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Therapeutic Function of Music: A Structured Plan and Worksheet for Anxiety Patients

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Abstract: *Music therapy is increasingly recognized as an effective intervention for various medical and psychological conditions. Central to this practice is the Therapeutic Function of Music (TFM) theory, which employs musical elements within a structured framework to achieve specific therapeutic outcomes. Building on Hanson-Abromeit's TFM Plan and its ante-hoc worksheet, the present study introduces a preliminary model for applying receptive music therapy to patients experiencing anxiety—both state anxiety and anxiety disorders. A theoretical worksheet was developed by integrating insights from a comprehensive literature review, aligning treatment aims with relevant theoretical frameworks and musical elements such as tempo, harmony, form, melody, and rhythm. The worksheet aims to provide clinicians with a structured, evidence-based approach for developing personalized playlists in receptive music therapy. This structured approach enhances information sharing among practitioners, fostering the standardization and optimization of receptive music therapy for anxiety management.*

Key-words*: receptive music therapy, therapeutic function of music, anxiety, ante-hoc worksheet*

1. Introduction

Receptive music therapy has appeared as an effective intervention for managing anxiety, using the therapeutic potential of musical elements like rhythm, melody, and harmony to promote relaxation and alleviate symptoms. This approach is grounded in the Therapeutic Function of Music (TFM) theory, developed by Hanson-Abromeit (2013), which sets up a direct connection between therapeutic goals and the specific characteristics of musical elements. In 2015, this framework was expanded with the introduction of the TFM Plan, an ante-hoc worksheet that

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organizes key components such as problem statements, musical elements, theoretical frameworks, and their practical implications (Hanson-Abromeit, 2015).

Building on this foundation, this article proposes a preliminary worksheet (TFM Plan for Reducing Anxiety Levels and Symptoms Table) tailored for receptive music therapy for clients with anxiety symptoms. By providing a systematic approach, this worksheet aims to facilitate the practical application of theory-driven strategies, enhancing the efficacy of receptive music therapy in addressing the unique needs of individuals with anxiety.

Although receptive therapy playlists must be adapted to each client's profile, we propose that such a structured worksheet facilitates the therapist's selection process by providing a musicological perspective—specifically, a parametric musical approach—as the primary framework. Each musical parameter is reviewed through an extensive literature analysis to determine its impact on the targeted psychological and physiological issues. Consequently, the conclusions drawn for each parameter ensure that the final music selections adhere to musicological criteria while serving the intended therapeutic purpose.

In this study, we have deliberately refrained from including specific musical pieces that align with the characteristics identified in the worksheet. This decision was made to avoid constraining the proposed framework to a particular musical genre, preventing cultural biases and ensuring a balanced level of generalization. By maintaining this level of flexibility, we enable practitioners to customize interventions according to diverse cultural and individual preferences, thus enhancing the effectiveness of receptive music therapy across various contexts.

As a result of this research, the proposed table provides a structured theoretical foundation that supports therapists in selecting or adapting musical material according to show-based parameters. When necessary, the music therapist may employ music technology tools to change the client's preferred pieces—adjusting tempo, tonality, or performing more advanced procedures such as filtering specific frequency ranges that do not align with the theoretical conclusions presented. This framework encourages a thoughtful and systematic approach to identifying musical works that meet the targeted therapeutic parameters, thereby ensuring coherence between the theoretical model and its practical application in receptive music therapy for anxiety.

2. Literature review

According to the World Health Organization (WHO), anxiety disorders are the most common mental health conditions globally, affecting 301 million people in 2019.

Also, anxiety is the most diagnosed and rapidly increasing mental health disorder in the European Union (2022). This underscores the urgent need for effective, accessible interventions like receptive music therapy, which harnesses the therapeutic potential of musical elements to address anxiety and promote mental well-being.

A 2021 meta-analysis of 32 randomized controlled trials involving 1,924 participants confirmed that music therapy significantly reduces anxiety during treatment. The interventions averaged 7.5 sessions, with follow-ups lasting 7.75 weeks on average. Subgroup analyses showed effectiveness across age groups, session durations, and economic contexts. However, limited data on follow-up effects and inconsistent durations highlight the need for further research on its long-term impact (Lu et al., 2021).

Music interventions have been explored in anxiety management both in daily life (Carlson et al., 2015) and clinically, such as pre-procedure anxiety (Mackintosh et al., 2018; Vachiramon et al., 2013). According to Taipale et al. (2024), one significant aspect of music listening in music therapy for anxiety treatment is its evolution through collaboration with the therapist. While individuals may already have the capacity to use music as a tool, therapy refines and strengthens these abilities. In everyday life, music is often used unconsciously, but within a therapeutic setting, its role becomes more deliberate—helping individuals regulate emotions, shift focus, and manage their mental state more effectively. Following these ideas, one method to achieve this is by providing music with carefully adjusted parameters to support all processes involved in reducing anxiety.

The study by Antoniazza et al. (2018), proves that live music performances can significantly reduce anxiety, improve physiological parameters like blood pressure and oxygen saturation, and achieve high levels of patient satisfaction. By engaging the brain's limbic system, music therapy not only alleviates emotional distress but also induces physiological relaxation, reinforcing its role as a powerful tool in anxiety management (Bellinger et al., 2023; Harney et al., 2023; Lee et al., 2016).

Music-based interventions have been shown to play a crucial role in reducing stress and anxiety among patients undergoing demanding medical treatments such as chemotherapy. Recent multi-site randomized clinical trials prove that live group music therapy can significantly decrease state anxiety and enhance multiple dimensions of well-being, underscoring its potential as a safe, non-invasive, and effective adjunct to standard medical care (Ettenberger et al., 2025).

Auditory beat stimulation in the delta–theta frequency range (0–7 Hz) has recently appeared as a promising non-invasive technique for anxiety reduction. Evidence shows that when monaural beats are harmoniously embedded within

music, they can significantly decrease state anxiety and enhance positive emotional valence, supporting their potential integration into receptive music therapy as a targeted form of auditory neuromodulation (Venkatesan et al., 2025). These findings highlight the importance of exploring structured and theory-based receptive approaches, such as the present study, to better understand how specific musical parameters contribute to anxiety reduction.

3. Therapeutic Function of Music Plan Worksheet

3.1. Problem Statement, Rationale, Treatment Goal

Anxiety significantly diminishes the quality of life, with symptoms such as excessive worry, restlessness, difficulty concentrating, rapid heart rate, increased muscle tension, and heightened alertness in response to specific situations (American Psychiatric Association, 1994).

Music is deeply connected to human emotional and physiological responses (Droit-Volet et al., 2013; Gebauer et al., 2012; Sarkamo et al., 2008), primarily due to its ability to influence neurological pathways and autonomic functions (Agnati et al., 2023; Chanda and Levitin, 2013; Escoffier et al., 2015; Olszewska et al., 2021). Music helps alleviate symptoms of anxiety by engaging brain regions involved in stress regulation, such as the limbic system, while also interacting with auditory and cardiovascular systems to promote relaxation (Koelsch, 2010).

Music's calming effects have been shown to reduce heart rate, lower cortisol levels, and enhance emotional well-being (Belfi and Loui, 2020; Denk, 2023; Golden et al., 2021; Wilhelm and Flaagan, 2018; Zatorre, 2015). Addressing anxiety through receptive music therapy provides a non-invasive and holistic therapeutic approach. The treatment goal is to reduce anxiety levels and symptoms.

3.2. Theoretical framework and practical application of musical elements in receptive music therapy for anxiety

The following table summarizes the theoretical foundations and practical implications of the musical elements considered relevant for receptive music therapy interventions targeting anxiety. It integrates current research findings with clinical reasoning, outlining how each musical parameters such as timbre, rhythm, tempo, melody, harmony, dynamics, lyrics, and style—can be purposefully applied to support relaxation, emotional regulation, and anxiety reduction.

The proposed table was designed following the structure originally developed by Hanson-Abromeit in her *Therapeutic Function of Music (TFM) Plan* framework. This format was kept intentionally to ensure conceptual continuity with the original model and to ease the systematic organization of theoretical and practical data. Presenting the information in this format allows for a clear alignment between musical elements, their theoretical underpinnings, and their therapeutic purposes, supporting fidelity to the methodological principles proven by the original author.

Musical element	**Theoretical framework**	**Purpose of musical element**	**Explicit description of the musical element**
Timbre	Timbre plays a pivotal role in shaping the emotional perception of music by conveying qualities that listeners associate with specific feelings or moods. The tonal color or quality of a sound can elicit emotional responses—such as warmth, calmness, or tension—based on its characteristics, including brightness, softness, or harshness. (Caclin et al., 2005; Hailstone et al., 2009; Schneider, 2001).	The timbre of music designed to alleviate anxiety should emphasize soft, smooth, and mellow qualities, as these are linked to calming effects on the listener. Research indicates that such timbres can activate the parasympathetic nervous system, foster relaxation and lower cortisol levels (Chanda and Levitin, 2013).	Based on patient's preferred musical instruments, the therapist can curate a repertoire that incorporates instruments with warm timbres, such as piano, sitar, flutes, acoustic guitar, or a symphony orchestra. Special consideration should be given to other elements that may influence the listener's feeling, including the interplay of timbre with dynamics, harmonic and melodic writing, and the size of the orchestral ensemble—preferably focusing on strings. Additionally, sounds from nature and the human voice may be included (Ragavan et al., 2023).
Tempo	The tempo of music is a pivotal factor in modulating the stress response, often exerting a greater influence on stress reduction than other musical elements	Slow-tempo music has been associated with a reduction in several physiological indicators, including slower breathing, decreased heart rate, lower body temperature,	The songs included in the playlist should fall within the slow-tempo range, ensuring that the pulse rate stays below approximately 70-75 BPM. Additionally, we

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	(Gomez and Danuser, 2007a).	reduced sweat production, and diminished muscle tension (Brownlow, 2017; Mallik and Russo, 2022)	recommend aligning the tempo of the music with other time-related elements, such as rhythm and meter.
Rhythm	Time in music is organized through temporal constructs using fundamental elements such as rhythm and pulse. The pulse, or basic beat, refers to a recurring pattern of equal intervals between acoustic events, generating a sense of temporal predictability that is intuitively felt rather than explicitly heard. Rhythms, as subdivisions of the pulse, combine varying note lengths and accents to form patterns ranging from simple to complex. These rhythmic patterns can convey information such as motor cues or cultural identity (Thaut and Hoemberg, 2014).	Mechanisms of expectation and prediction lie at the heart of musical perception and cognition. The brain continuously generates hypotheses about upcoming musical events, which are typically resolved within a few notes or beats. This process of resolving uncertainty aligns with the concept of epistemic affordance, wherein music inherently invites us to confirm or challenge competing theories. To fulfill these expectations, pulse and rhythm must support predictability (Koelsch et al., 2019; Witek et al., 2014).	The rhythmic parameter and pulse must remain stable and predictable, avoiding excessive or unexpected changes that might disrupt the listener's expectations. A homogeneous meter, with consistent accents and an even pulse, is recommended. Syncopation, counter-rhythms, or abrupt changes should be minimized. Predictable rhythm could be combined with a timeless melodic line to evoke a sense of stillness. Client preferences should always be considered to ensure the intervention resonates personally with the listener.
Harmony	Research consistently shows that happy music is typically associated with a major mode (thus creating a gravitational harmony), while sad music tends to feature a minor mode (Dalla Bella et al., 2001; Pallesen et al., 2005; Peretz, 1998). In a study by 116	Harmony is the framework that supports the melody. It alternates between tension and relaxation, setting up the gravitational or non-gravitational environment of the music and influencing emotional processing (Torres Agustín et al., 2024). In	Based on established research principles, we recommend that music included in a relaxation playlist should be gravitational, avoiding sharp modulation or excessive alternation between tonal stability and instability. We recommend a strong

Musical element	Theoretical framework	Purpose of musical element	Explicit description of the musical element
	participants evaluated 110 film soundtrack excerpts, analyzing 200 audio features, music rated as happy by listeners was characterized by a major mode, while sad and tender music predominantly used a minor mode, aligning with findings from similar studies (Bresin and Friberg, 2011; Thaut and Hoemberg, 2014)	our research, the key focus is whether the harmony is set in major or minor modes or tonalities, as these two factors decide whether the music evokes happy or sad emotions, as proved by earlier studies (Straehley and Loebach, 2014).	intrinsic correlation between melodic contour, intervals, musical form, and harmonic context. While pieces in major modes and keys are preferable as they evoke positive emotions, minor keys should also be considered, following the ISO principle, if they align with the patient's current mood.
Dynamics	The intensity of sound has been found to positively correlate with arousal (Juslin, 1997; Rigg, 1964). Furthermore, this correlation is stronger for emotions associated with high arousal compared to those linked to low arousal (Gomez & Danuser, 2007b). Another important aspect is the role of large sound level variability and rapid changes in sound level in the process by which music conveys fear (Trevor et al., 2023).	High-arousal music may not be suitable for individuals with elevated levels of anxiety due to their distinct physiological and psychological responses to stress. While individuals with chronic anxiety often report feelings of hyperarousal, studies show that their baseline physiological state is typically marked by increased muscle tension rather than autonomic hyperarousal. In response to everyday stress, they show reduced physiological flexibility, making it more difficult for their bodies to adapt to changes. Furthermore, they tend to overreact both emotionally and physiologically to anxiety-inducing stimuli, despite having subdued re-	Music included in the playlist designed to avoid increasing anxiety should have a gentle and steady dynamic range, with no sudden changes in intensity. The overall volume should remain moderate to low, creating a soothing and predictable auditory environment. This consistency helps prevent overstimulation, promoting relaxation and a sense of calm. Additionally, therapists must consider the correlation between this parameter and timbre, as volume and dynamic changes are directly influenced by the instrumentation used. Related to this, we emphasize the importance of using stable,

Musical element	Theoretical framework	Purpose of musical element	Explicit description of the musical element
		sponses to neutral ones (Hazlett et al., 1994; Hoehn-Saric and McLeod, 2000). High-arousal music may replicate or amplify these anxiety-provoking stimuli, leading to exaggerated emotional and physiological reactions. As a result, it can worsen discomfort and prolong anxiety. In contrast, low-arousal music can promote relaxation and minimize overstimulation.	high-quality music reproduction equipment capable of accurately reproducing the full spectrum of frequencies in the music recommended by the therapist, as well as supporting a stable dynamic range without interruptions, noise, or volume fluctuations due to technical defects.
Melody, Pitch, and Form	Melodic structure (both micro, as in melody, and macro, as in form) and pitch are crucial elements in music's capacity to influence emotions and alleviate anxiety. Melodies are often organized into predictable, hierarchical patterns that align with inherent human preferences for structure (Huron, 2006). Furthermore, there is a universality in the understanding and expectation of music regarding these elements (Brown and Jordania, 2013) .	By juxtaposing the concept of universality in understanding music with the need for predictability in anxiety reduction, we see that melody, pitch, and form are crucial elements. Predictable melodic structures, such as descending contours and stepwise motion, create a sense of closure and calm through phrases and periods with regular cadences. Meanwhile, larger intervals followed by smaller ones help support balance and reduce tension (Brown & Jordania, 2013). This organization of sound aligns with the brain's need for predictability, which can lower stress levels by fulfilling	Music with a melodic line based on predictable structures, featuring small intervals, and a melodic contour in the shape of a U or an inverted U, with a range that is still medium or low, is recommended. The music should also include well-defined melodic themes that stand out from the rest of the composition. We suggest that the primary methods of melody development include repetition, variation with minimal contrast, and sequencing. Additionally, we recommend that melodies emphasize a tonal center —especially when paired with harmony. Musical form plays a pivotal role, as it

Musical element	Theoretical framework	Purpose of musical element	Explicit description of the musical element
		cognitive expectations (Patel, 2010). We must consider musical elements that can induce fear or panic. These include high pitch, an extensive pitch range, large pitch contrasts, and pitch-related microstructural irregularities (Juslin, 2019).	relies on repetition and predictable structures, incorporating symmetrical melodies to foster a sense of stability and calm. For this reason, we suggest miniature music or variation forms, which reward the listener's expectation by allowing them to follow familiar musical structures. The rondo form is also particularly effective.
Lyrics	Happy music without lyrics evokes more positive emotions than happy music with lyrics, according to behavioral ratings. While auditory regions responded exclusively to happy music with lyrics, limbic system structures and the right parts opercularis of the inferior frontal gyrus were activated by happy music without lyrics. In contrast, the differences between sad music with and without lyrics involve activity in the parahippocampal gyrus, amygdala, claustrum, putamen, precentral gyrus, medial and inferior frontal gyrus (including Broca's area), and auditory cortex, while music	By examining the emotional understanding of music through the lens of the two basic emotions—happiness and sadness—the research reveals a unified capacity of music to convey these two types of emotional interpretations (Juslin and Laukka, 2004; Krumhansl, 1997; Nieminen et al., 2011). We draw on findings that suggest the lyrics of happy music are less significant than those of sad music (Brattico et al., 2011), showing that, in relation to anxiety, lyrics are considered optional rather than a crucial parameter.	When considering the emotional content of music to reduce anxiety, it is essential to create a calm, stable environment with positive emotional connotations. However, a well-structured playlist should also consider the client's preferences as well as the ISO principle. In this context, a mood management technique is recommended, where the music therapist uses music that aligns with the client's current emotional state and gradually transitions to music that guides the client toward a desired mood (Altshuler, 1948). For music intended to reduce anxiety, lyrics are less critical than the acoustic qualities of the

Musical element	Theoretical framework	Purpose of musical element	Explicit description of the musical element
	without lyrics does not produce activations in these areas (Brattico et al., 2011)		music itself. Care should be taken to avoid pairing the music with sad or melancholic lyrics, as these can amplify the emotional impact and potentially intensify feelings of sadness or unease. Instead, neutral or uplifting lyrics, if included, are preferable to keep a calming emotional environment.
Style	Research shows that listening to Pop, Classical, and Persian Traditional music, promotes relaxation and reduces state anxiety, while Rock music showed no statistically significant effect on relaxation. It was also concluded that listening to preferred music can be beneficial for many individuals (Costa et al., 2018; Malakoutikhah et al., 2020; Moss et al., 2018). Tonal styles such as Baroque and Classical in major mode evoke positive emotions, while Romantic music often leads to heightened arousal, particularly in minor mode (Tizón Díaz and Gómez Martín, 2020).	Musical style can be understood in various ways. It can refer to a style of music defined by its place in a historical period or its cultural context. Regardless of these theoretical definitions, the genre or style used in therapy should be chosen based on the patient's preferences, as well as their level of musical literacy and stylistic openness. Furthermore, as research suggests, it is advisable to avoid genres that are too loud (those featuring instruments with high dynamics or harsh timbres) or musical textures that are overly complex (such as fast-tempo Baroque music).	We consider this musical parameter to be highly dependent on the patient's preferences and level of musical literacy. Therefore, it is essential to avoid music that the client does not prefer, music that is too unfamiliar, as it may become a stimulus that increases stress, and music with characteristics that contradict those discussed above. In addition to the strong influence of the client's preferences, the chosen style and genre of music should align with all the musical aspects we've covered, allowing for flexibility in choice.

Table 1. *TFM Plan for Reducing Anxiety Levels and Symptoms*

4. Conclusion and limitation

This study proposes a structured theoretical framework for receptive music therapy aimed at anxiety reduction, developed through a detailed analysis of musical parameters based on an extensive review of existing literature. The resulting table offers a practical tool for therapists, providing evidence-informed guidance on how specific musical features—such as timbre, harmony, melody, rhythm, and tempo—can be purposefully employed to promote relaxation and emotional stability. Warm timbres, predictable tonal harmony in major keys, symmetrical forms, slow tempos, and stepwise melodic movement emerged as particularly effective configurations for fostering calm and balance. The inclusion of the ISO principle further supports emotional regulation by matching the music to the client's current state and gradually directing it toward more positive affective outcomes.

Nevertheless, several limitations must be acknowledged. The proposed framework has not yet been empirically validated, which restricts the generalisability of the theoretical observations and positions the findings as exploratory. The evaluation relied primarily on qualitative and conceptual insights rather than on standardised psychometric or physiological measures, which may introduce subjectivity. Finally, the absence of formal recognition of the music therapy profession in Romania currently limits both professional training and methodological standardisation. Future research should aim to test this framework on larger and more diverse samples, using validated assessment tools to confirm its therapeutic potential and contribute to the formal integration of receptive music therapy into clinical practice.

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