeń o charakterze przewlekłym (także o podłożu somatycznym). Celem niniejszego badania jest obiektywna analiza dostępnego piśmiennictwa na temat leczenia pacjentów z chorobami przewlekłymi za pomocą muzykoterapii. **Materiał i metody:** Metodą badawczą zastosowaną w badaniu był krytyczny przegląd literatury. Opierał się on na najnowszych publikacjach (książkach, artykułach) i raportach z badań naukowych. Wynika to z tego, że w ostatnich latach przeprowadzono wiele badań, które potwierdzają skuteczność muzykoterapii w leczeniu tych dolegliwości. **Wyniki:** Muzykoterapia w leczeniu chorób przewlekłych przynosi wiele korzyści, które wynikają z jej zdolności do wpływania zarówno na psychiczne, jak i fizyczne aspekty zdrowia. Choroby przewlekłe, w których czynniki psychologiczne, takie jak stres, lęk czy depresja, mają wpływ na objawy fizyczne, mogą być skutecznie łagodzone dzięki zastosowaniu muzyki w terapii. **Wnioski:** W podsumowaniu przedstawiono wnioski i zalecenia dotyczące częstego stosowania muzykoterapii w leczeniu chorób przewlekłych.

**Słowa kluczowe:** choroby przewlekłe, leczenie, pacjenci, psychoterapia, muzykoterapia

## INTRODUCTION

**C**hronic diseases, also known as noncommunicable diseases (NCDs), are a major global health challenge, accounting for about 74% of all deaths worldwide. Major examples include cardiovascular diseases, stroke, cancer, diabetes, and chronic respiratory conditions. Of the 17 million people who die prematurely (before the age of 70) each year from NCDs, 86% live in low- and middle-income countries. The main risk factors contributing to these diseases include social, behavioural, and environmental determinants.

The World Health Organization (WHO) emphasises prevention through lifestyle modifications such as healthier diets, increased physical activity, and reduced tobacco and alcohol use. It also promotes global action plans, including improved access to health care and universal health coverage, especially in low-income countries where the burden of these diseases is the highest.

Chronic diseases are considered a contemporary pandemic, as they are affecting progressively younger populations, and the genesis of their development is not as clear-cut as it may seem (Gruszczyński, 2012). Although the situation of patients with chronic diseases has improved significantly in the 21<sup>st</sup> century, it is still unsatisfactory. As more and more people are diagnosed with lifestyle-related diseases, general practitioners, psychiatrists, psychologists, and psychotherapists should join forces in the treatment of patients with chronic conditions.

## DEFINITION AND AETIOLOGY OF CHRONIC DISEASES

The ICD-11, developed by the WHO (World Health Organization, 2022), defines chronic conditions according to specific criteria and classifications. Chronic diseases are generally characterised by their long duration and persistence, often lasting at least three months. For example, the ICD-11 describes chronic pain – a key category – as either primary (occurring without a clear underlying pathology) or secondary (related to conditions such as cancer, neuropathy, or musculoskeletal disorders). The classification also includes tools for coding severity and accounting for associated psychological or social factors.

The DSM-5 (American Psychiatric Association, 2022), by contrast, focuses less on the physical aspects of chronic conditions and more on mental disorders. However, it does address certain chronic conditions with psychological components, such as somatic symptom disorders. These are persistent physical symptoms associated with significant psychological distress or functional impairment. Currently, approximately one hundred disease entities are listed as chronic conditions. Symptoms may affect any organ or bodily system. The course of these disorders is chronic, variable, and often associated with disruption of

social, interpersonal, and family functioning (World Health Organization, 2022).

Undoubtedly, psychological, biological and social factors play an important role in both the onset and course of chronic disease, influencing a person's individual susceptibility. Which organ or system is affected by chronic diseases depends on the "congenital susceptibility to the disease" (Kuberska-Kędzierska, 2018, p. 10). In summary, chronic diseases are those pathological changes in the pathogenesis and course of which genetic, somatic and psychosocial factors play an important role (Luban-Plozza et al., 1995). For further discussion of somatic symptoms in chronic disorders – their treatment, origins, and associated challenges, see Szewczyk and Kulik (2014) or Orzechowska and Gałęcki (2014).

## DESCRIPTION OF OWN RESEARCH

The authors have conducted a literature review, i.e. a comprehensive and objective summary of the available literature on music therapy in the context of chronic diseases (including somatic symptoms in these conditions). The aim of the study (literature review) is to present the latest research on the applicability of music therapy to chronic and somatic illnesses. The authors have adopted a critical approach to the literature review, taking into account its quality, timeliness, and relevance in the context of the research problem. The review was carried out between 2021 and 2024, and took into account the available literature on the subject. This included books, scientific articles, and meta-analyses. Publications that did not meet the criteria of evidence-based medicine were excluded from the analysis.

## THE ROLE OF MUSIC THERAPY IN VARIOUS SOMATIC CONDITIONS

Music therapy – the intentional use of music to promote healing and well-being – has a rich history spanning many centuries and cultures. However, its development as a formal clinical discipline is relatively recent. The modern origins of music therapy can be traced to the aftermath of the First and Second World Wars, when musicians played for wounded soldiers in hospitals. Observations of improved morale, reduced pain, and faster recovery in patients sparked interest in studying the therapeutic potential of music. The second half of the 20<sup>th</sup> century saw the integration of music therapy with neuroscience and psychology, leading to the development of evidence-based practice. Advances in neuroscience and technology, such as brain imaging, have since scientifically validated the effects of music therapy on the brain, mood (emotions), and behaviour.

It should be noted that music therapy for patients with chronic illnesses may only be conducted by a certified music therapist with a university degree or specialisation in music therapy (requirements in Poland).

## LITERATURE REVIEW ON SOMATIC AND MENTAL ILLNESSES

“Music Therapy in Mental Health for Illness Management and Recovery” (2015) by Silvermann, and “Music Therapy in the Treatment of Adults with Mental Disorders: Theoretical Bases and Clinical Interventions” (2005) by Thaut and Unkefer, are considered the most important books on music therapy in mental illness. In addition, Wigram and De Backer discuss the use of music therapy in mental health in their publication “Clinical Applications of Music Therapy in Psychiatry” (Langenberg, 1999). Silvermann’s book provides a comprehensive overview of how music therapy can help individuals cope with mental illness and contribute to the recovery process. It explores evidence-based practices and presents practical applications across various populations and settings. Thaut and Unkefer’s book is a foundational text that explores the role of music therapy in addressing mental health issues in adults. It covers a wide range of conditions, techniques, and interventions. It includes case studies and treatment strategies for common mental health conditions such as depression, anxiety, schizophrenia, bipolar disorder, and post-traumatic stress disorder. Wigram’s book presents a comprehensive analysis of how music can address psychological and emotional challenges, providing both theoretical insights and practical guidance for therapists working in psychiatric settings. It includes case studies that illustrate the practical application of music therapy in clinical settings. His work explores how techniques such as improvisation, songwriting, text analysis, and receptive listening promote emotional expression, social interaction, and cognitive engagement. It also bridges the gap between psychiatric care and music therapy, highlighting the latter’s role in promoting mental and physical healing, particularly in chronic and somatic contexts.

In the German-speaking world, reference can be made to the recent book by Schmidt et al. (2020), as well as the research of Schneider et al. (2020), Metzner (2014), or Kächele et al. (2003). Schmidt’s book focuses on the theoretical and clinical application of music therapy for mental health. Combining psychoanalytic, humanistic, and behavioural approaches, it reflects a European perspective on music therapy. It discusses how music influences brain function and neuroplasticity, and contributes to emotional and physiological regulation. It also highlights research on the effectiveness of music therapy for both psychiatric and psychosomatic disorders.

In addition, methods, models, case descriptions, and treatments for somatic patients are described by Tonn (2010). The book by Frohne-Hagemann and Pleß-Adamczyk (2005) on the applications of music therapy for psychological problems in children and adolescents is also highly recommended.

## NEW RESEARCH ON CHRONIC ILLNESS AND MUSIC THERAPY

In recent years, many studies have confirmed the effectiveness of music therapy in the treatment of somatic

complaints beyond depression. Applications of music therapy in psychosomatic medicine include:

- Stress and anxiety reduction. A study published in 2017 (Rossetti et al., 2017) found that music therapy significantly reduced anxiety and improved quality of life in patients undergoing cancer treatment. Patients attending music therapy sessions reported less stress and improved emotional well-being. Relaxation music can help reduce levels of the stress hormone cortisol while enhancing mental and physical well-being (Pelletier, 2004).
- Pain management. Research shows that music therapy can effectively reduce chronic and acute perceived pain (Lee, 2016). Music can act as a distraction, helping patients to focus on something other than pain (Cepeda et al., 2006). A 2015 study investigated the effect of music therapy on pain levels in post-surgical patients. Results showed that patients who listened to relaxing music before and after surgery reported less pain and required lower doses of pain medication (Hole et al., 2015).
- Improving sleep quality. Listening to relaxing music before bedtime can improve sleep quality in individuals suffering from insomnia and other sleep disorders (Jespersen et al., 2015; Lai and Good, 2005). For insomnia, music therapy offers benefits through relaxation, stress reduction, and emotional regulation. Study participants reported better sleep quality and fewer sleep problems. Music therapy can also reduce sleep disturbances and wakefulness, particularly in older adults.
- Post-stroke rehabilitation. Studies by Thaut and Abiru (2010) and Schneider et al. (2007) show that music therapy can significantly aid rehabilitation after stroke, especially by improving motor function (motor skills) and coordination. Neurological music therapy (NMT) uses evidence-based music interventions to address sensory, cognitive, and motor deficits. It leverages the relationship between music and brain function to promote rehabilitation and recovery.
- Supporting rehabilitation. Music therapy can reduce the level of anxiety in patients with dementia compared to patients receiving typical care or treatment (Särkämö et al., 2014). It can also stimulate recovery after brain injuries such as traumatic brain injury, stroke, or hypoxic events (Magee et al., 2017). Using NMT, the brain’s ability to reorganise and adapt by forming new neural connections is activated, promoting neural plasticity, improving motor and cognitive function, and supporting emotional well-being.
- Help with metabolic diseases. Music therapy may be useful in the treatment of obesity and metabolic syndrome (Witusik et al., 2023) as well as type 2 diabetes (Cioca, 2013; Witusik et al., 2022). Goals of music therapy for individuals with diabetes include stress reduction and glycaemic control, improved cardiovascular health, pain management (control) in diabetic neuropathy, improved psychological well-being, and better adherence to treatment.

Music therapy approaches for patients with type 2 diabetes may include receptive therapy (listening to relaxing music tailored to the patient's preferences), active music therapy (participating in music-making, singing, or movement-based sessions), or guided relaxation (combining music with breathing exercises or progressive muscle relaxation).

Among the many studies conducted on patients with depression, the research by Erkkilä et al. (2013, 2021, 2011) deserves special mention. The 2011 study concluded that individual music therapy, combined with standard care, is effective in treating depression in working-age adults. The 2021 study adds to the growing body of evidence supporting the use of music therapy as a viable treatment option for depression, and highlights the potential benefits of integrating specific techniques, such as resonance frequency breathing or listening homework, to improve therapeutic outcomes.

### NEW META-ANALYSIS ON MUSIC THERAPY AND SOMATIC SYMPTOMS

In addition to scientific studies, meta-analyses have become increasingly popular in recent years and are also used in music therapy research. For example, de Witte et al. (2022) conducted a meta-analysis of the effectiveness of music therapy in reducing stress across different populations. This meta-analysis demonstrated a significant reduction in stress levels in participants receiving music therapy compared to control groups. The effectiveness of using music therapy in both health and mental health care is also discussed in this meta-analysis.

Another meta-analysis was conducted by Yangöz and Özer (2022), who investigated the effects of music interventions on the physical and psychological well-being of patients undergoing haemodialysis. They concluded that music therapy helped alleviate symptoms such as anxiety, depression, and physical complaints (e.g. pain, fatigue). Their findings highlight the potential for music to be used as a supportive treatment in the management of chronic diseases, particularly in settings such as dialysis centres.

The most recent systematic review and meta-analysis by Xu et al. (2024) focuses on breast cancer patients, examining the effects of music therapy on anxiety and depression. The authors found that music therapy significantly reduces both anxiety and depression levels in this population, suggesting it is a beneficial adjunctive treatment. They also examined variables such as the type of music intervention (e.g. active or receptive) and its integration with standard cancer care protocols, recommending tailored approaches for maximum benefit.

Collectively, these meta-analyses highlight the role of music therapy as a versatile and effective intervention for managing psychological and physical symptoms across diverse clinical populations, such as those experiencing stress, chronic illness, or cancer. By synthesising data from

multiple studies, they provide strong evidence supporting the integration of music therapy into holistic care practices.

### LITERATURE REVIEW ON THE TREATMENT OF PATIENTS WITH SOMATIC SYMPTOMS

The best treatment for patients with chronic conditions is psychotherapy. In an “ideal approach”, these patients should be treated in a comprehensive, interdisciplinary manner, taking into account proper nutrition and rehabilitation. Patient with chronic disease should be treated by multidisciplinary teams. Such a team should include a psychologist, psychotherapist, psychiatrist, a specialist in methods of working with the body, art therapist (music therapist), and other medical specialists. An interdisciplinary approach to the patient is important because chronic disorders are often resistant to outpatient treatment (see: Gruszczyński, 2010, p. 105).

Unfortunately, no single optimal therapeutic approach has been established for the treatment of chronic disorders. Any school of therapy (i.e. cognitive-behavioural, systemic, psychodynamic, or humanistic) can be effective in helping patients with chronic conditions. Reliable training of psychotherapists, continuous improvement of professional qualifications, multidirectional training (e.g. psychodynamic training complemented by cognitive-behavioural training and vice versa), openness to scientific knowledge, and a wise combination of various therapeutic methods and techniques are essential in the treatment of chronic illnesses.

It is also important that psychotherapy for patients with chronic illnesses is conducted by experienced psychotherapists. Therapy for this group is “easier to describe than to implement” (Kaczmarek, 2020, p. 243). When working with these patients, the therapist must demonstrate appropriate therapeutic skills, as this group often comprises difficult, dissatisfied, somatising, resistant, and regressive patients.

A wider range of methods and techniques may be used (with greater flexibility) when working with patients with chronic conditions compared to those with psychiatric disorders. Patients with chronic diseases can work with techniques based on consciousness and subconsciousness (hypnosis, trance, fairy tales, metaphors), imagination, fantasy, movement, i.e. many imaginative techniques. The treatment of chronic patients is characterised by a wide spectrum of interventions, but with less reliance on pharmacotherapy, and a greater role for psychoeducation and individual “work on problems”. In addition to psychotherapeutic treatment, dance therapy and art therapy, especially bioenergetics developed by Lowen, TRE technique, or the mindfulness approach by Kabat-Zinn, deserve attention (Kaczmarek, 2020, p. 358).

The most important part of the therapeutic process is the relationship based on commitment, presence, empathy, trust, compassion, respect, partnership, and co-responsibility. Establishing an appropriate therapeutic relationship is important so that the patient can safely express their concerns,

admit their needs, and learn to meet them in a healthy manner (Bruscia, 2014).

## THE MAIN AIMS OF MUSIC THERAPY

The main therapeutic goal when working with patients with various chronic illnesses is not the elimination of symptoms (it is difficult to guarantee this; it is not a therapeutic objective), but the recognition of somatic symptoms (e.g. stress, anxiety). Improvements in the patient's somatic state are viewed as an indirect effect of the therapeutic work. The main goal and the "hard endpoint" in managing these patients should, therefore, be to improve the patient's well-being and mood.

The literature shows that patients with chronic diseases and somatic symptoms often have little insight into problem perception and (self-)awareness, and limited access to the emotions they experience. Many patients have been taught (since childhood) either to suppress their feelings or to deny certain (unwanted, negative, unacceptable, difficult, repressed) emotions. Therefore, one of the most important areas covered by deprivation is the emotional sphere. Naming and defining emotions – determining what one is feeling and experiencing at the moment – is often extremely difficult in this group of patients.

In summary, working with emotions is one of the most important goals when managing patients with chronic diseases and somatic symptoms. These patients are often unable to regulate emotions and have problems recognising and naming them. They also typically deal with their emotions instrumentally. Working on uncovering deeply hidden emotions is therefore a key goal of therapy – whether verbal or non-verbal.

Patients with somatic symptoms often find it challenging to believe – during therapeutic work – that various problems related to their physical health have their origins in the psyche. It is also difficult for them to understand the interdependencies between "soma" and "psyche", especially since, in a holistic approach, the head and body are seen as one. Thus, these patients often have problems with diagnosis, i.e. accepting the medical diagnosis and the fact that their illness has a psychological element, that the symptoms they are experiencing are psychological, and that their real symptoms and real physical illness may be the result of emotional problems. Accepting a somatic symptom is difficult for these patients because it is, to some extent, associated with "psychological stigma" (Kuberska-Kędzierska, 2018, p. 198), and retreating into the illness itself turns out to be more socially acceptable than addressing the causes of the disease and then trying to make changes.

In other words, the main goal of therapy for chronic patients with somatic symptoms is to work on becoming aware of and accepting difficult, repressed emotions, and to enable the patient to express repressed feelings. In addition to the emotional area, it is worth working with these

patients on problems in the cognitive, social, and personal/interpersonal domains.

## RESEARCH FINDINGS

Current research supports the effectiveness of music therapy in reducing stress, anxiety, and pain, improving sleep quality, and supporting rehabilitation. Music therapy is increasingly being used in various aspects of treatment for chronic and somatic disorders, confirming its versatility and therapeutic potential.

Based on the literature and research on the use of music therapy, the following conclusions can be drawn:

1. Music therapy is effective in reducing stress, which is one of the main factors contributing to the onset and severity of somatic disorders. Techniques such as listening to relaxation music, instrumental improvisation, or breathing exercises with music help reduce cortisol levels and stabilise the autonomic nervous system.
2. Music allows patients to express emotions that may be repressed or unconscious and manifest as somatic symptoms. It provides an opportunity to explore emotions in a safe environment that supports their integration and processing.
3. Music therapy can help reduce the intensity of somatic symptoms such as headaches, muscle pain, stomach aches, or muscle tension. The use of music-based techniques helps regulate the functions of the autonomic systems, such as the cardiovascular and digestive systems.
4. Music can help patients understand their body's signals and learn how to regulate their stress response. This increases their sense of control over their condition and helps them develop healthy coping strategies.
5. Music therapy improves patients' quality of life by providing moments of relief and relaxation from the daily difficulties of illness. The reduction in anxiety and improvement in mood lead to a greater sense of well-being and increased motivation to engage in other forms of therapy.
6. Music therapy can be used as a complementary method in the treatment of chronic illnesses, in conjunction with psychotherapy or pharmacotherapy. Through music, patients often open up more quickly to other forms of therapy, increasing the effectiveness of the overall treatment process.
7. Music therapy is extremely flexible and can be adapted to the needs of the patient, regardless of age, condition, or type of chronic disorder. Personalising music interventions increases their effectiveness and acceptance by patients.

For patients with chronic pain and somatic conditions, specific types of music therapy are recommended to address both the physical and psychological dimensions of their conditions. Key approaches include:

1. NMT;
2. guided imagery and music;



3. receptive music therapy;
4. resource-oriented music therapy;
5. psychodynamic music therapy.

In most cases, music therapy sessions for these patient groups take place in group settings once or twice a week. Music therapy is often most effective when incorporated into a multidisciplinary approach that includes physiotherapy, psychological support, and medical treatment. Tailored sessions that consider patients' preferences and psychological needs can maximise therapeutic benefits.

## CONCLUSIONS

Music therapy as an adjunctive therapy for patients with various chronic and somatic disorders has shown promise in addressing both the physical and psychological aspects of these conditions. Music therapy is an effective, safe, and multidimensional method for supporting patient care. By harnessing its potential, it is possible to both alleviate somatic symptoms and assist in coping with the psychological aspects of the illness. Integrating music therapy with other therapeutic approaches can help improve patients' health and quality of life.

Patients with various illnesses (especially chronic conditions) share many common characteristics, including problems across cognitive, social, personal, and physical domains, as well as problems in the emotional sphere. Lack of ability to name and recognise emotions, difficulty regulating emotions, limited insight and awareness of experienced feelings, emotional inhibition or suppression of painful feelings – these are typical emotional problems faced by these patients. One of the main aims of psychotherapeutic work with patients experiencing somatic symptoms is to work on emotions. The patient's task is to “tame” their emotions, to notice and recognise them, to express them, to name them, to understand them, to accept them, and to feel them in the body.

In general, various chronic diseases can be understood as “a delayed physical reaction of the body to long-term stress, traumatic experiences, mental conflicts or long-suppressed emotions” (Kuberska-Kędzierska, 2018, p. 197). However, the most important factor in the development of various chronic diseases are emotional states of varying intensity that cause prolonged organ reactions (trauma, mostly from childhood, e.g. physical or mental abuse, or specific family patterns, e.g. distant, unemotional parenting). In other words, there is a connection between negative psychosocial (emotional) events in childhood and adulthood, and certain personality traits, with the incidence of specific somatic diseases.

Patients with chronic illnesses can benefit from many psychotherapeutic approaches, taking into account the important role of the therapeutic relationship. Work with these patients is possible across all therapeutic paradigms, i.e. humanistic-existential, systemic, analytical, and cognitive-behavioural. Music therapy can serve as a complementary

source of work with a patient with various chronic illnesses (with somatic symptoms). Depending on the needs and expectations of the patient, music therapy can be tailored to the patient's most important concerns. The use of music therapy makes it possible to work in multiple areas at once. More importantly, music therapists can respond to the individual needs of patients and improve the area that is most crucial (blocked) at any given time.

Unfortunately, various chronic and somatic diseases are expected to develop at a record pace in the future, and this will be influenced by the progress of civilisation, advances in digitalisation and computerisation, a continuous rise in the standard of living or an increase in social inequalities. Environmental pollution, the development of artificial intelligence, and the increasing risk of pandemics will also have an impact on people's well-being.

## Conflict of interest

*The authors do not report any financial or personal connections with other persons or organisations which might negatively affect the content of this publication and/or claim authorship rights to this publication.*

## Author contribution

*Original concept of study; analysis and interpretation of data; writing of manuscript: SK. Collection, recording and/or compilation of data; critical review of manuscript; final approval of manuscript: ACL.*

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