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The Future of Music Therapy: An Exploration of Music Therapists' Perceptions of Artificial Intelligence and Its Ethical Implications

B194164
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Supervisor: Professor Raymond MacDonald
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Abstract

Artificial intelligence is rapidly advancing across healthcare and is increasingly being explored in music therapy to enhance personalization and accessibility. Although previous research has explored music therapists' perceptions of AI, it has primarily focused on issues of efficiency and promoting technological innovation, leaving a significant gap regarding the ethical implications of AI integration into clinical practice. To address this gap, semi-structured interviews were conducted with eight music therapy professionals and trainees. Thematic analysis identified three central themes, namely: Barriers to AI Integration, Perceived Opportunities of AI in Music Therapy, and Conditions for Ethical AI Integration. Importantly, participants consistently emphasised that AI should augment, rather than replace, human-driven therapeutic processes. These findings extend existing knowledge by specifically examining the ethical considerations of AI in music therapy. Furthermore, the findings inform clinical training and ethical guidelines, ensuring that AI integration prioritises therapist and client agency. Ultimately, this study underscores the importance of maintaining the relational and creative foundations of music therapy as technology continues to evolve within the field.

Keywords: Artificial Intelligence, Music Therapy, Music Therapists' Perceptions of AI, Ethical AI Integration

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Contents

1. Introduction

1.1 Background

The Fourth Industrial Revolution, marked by innovations, including big data, advanced robotics, and artificial intelligence (henceforth, AI), is transforming various sectors, including healthcare. AI refers to systems designed to perform tasks that typically require human intelligence, such as learning from data, recognizing patterns, and making decisions (Russell & Norvig, 2016). In therapeutic settings, AI technologies are increasingly being used to enhance patient care and practitioner efficiency. For instance, AI-powered systems can analyse clients' emotional states and therapeutic needs, improving communication between therapists and patients (AlSadoun et al., 2020). These systems utilise machine learning to independently learn from data, predict outcomes, and adapt their responses, allowing therapists to personalise treatments more effectively (Olawade, et al., 2024). However, while these technologies promise enhanced efficiency and outcomes, they also raise significant questions about their impact on established healthcare practices, particularly in human-centred disciplines like music therapy.

Music therapy, an evidence-based healthcare practice, uses a range of musical interventions to improve the physical, emotional, and psychological well-being of clients. These interventions include active methods, such as re-creative, improvisatory, and compositional approaches, and passive methods, such as receptive approaches involving music listening and response (Bruscia, 2014; Bunt, 2021). Grounded in client-centred principles, music therapy emphasizes the unique needs and goals of each individual, fostering a therapeutic environment where clients are active participants in their own healing process. (Bruscia, 2014). Research has consistently demonstrated positive outcomes from music therapy in areas such as pain management, stress reduction, mood enhancement, cognitive function improvement, and social skills development (Pathania et al., 2019; de Witte et al., 2022; Chen, 2020; LaGasse, 2014).

While there is growing interest in AI's potential to enhance music therapy, much of the existing research has concentrated on its role in improving efficiency and fostering technological innovation within the profession (Sun et al., 2024; Kwon et al., 2024; Kosugi et al., 2025). However, the ethical implications of AI's integration into music therapy, particularly how it might challenge or alter the core human-centred values of the practice,

remain largely unexplored. This study seeks to explore music therapists' perceptions of the integration of AI into music therapy, focusing on their concerns, reservations, and considerations for ethical AI implementation. Through semi-structured interviews with eight practicing and trainee music therapists, this research aims to answer three key questions:

1. How do music therapists perceive AI in music therapy?
2. What factors shape music therapists' perceptions of AI in music therapy?
3. What ethical considerations do music therapists believe are necessary for the integration of AI into music therapy?

The data was analysed using an inductive approach to thematic analysis to reveal key themes surrounding music therapists' attitudes towards AI integration in music therapy. The research is structured as follows:

Following this introductory chapter, Chapter 2 presents a literature review surrounding research on Technology Use in Music Therapy, AI in Music Therapy, and AI in Related Therapeutic Fields. Chapter 3 outlines the methodology, including data collection methods and the thematic analysis procedure. Chapter 4 presents the findings of this study, organised thematically to address each research question. Chapter 5 discusses the study's findings and limitations, as well as its implications for music therapy practice. Finally, Chapter 6 concludes by summarising the key findings, and proposing recommendations for future research.

This research holds significant importance for both the field of music therapy and the broader context of AI in healthcare. By addressing the emerging intersection of AI and music therapy, this study offers valuable insights into practicing therapists' perceptions while contributing to continuing discussions about the ethical implications of AI in therapeutic settings.

2. Literature Review

2.1 Technology Use in Music Therapy

Throughout its history, music therapy has been increasingly transformed by technological advancements, which have expanded various therapeutic possibilities. From their initial use in organising and analysing clinical data in the 1980s (Hasselbring & Duffus, 1981), technologies have evolved to become a central tool in the field of music therapy. Today, these tools not only support diverse therapeutic approaches, but also influence the relationship between therapist and clients by enabling collaborative musical interactions that foster trust and connection. By leveraging these tools, music therapists have been able to engage with clients, the public, and one another in more dynamic and collaborative ways, while also designing interventions that are precisely tailored to individual client needs (Magee, 2006).

The advent of personal computers and the MIDI (Musical Instrument Digital Interface) protocol has further revolutionized the field by making music technology more portable and accessible for use in both home settings and clinical environments (Cevasco & Hong, 2011). This increased accessibility, combined with innovations like digital instruments, computer-assisted composition tools, and recording technologies empowers individuals with physical limitations to participate in activities that were previously inaccessible, expanding not only treatment possibilities, but also enhancing relational dynamics by promoting collaboration between therapist and client (Magee, 2006).

Additionally, technology has enabled the growth of remote and virtual music therapy sessions. This shift was significantly accelerated by the COVID-19 pandemic, which prompted the widespread adoption of telehealth solutions across various healthcare fields, including music therapy (Agres et al., 2021). Telehealth have proven effective in reaching clients with geographical or mobility barriers and has fostered relational benefits by empowering clients through increased autonomy and collaborative problem-solving in interactive music experiences (Cephas et al., 2022). While telehealth has enhanced accessibility and inclusivity in music therapy, studies have noted relational barriers such as reduced intimacy and challenges in maintaining emotional connection during virtual sessions (Agres et al., 2021; Cephas et al., 2022). These complexities highlight the broader tensions that can arise when digital tools are introduced into therapeutic contexts. As technological

innovation continues to evolve, particularly with the emergence of AI, it is essential to consider how these newer developments might further shape or challenge therapeutic relationships in music therapy

2.2 AI in Music Therapy

As interest in the intersection of AI and music therapy grows, an emerging body of literature has begun to examine its potential applications, benefits, and limitations. While empirical research remains limited, preliminary findings indicate that AI may offer meaningful support to therapeutic practice. For example, Sun et al. (2024) conducted a mixed-methods study involving semi-structured interviews and co-design workshops with music therapists to explore the design possibilities for musical AI tools in music therapy, drawing from a theoretical framework based on emotion-focused therapy. Their findings indicate that AI could enhance music therapy by enabling personalisation, increasing efficiency, and supporting client engagement across cognitive, behavioural, and emotional domains. However, the integration of AI also presents significant challenges. These include technical constraints in capturing and responding to emotional nuance, disruptions to session coherence, and the risk of increased therapist workload. Importantly, therapists expressed concern about how AI might alter their professional roles and the nature of the therapeutic relationship. While the study offers valuable insight, it provides only a surface-level analysis of how these transformations might unfold, leaving a need for further exploration into the ethical and relational implications of AI in therapeutic contexts.

Complementing this growing discourse, Kwon et al. (2024) present a conceptual proposal for integrating AI into Five-Element Music Therapy (FEMT), a modality rooted in Traditional Chinese Medicine. They argue that AI could support the classification and individualisation of therapeutic music based on client needs. This theoretical contribution expands possibilities for AI-assisted music therapy, particularly in culturally specific contexts. However, the study lacks empirical evaluation and does not engage with the perspectives of practicing therapists. Moreover, its focus on FEMT may limit its relevance to more widely adopted therapeutic models. Ethical considerations - such as how algorithmic processes might affect therapist autonomy, authenticity, or the therapeutic alliance - are notably absent, highlighting the continued need for research grounded in practitioner experience.

In line with this limited but emerging body of work, one notable contribution is the recent development of an AI music therapist by Kosugi et al. (2025), designed specifically for elderly individuals with dementia. Although their paper does not take the form of an empirical study, it represents a significant step forward in the application of AI within music therapy supported by reflections from music therapists and caregivers after interacting with the AI. The paper details the design of 'Satsuki-san,' an AI interface that allows dementia patients to engage in music therapy on demand, especially when access to human music therapists is not possible. The goal is to alleviate behavioural and psychological symptoms of dementia (BPSD), reduce the burden on caregivers, and improve the quality of life for both patients and caregivers. While the AI system generated high expectations, several limitations were identified, such as issues with intonation and its inability to provide varied, high-quality accompaniment for singing. Interestingly, music therapists considered the AI as an assistant rather than leading the therapy sessions, underscoring the challenges of fully integrating AI into the human-centred nature of music therapy. While the authors focus on technological limitations, ethical concerns regarding the replacement of human therapists or the implications of using AI in sensitive contexts like dementia care are not addressed and represent critical areas for further research. These issues are particularly relevant, as the role of therapists in these settings is not only professional but deeply human and relational, a consideration that AI systems like 'Satsuki-san' may struggle to replicate.

2.3 AI in Related Therapeutic Fields

While little research currently exists on the use of AI in music therapy, emerging studies in related therapeutic disciplines, such as art therapy, can provide helpful insight for understanding perceptions in music therapy. In the context of art therapy, recent studies reveal that art therapists view AI as a dual-edged tool that is capable of enhancing accessibility and creativity, while raising ethical and relational concerns. For instance, Shojaei et al. (2024) found that art therapists perceive AI as a potentially valuable tool for overcoming client resistance to traditional art-making practices, enhancing self-expression, and supporting therapeutic decision-making, such as material selection. AI was also seen to facilitate dialogue and relational engagement by generating imagery that could serve as a conversational catalyst. However, the study also highlighted several limitations, particularly for clients and therapists less familiar with technology. A key concern was that AI might reduce the creative agency of the client and compromise the depth of the therapeutic

relationship. Therapists questioned whether AI-generated imagery could fully represent clients' emotions or reflect the cultural specificity often central to art therapy. Ethical considerations were also prominent, including issues around data privacy, authorship, and safeguarding sensitive information from unauthorised access.

Further insight is offered by Jütte et al. (2024), who surveyed art therapists about the use of generative AI in art therapy with melanoma patients. Their study found that therapists acknowledged the therapeutic potential of AI-generated art to support emotional expression and personalise therapy, particularly in medical contexts. At the same time, therapists voiced ethical concerns about data privacy, informed consent, and the handling of sensitive medical imagery. There were also apprehensions around technical challenges and the necessity for patient-centred applications tailored to individual needs. Notably, therapists highlighted the importance of maintaining human oversight and ensuring that AI serves as a supplement, rather than a replacement, for the therapist-client relationship. These findings complement the themes raised by Shojaei et al. (2024), while further emphasising the complexity of integrating AI into sensitive therapeutic contexts. The discussion of tailored applications and the need for clear ethical frameworks may also resonate with music therapists, where similar tensions between creativity, relational dynamics, and ethical integrity are likely to emerge.

3. Methodology

3.1 Research Design

This study sought to explore music therapists' perceptions of AI integration and its ethical implications in music therapy. To achieve this, an exploratory qualitative approach was employed, utilising semi-structured interviews - a method suitable for examining emerging or underexamined topics (Patton, 2015).

Open-ended questioning allowed participants to articulate their attitudes toward AI based on their professional practice, drawing on real-world experiences while also engaging with hypothetical scenarios. This approach maintained the focus on the study's exploratory aims, ensuring discussions reflected both their lived experiences and professional expertise (Patton, 2015). As a result, the study facilitated a comprehensive understanding of therapists' attitudes and the contextual factors shaping their perspectives on AI adoption, without imposing predetermined theoretical assumptions.

3.2 Participants and Sampling

Eight music therapists participated in this study, selected using a combination of purposive convenience sampling and snowball sampling. Initial participants were identified through targeted email outreach and direct messaging, selected primarily based on accessibility and relevance to the aims of the study. In addition, snowball sampling was encouraged by asking participants to share the study with colleagues, and by contacting music therapy associations, such as the British Association for Music Therapy (BAMT), to help disseminate the call for participants. One therapist subsequently reached out independently after hearing about the study through these channels. The participants had varying approaches to practice and differing levels of experience with technology (as detailed in Chapter 4), which ensured a broad range of perspectives on the integration of AI in music therapy. The sample size was chosen to offer a range of perspectives while remaining manageable for in-depth qualitative analysis within the scope of the research project.

3.3 Inclusion Criteria

To ensure participants could provide informed perspectives on AI integration in music therapy, the following criteria were established: Participants were required to be credentialed music therapists, defined as professionals holding valid certification or accreditation (e.g., national/regional licensure such as Health and Care Professions Council (HCPC) registration or Music Therapist Board-Certified (MT-BC) or students enrolled in accredited music therapy training programs. Professionals needed at least one year of post-certification clinical experience, while students required completion of a minimum of one year of study. Additionally, participants had to be fluent in English to ensure clear communication during interviews and consent to a 30–45-minute interview exploring their perspectives on AI integration in music therapy. No practical experience with AI was necessary, as the study aimed to capture general attitudes toward the integration of AI within the profession. Individuals lacking formal music therapy training or certification, or professionals with less than one year of post-certification experience, were excluded.

3.4 Data Collection

Data was collected through individual semi-structured interviews lasting approximately 30–45 minutes each, conducted via the video conferencing platform, Zoom, to accommodate participant preferences and logistical feasibility. Interviews were recorded using Zoom's built-in recording feature, with explicit participant consent obtained prior to each session, and audio was transcribed verbatim for analysis.

To ground the discussions in participants' professional contexts, the researcher began each interview by asking about their approach to music therapy (e.g.,psychodynamic, person-centred) and whether technology plays a role in their work. A semi-structured interview guide (see Appendix) prioritised open-ended questions and adaptive follow-up probes to elicit in-depth accounts of participants' understanding of AI, awareness of its applications in related fields (e.g., art therapy, psychotherapy, etc), and perspectives on its potential role in music therapy. Consistent with Patton's (2015) qualitative framework, this approach avoided predefined response categories, enabling participants to articulate concerns, values, and conditions for AI adoption in their own terms. For example, questions such as *'What ethical considerations may arise with AI in music therapy?'* encouraged reflective, practice-grounded insights while minimising researcher bias.

Hypothetical scenarios were introduced to help participants engage with abstract concepts (e.g., analysing improvisations to assess emotional states). Terms like "generative AI" were dynamically rephrased (e.g., *"tools like ChatGPT"*) to clarify meaning without imposing definitions. This adaptive approach allowed participants to critique AI's potential role through their professional expertise, while intentionally minimising reliance on the researcher's prior assumptions about AI in therapy (Patton, 2015).

3.5 Data Analysis

An inductive approach to thematic analysis was applied to the interview transcripts, following Braun and Clarke's (2022) six-phase framework. This method was chosen for its systematic yet flexible framework, which aligns well with the exploratory nature of this study and its aim to capture baseline attitudes toward AI in music therapy. The process ensured a systematic analysis, allowing key themes to emerge from participants' perspectives. The six phases were applied as follows:

1. Data Familiarization: The researcher immersed themselves in the data by repeatedly reading the transcripts and noting initial impressions of participants' general attitudes, concerns, and expectations about AI.
2. Initial Coding: Transcripts were systematically coded manually to maintain closeness to the data. Codes were generated inductively, focusing on participants' descriptions of AI's potential role, ethical concerns, and conditions for integration.
3. Generating Initial Themes: Codes were collated into potential themes that reflected broad patterns in participants' perspectives, such as barriers to adoption, perceived opportunities, and ethical preconditions.
4. Reviewing Themes: Themes were rigorously checked against the coded extracts and the entire dataset to ensure they accurately represented participants' attitudes. This phase involved refining themes to eliminate overlap (e.g., merging "client safety" and "data privacy" into broader ethical concerns) and ensuring coherence with the study's focus on therapist perceptions.
5. Defining and Naming Themes: Clear definitions and concise names were developed for each theme to capture their conceptual essence (e.g., "Barriers to AI Integration" encompassed both knowledge gaps and ethical hesitations).
6. Producing the Report: The final analysis was synthesized into a cohesive narrative, prioritizing participants' voices through exemplar quotes to illustrate themes

structured around human-centred values over technological integration. Quotes were selected for their richness and relevance to the research question, with each theme explicitly linked to the study's aim of exploring baseline attitudes toward AI.

3.6 Ethical Approval Statement

This research received ethical approval from the Edinburgh College of Art Research Ethics Sub-Committee, University of Edinburgh. Informed consent was obtained from each participant prior to the interview, with a consent form outlining the study's purpose, procedures, potential risks and benefits, and assuring participants of their voluntary involvement and the right to withdraw at any time without consequence. To ensure anonymity and confidentiality, all participant data were anonymized using pseudonyms (e.g., T1, T2), and data were stored securely on a password-protected computer accessible only to the researcher.

3.7 Trustworthiness and Validity

To enhance the credibility of the findings, member checking was conducted with participants. After the initial thematic analysis, the identified themes and supporting illustrative quotes were shared individually with the participants, allowing them to review and comment on the accuracy of the interpretations. This process of member checking, as emphasized by Patton (2015), helps to ensure the validity of qualitative research by allowing participants to verify that the researcher's interpretations truly reflect their perspectives and experiences. The feedback received was carefully considered and incorporated into the final analysis, further ensuring that the findings were an accurate representation of the participants' views.

3.8 Reflexivity

As a researcher with knowledge of music therapy, but not as a practicing music therapist, I recognise that my position could influence how I interpret data and interact with participants. Additionally, although I did not have extensive prior knowledge of AI in music therapy, I ensured a well-rounded understanding through a comprehensive review of literature. According to Patton (2015), reflexivity in qualitative research is crucial for recognising how a researcher's background and perspectives can shape the study. While my background is in music therapy, I approached the integration of AI with openness, actively reflecting on my role to minimize potential bias in interpreting participants' perspectives.

4. Results

Overview of Findings

This section presents the findings derived from a thematic analysis of semi-structured interviews conducted with eight professional and trainee music therapists, exploring their perceptions on the integration of AI in music therapy. Three overarching themes emerged from the analysis: Barriers to AI Integration, Perceived Opportunities of AI in Music Therapy, and Conditions for Ethical AI Integration.

The first theme, Barriers to AI Integration, comprises subthemes addressing Limited Understanding and Perceived Irrelevance of AI Tools, Relational Concerns, and Ethical Concerns, reflecting participants' scepticism and reservations about AI's role in therapeutic practice. The second theme, Perceived Opportunities of AI in Music Therapy, identifies areas and client groups for which AI could be useful. Finally, Conditions for Ethical AI Integration delineates subthemes related to Alignment with Clinical Goals, Boundaries for AI's Therapeutic Role, Ethical Safeguards, and Training Needs, reflecting participants' perspectives on the requirements for the safe and ethical integration of AI into therapeutic practice.

Table 1 presents contextual information about participants' characteristics, including their approaches to music therapy and their use of technology in therapy sessions. Although these factors were not directly analysed in this study, they provide valuable context for understanding the professional settings in which the therapists operate, which may influence their views on AI.

Table 1

Participant Characteristics

ID	Music Therapy Approach	Technology Usage in Therapy Sessions
T1	Psychodynamic	None
T2	Psychodynamic	Garageband and iPad applications
T3	Person-Centred and Neurologic Music Therapy	Video conferencing tools, apps, and websites
T4	Person-Centred	Soundbeam and YouTube
T5	Person-Centred	Garageband
T6	Person-Centred	Music creation websites
T7	Person-Centred and Neurologic Music Therapy	Video conferencing tools, music creation websites
T8	Psychodynamic and Person-Centred	Garageband, digital keyboards

4.1 Barriers to AI Integration

4.1.1 Limited Understanding and Perceived Irrelevance of AI Tools

All participants reported no prior use of AI in their clinical practice and described only a superficial understanding of its functions. While some had interacted with tools like ChatGPT or speech-to-text software or were aware of generative AI's broader applications (e.g., music composition), their knowledge was largely limited to non-clinical settings. This lack of understanding directly influenced participants' scepticism about AI's applicability in therapeutic settings. Although they recognized AI's potential in non-clinical contexts, many participants emphasized a preference for relying on their own expertise, which led to hesitancy in exploring AI further. For instance, participant T2 stated "Maybe this is just me, because I don't understand what it could offer me, but I don't really see how I might use AI." Similarly, participant T4 expressed curiosity yet noted a lack of immediate relevance,

explaining “The idea of it is fascinating…but I don’t have use for it in my work, and it’s not really something I would want to explore at this stage.”

4.1.2 Relational Concerns

Following the discussions of limited familiarity with AI and its perceived irrelevance to therapeutic work, therapists raised concerns about how AI could potentially affect the relational dynamics central to music therapy. These concerns included disrupting human connection, losing emotional and symbolic depth, threatening client autonomy and creative expression, impacting therapist presence and engagement, and eroding the collaborative process.

Disrupting Human Connection

Therapists were predominantly concerned that integrating AI into the therapeutic process might erode the human connection underpinning the relational dynamics central to music therapy, potentially affecting both client care and the core principles of the practice. Some therapists described AI as potentially becoming a “third element” in the room and were concerned that this additional presence could disrupt the connection between therapist and client. Participant T1 expressed this concern, stating “No matter how advanced the AI is, I believe it would always be like a third element in the room, and that could potentially be distracting to the therapeutic relationship and the process.” Participant T6 echoed a similar sentiment, explaining “A lot of it is about that human interaction, the here and now, and being with the other in that moment and trying to connect… I feel like AI could potentially get in the way of this interaction.”

Losing Emotional and Symbolic Depth

Therapists voiced apprehension about the potential loss of emotional and symbolic depth if AI were to be used in sessions. They emphasised that addressing clients’ complex emotional and relational needs requires a deep understanding of emotions and symbols, qualities they felt AI lacks due to its rigid, non-human nature:

> AI can't grasp emotional, symbolic, or relational aspects of a response, whether that be verbal or musical, and I worry that it may over-simplify something that is largely emotional. Because although it does identify patterns, it doesn't have human or emotional intelligence, and I think that is such a massive part of music therapy or any therapeutic work. (T8)

Threatening Client Autonomy and Creative Expression

Participants also conveyed unease about AI's potential to undermine the client's autonomy within the creative process. Therapists emphasised the importance of client-driven exploration in music therapy, where the client's creativity and imagination play a crucial role. AI's capacity to generate content automatically raised concerns that it could prevent clients from having the opportunity to engage in creative self-expression. As one therapist observed:

> I don't think that using generative AI is really enacting a sense of play because all the work is done for you, regardless of what you tell it to do. All the sound generation, the tactility, the imagination… is done by something else. (T5)

T5 further illustrated this concern by explicitly comparing AI to other types of technology, such as the digital audio workstation tool, GarageBand. They believed that, unlike GarageBand - which supports client-driven creativity - AI might reduce opportunities for imagination and play by performing tasks entirely for the client:

> Garageband has automated features that aren't AI and that allow you to be creative and have autonomy over. The only difference with a generative AI tool is you would have less autonomy because it would be generated by something else. (T5)

Impacting Therapist Presence and Engagement

Additionally, participants expressed concerns about how AI might impact the therapist-client dynamic if it were not used collaboratively between therapist and client. They feared that relying on AI tools, particularly without client involvement, could impact the therapist's

presence, detracting from their ability to remain fully engaged or responsive to the client's needs:

> I think if it [AI] was used purely for the therapist to refer to it could feel like you're not fully in the moment. Like, if I were on the receiving end of therapy and my therapist was using AI on their phone, I think I would feel paranoid that they weren't really listening to me. (T1)

Furthermore, therapists expressed apprehension about how AI might fundamentally alter their role as a therapist in the therapeutic process if no boundary was established, and that this could potentially reshape the nature of the therapeutic relationship altogether. For instance, participant T1 explained "It could feel like it's the therapist facilitating the creative relationship between AI and the patient… I don't know if that aligns with being entirely relational."

Eroding the Collaborative Process

Therapists were also concerned that overusing AI as an assistive tool might compromise the depth of therapy. They cautioned that excessive reliance on AI could erode the essential collaborative process, where client and therapist jointly navigate the therapeutic process together. One therapist noted:

> These days everyone wants fast information, and while AI can be helpful for putting ideas together, it can mean that sometimes you miss important parts of the therapeutic process, as you don't have to spend so much time thinking about it. (T7)

This perspective was reinforced by participant T2, who expressed "In therapy it's not always about the end product; the process is important", demonstrating that therapy is not just about efficiency or outcomes but also about the meaningful engagement between therapist and client.

4.1.3 Ethical Concerns

In addition to relational concerns, therapists also raised ethical considerations about the integration of AI into music therapy. These concerns centred around safeguarding

professional autonomy, ensuring responsible data practices, and maintaining trust in the therapeutic process. Specific issues included undermining professional judgment and autonomy, conflicting outcomes leading to self-doubt, malfunctioning AI and ethical breaches, and capturing data without client consent.

Undermining Professional Judgment and Autonomy

Therapists emphasised the importance of intuition in navigating complex therapeutic situations and expressed concern that overreliance on AI could undermine their ability to make independent clinical decisions:

> My fear would be if someone were to use AI in therapy, they get too sucked into that and then they kind of forget their own clinical thinking, you know, the processing on their own and not having a robot doing the processing. (T6)

Some therapists also reflected on how conflicting outcomes between AI tools and their own professional intuition might lead to self-doubt, potentially affecting confidence and autonomy in clinical decision-making:

> AI could say anything, so are you obliged to always act on the information from it, and if it's contradicting the therapist's perception, which one do you go with?... I think I would feel threatened in a way of like 'oh, why didn't I think of that myself?' or 'are those ideas better than mine?' (T1)

Malfunctioning and Ethical Breaches

Therapists were particularly concerned that AI tools could malfunction, potentially leading to ethical breaches such as mishandling sensitive client data, which could have serious professional and legal consequences. As participant T6 said "Because it's technology - what if it goes wrong or what if it's unreliable? So, then it's unethical in terms of potentially doing something with the data, like releasing it."

Capturing Data Without Client Consent

Furthermore, therapists highlighted concerns regarding the risk of AI tools autonomously capturing data during sessions without the knowledge or consent of clients.

They stressed how this lack of transparency could create ethical dilemmas, particularly when obtaining explicit consent is not feasible. For instance, participant T1 said “I would be worried about bringing something that could be listening to the session when I don’t have written consent for that… this could be problematic, especially for people who are not able to give verbal consent.”

4.2 Perceived Opportunities of AI in Music Therapy

Although participants were generally sceptical about the integration of AI in music therapy, some recognised its potential benefits, particularly when considering the associated risks. Some therapists viewed AI as an extension of existing digital music creation tools commonly used in the field, like GarageBand. They suggested that AI could provide new ways for clients to express themselves and support clinical outcomes, which in turn might help to strengthen the therapeutic relationship. In this context, therapists noted that AI could be particularly useful for creative tasks like songwriting, making the process more interactive, which could enhance motivation and involvement in the creative process:

> Depending on the complexity of the client, you could use AI for songwriting, to get them to give prompts or to think of a theme and then create something from there. And I think, especially for teenagers, who don’t often have the motivation to make stuff up, if they see something like AI doing it, it’s a novelty for them, and therefore can be motivating. (T3)

Therapists highlighted that younger clients, who are typically more familiar with technology, might find these tools especially engaging. As participant T6 said “Because they’re kind of the generation of AI, it could be something that maybe current younger age groups will be exploring in their therapeutic journey.”

In addition to fostering creative engagement, some therapists viewed AI as a valuable tool for enhancing clinical insights. Given the complexity of therapeutic sessions, documenting and assessing every aspect of the process can be challenging. Therapists suggested that AI could provide alternative analytical perspectives, helping to address potential gaps in human perception. For instance, participant T6 said “While you will have

your own interpretation of the process, an AI tool could be useful for providing a different perspective, because sometimes things can be missed."

4.3 Conditions for Ethical AI Integration

4.3.1 Alignment with Clinical Goals

While participants identified areas where AI could enhance the therapeutic process, they stressed that its integration into practice must adhere to strict ethical and clinical standards to ensure client safety and therapeutic integrity. Highlighting the need for alignment with personalised care, they argued that AI's potential role in music therapy would depend heavily on its relevance to specific clinical goals and the unique needs of clients. Participant T2 articulated "As a therapist, if you bring anything into therapy you have to question: 'is this serving the needs of my client?'"

Therapists explained that clearly identifying the clinical aims for which AI is being used would be beneficial for preserving the safety of the therapeutic space. Moreover, most therapists were open to using AI but on the condition that it was requested by the client. They explained that because music therapy is highly person-centred, AI use is contingent upon the context and therefore should respect client preferences. For instance, one therapist noted:

> I think it's context-specific. I'd never want to impose it [AI], but if a client came in and wanted to use it and explore it together, I would definitely welcome it, because I feel my role is to be in that space and offer them that space to use the time whatever way they wish and think it will support them. (T6)

4.3.2 Boundaries for AI's Role in Therapy

In addition to ensuring alignment with client needs and preferences, participants stressed that AI must complement the relational integrity of the therapeutic process. Participants emphasised that to preserve the relational integrity, it is essential to establish and maintain clear boundaries between therapist expertise and the role of AI tools in therapy. As participant T5 explained "Therapy is built out of the relationship between the client and the therapist, as I understand it, and if you're going to outsource that to an algorithm it becomes something entirely different."

Therefore, participants advised for boundary establishment to prevent undermining the therapeutic and creative aspects of the process through excessive usage:

> I think it might affect the therapeutic relationship if you use it too much, because it would take away from the human aspect of creativity. So, I would definitely be a bit wary of the boundary of that, making sure that you are using it as a tool and not using it to run the whole session. (T3)

Another therapist also explained the importance of being aware of the consequences of adding external elements like AI into the session:

> Even just having, for example, parents taking a video of what's happening in the session can change how the child interacts…they might completely disengage from it. You just have to be aware that any time you add something into the session, such as AI, it's going to change some things. (T2)

4.3.3 Ethical Safeguards

Therapists also highlighted the need for ethical safeguards such as maintaining therapist presence during sessions to mitigate the potential risk of malfunctions, such as misinterpretation of information by AI to clients:

> If AI is being used in sessions it is important that the therapist is there to make sure that it isn't misinterpreting information that clients are giving it, as that could be a risk for those that are using it in a therapeutic context. (T8)

Additionally, therapists stressed the need to preserve confidentiality and acquire informed consent when using AI in music therapy, ensuring that the consent process considers the client and the therapeutic space:

> There's always the issue of protecting confidentiality, protecting what happens in the space… and AI technology that could come in and analyse sessions…keeping information that comes from that safe will be hugely important. And making sure that it would be okay with the person we are working with would, of course, come first. (T4)

4.3.4 Training Needs

To ensure both a comprehensive understanding and effective application of AI tools, as well as the responsible implementation of ethical safeguards, therapists underscored the necessity for adequate training. They noted that their formal music therapy education did not cover the use of technology, including AI, and therefore recommended interactive and hands-on training to introduce concepts, demonstrate therapeutic relevance, and showcase AI's full potential in therapeutic contexts. Participant T6 explained "I think there's definitely a place for [AI] to be explored in music therapy training, particularly through workshops that discuss what AI is and its benefits in supporting clients or therapists, using specific case examples." Other participants argued that such training would increase their likelihood of incorporating AI tools into practice, particularly when paired with case examples illustrating clear therapeutic benefits. For instance, participant T1 said "Training would be all it takes… it would be a real game changer for me if I were to see AI being used in action." Additionally, participant T8 said "As technology like AI becomes more prominent, I think I am going to be more likely to use it, but I would need to make sure I felt competent to do so."

5. Discussion

This study aimed to explore music therapists' perceptions of AI integration and its ethical implications in music therapy. Specifically, the study sought to answer three critical questions concerning how music therapists perceive AI in music therapy, the factors influencing these perceptions, and the ethical considerations they believe are required for its integration. Through thematic analysis, three overarching themes were identified: Barriers to AI Integration, Perceived Opportunities of AI in Music Therapy, and Conditions for Ethical Integration. These findings highlight both scepticism and cautious optimism among music therapists regarding AI's role in therapeutic contexts. While subject to the limitations of the study, these findings can inform the future of AI in music therapy. This discussion contextualises these insights within existing literature, explores their implications for clinical practice and AI development, acknowledges the study's limitations, and identifies key avenues for future research, thereby contributing to informed, ethical innovation in music therapy.

5.1 Interpretation of Results

This study found that music therapists held ambivalent attitudes toward AI integration- marked by both scepticism and cautious optimism. This ambivalence was shaped by multiple factors, including a lack of familiarity and relevant use for AI tools, relational concerns regarding the therapist-client dynamic, and ethical considerations surrounding its use. Many explicitly acknowledged their lack of knowledge about how such tools function or could be applied in sessions. The participants' hesitation was largely driven by unfamiliarity with AI tools, with many preferring to rely on their established expertise rather than integrating a new, uncertain system into their practice. Although they did not frame their reluctance as an issue of confidence, it appears that discomfort was more a product of limited exposure and uncertainty regarding practical applications, rather than outright rejection of the technology. Crucially, this scepticism appears self-reinforcing: limited exposure to AI fuels distrust, which in turn discourages experimentation, thereby perpetuating unfamiliarity. This highlights the importance of creating accessible training pathways that contextualise AI within therapeutic goals rather than positioning it as a standalone innovation.

Relational and ethical concerns, such as replacing therapist intuition, diminishing collaborative creativity and client autonomy, and devaluing core elements of music therapy like the therapeutic relationship and professional expertise- were consistent across interviews in this study. Participants cautioned that excessive dependence on AI could shift power dynamics within sessions, positioning technology as the central agent of care, potentially marginalizing the therapist's role and undermining music therapy's relational, human-centred ethos. These concerns are not unique to music therapy and reflect broader apprehensions within healthcare about the increasing role of technology in patient care. For instance, Richardson et al. (2021) cautions that overreliance on AI could result in skill atrophy among healthcare clinicians, leaving them unprepared to respond effectively in cases where technology is unavailable or malfunctions. In the context of music therapy, this could have significant implications for therapists' ability to engage with clients in meaningful responsive, and ethically grounded ways. Music therapy relies heavily on the therapist's ability to intuitively assess the emotional and psychological state of the client, adapt musical interventions in real-time, and maintain a flexible, responsive approach to the therapeutic process (Bruscia, 2014). If therapists were to become overly reliant on AI tools to assist with assessment, treatment planning, or even musical improvisation, they might lose their ability to create these personalized, adaptive interventions, with sessions being at risk of becoming mechanistic or misaligned with clients' needs.

Furthermore, the issue of malfunctioning technology presents unique ethical risks that could directly affect the client's safety, wellbeing, and therapeutic progress. If AI systems are introduced to assist with clinical tasks, their failure or malfunction could create significant issues. For example, if an AI system designed to monitor a client's emotional state through biofeedback were to malfunction, it could result in inaccurate readings of the client's emotional or psychological state. This could lead to inappropriate therapeutic interventions, potentially exacerbating the client's condition. In such cases, the therapist's ability to recognise and respond to these signs in real time would be critical. However, if the therapist has become overly reliant on the AI, they might miss critical cues or fail to adjust their approach when the technology fails, and thus potentially place the client at risk of not receiving appropriate care. Furthermore, if therapists are no longer equipped to assume full responsibility for their clinical judgment due to underdeveloped or eroded skills, this may undermine the therapeutic alliance and contravene ethical principles associated with healthcare such as beneficence, non-maleficence, and fidelity (Farhud & Zokaei, 2021). As

such, the risk of skill atrophy must be considered not only as a functional limitation but also as a serious ethical vulnerability in contexts where human presence and responsiveness are fundamental to the therapeutic process. These potential ethical issues highlight the need for therapists to retain their own expertise and clinical judgment, especially when using AI tools. They must remain prepared to intervene and make adjustments when AI malfunctions to ensure that the client's emotional and physical safety is not compromised. Moreover, therapists must be aware of these risks when integrating AI into their practice, ensuring they are equipped to handle technology failures without compromising the therapeutic experience or the ethical standards of care. This underscores the importance of maintaining a balance between leveraging technological advancements and preserving the human-centred, relational aspects of music therapy that are essential for ethical and effective practice.

Additionally, several participants likened AI to a "third element" in the therapy room, cautioning that its presence could disrupt relational dynamics. This framing closely aligns with what Haber et al. (2024) term the *artificial third* - a conceptualisation of AI as an additional agent in the therapeutic dyad, subtly transforming the therapeutic encounter into a triadic relationship. Rather than functioning as a neutral tool, AI can become an active presence, shaping dynamics and influencing the relational field in ways that may not always align with therapeutic aims. In music therapy, this concern takes on particular weight. Music itself is not merely a medium but a relational space in which therapist and client co-create meaning, attune to each other, and express emotion (Pavlicevic, 1997; Bruscia, 2014; Ansdell, 2014). Unlike music, which typically facilitates connection, the *artificial third* may disrupt or redirect attention away from the human interaction at the heart of therapy. Several therapists expressed concern that AI's involvement, even when intended to support, could create a sense of distance or disconnection, particularly if it lacked the emotional intelligence or contextual sensitivity required in real-time improvisation. As such, participants did not only question the *functionality* of AI, but also its *affective presence* - how it feels to have AI in the room, how it might subtly reconfigure the therapist-client relationship, and what kind of relational stance it implicitly promotes. These reflections underscore a deeper ethical and phenomenological inquiry: not merely whether AI can assist in therapy, but whether its presence sustains, enhances, or undermines the core relational processes that make music therapy effective. Therefore, ethical discussions surrounding AI in music therapy should not only question its efficacy or efficiency, but also consider its impact on the therapeutic relationship and the co-created musical space at the heart of practice.

Despite the concerns outlined in the findings, participants acknowledged that, when applied judiciously, AI could offer valuable complementary insights or enhance specific therapeutic practices. Rather than rejecting AI outright, many therapists expressed a cautious openness to its potential, particularly in contexts where it might support, rather than replace, core therapeutic processes. Some participants described how AI tools could assist in fostering creativity, generating novel musical ideas, or supporting engagement, especially with younger clients who are often more attuned to and comfortable with technology. This emphasis on younger demographics aligns with broader trends in the creative arts therapies, as Jütte et al. (2024) found that art therapists viewed AI-generated content as particularly beneficial for younger clients, whose digital fluency may facilitate therapeutic engagement through such tools. In this context, AI was viewed not as a substitute for the therapeutic relationship but as a potential bridge- something that might meet clients where they are and spark interaction in new ways. However, this cautiously optimistic view was tempered by a shared understanding that the integration of AI must be approached thoughtfully. Participants stressed the importance of applying such tools with clear intention, remaining attuned to clients' needs while carefully mediating the role of technology in the therapeutic space. While they acknowledged AI's potential to enhance specific aspects of practice, they consistently emphasised the need to preserve therapeutic presence, relational attunement, and ethical responsibility, ensuring that technological tools support, rather than compromise, the relational core of music therapy.

5.2 Implications for Music Therapy Practice

The findings of this study carry significant implications for music therapy practice, particularly as the field begins to grapple with the growing presence of AI technologies. Firstly, the ambivalence expressed by participants underscores the urgent need for structured, accessible training that demystifies AI and situates its use within a therapeutic framework. Training should not only offer technical guidance but also critically engage therapists in reflective practice around when, why, and how AI might be used in alignment with therapeutic values. This might include interactive workshops, scenario-based learning, and supervised practice that foregrounds relational and ethical considerations. Without such grounding, there is a risk that AI tools will be perceived either as irrelevant novelties or as threats to the integrity of the therapeutic space.

Secondly, the findings highlight the necessity for clear, profession-specific ethical guidelines that address AI's role in music therapy. These should be developed by professional bodies in collaboration with practitioners, ethicists, clients, and technology experts to ensure they are practical, inclusive, and forward-thinking. Key areas of focus should include informed consent when using AI tools, data privacy and security, boundaries of clinical responsibility, and safeguarding the relational core of therapy. Importantly, such guidelines must consider not only how AI is used, but how its presence is felt, attending to the affective and phenomenological dimensions raised by participants in this study.

Thirdly, the study suggests a need for ongoing dialogue and critical reflection within the music therapy community about the evolving therapist-client-technology triad. As AI increasingly mediates therapeutic encounters, whether through music generation, emotion tracking, or session support, therapists must be empowered to question not just the utility but also the values embedded in such tools. Reflective supervision, peer discussion groups, and interdisciplinary collaboration could offer valuable forums for processing these changes and maintaining ethical clarity.

Finally, while AI may hold promise in music therapy, especially for engaging younger or tech-comfortable clients, its use must be guided by clinical judgement and attuned to individual client needs. Therapists must remain vigilant against the overgeneralisation of benefits and ensure that any technological intervention serves, rather than substitutes, the therapeutic relationship. As such, AI should be positioned as a complement to, not a replacement for, human therapeutic presence, ensuring that the co-created musical space remains grounded in empathy, responsiveness, and connection.

5.3 Limitations of the Study

Although the findings of this study contribute to a deeper understanding of the ethical implications of AI in music therapy, it is important to acknowledge certain limitations that may affect the generalisability and scope of the results.

One limitation of this study is the small cohort of music therapists (n=8) interviewed. While this sample allowed for an in-depth exploration and generation of rich, nuanced data, the limited number of participants restricts the generalisability of the findings to the wider music therapy community. A larger, more diverse sample would provide a broader perspective and potentially enhance the applicability of the results. Additionally, variables

such as years of professional experience, therapeutic settings, client populations, and familiarity with digital tools could significantly influence perceptions of AI. Although some of these factors were acknowledged in the study, they were not directly analysed in relation to the findings. A deeper exploration of these variables in future research could reveal additional themes or divergent opinions not fully captured in this study.

Another limitation of the study is its geographical focus, with all but one participant based in the United Kingdom. This raises questions about the generalisability of the findings to a global context. While the UK-specific focus provided valuable insights into the country's healthcare and training context, it potentially overlooks important cultural, technological, and systemic factors that could shape AI integration in other regions. For example, the study's findings may reflect cultural biases unique to the UK, influenced by practices, regulations, and attitudes toward technology in healthcare that are shaped by bodies like the HCPC and the NHS. Participants frequently highlighted the importance of complying with HCPC regulations and maintaining strict confidentiality in AI data storage and management - concerns that may be less pronounced in countries with different regulatory frameworks.

Furthermore, the level of technological integration in UK healthcare may not be representative of other countries, potentially affecting therapists' exposure to and familiarity with AI tools. Therapists in the UK may be more sensitive to the risks associated with AI, given the lack of widespread adoption and established security protocols. Additionally, the structure and funding of the UK healthcare system may influence the adoption and perception of AI technologies, impacting factors such as resource availability, institutional support, and perceived cost-effectiveness.

Finally, a notable limitation is the participants' limited familiarity with AI technologies. Most interviewees had minimal or no direct experience with AI, which shaped the nature of their responses. Although no practical experience with AI was required for participation, the lack of hands-on experience among most interviewees posed limitations in terms of the insights gained. Their reflections tended to focus on theoretical or speculative concerns, rather than practical insights derived from interaction with AI in therapeutic settings. This may have led to an over-representation of perceived risks and ethical uncertainties, while potentially under-representing the practical benefits of AI integration that might emerge through direct interaction with such technologies in a therapeutic context. Therefore, while the study effectively captured general attitudes, it is important to recognize that the findings are primarily theoretical, and real-world application could uncover additional insights and considerations that were not fully addressed in this research.

6. Conclusion

6.1 Summary of Findings

This qualitative study explored the perceptions of music therapists regarding the integration of AI and its ethical implications in music therapy. In light of AI's rapid evolution and its growing influence across various healthcare domains, this research highlights the critical importance of addressing the perceptions of music therapists to ensure that AI is implemented effectively while preserving the human-centred values foundational to music therapy. Although participants in the study did not have a complete understanding of AI or its capabilities, they were able to actively interact with fundamental concepts related to music therapy and identified potential benefits in specific therapeutic contexts. Importantly, they emphasised critical conditions for ethical integration, such as alignment with clinical goals to ensure AI supports therapeutic objectives, clearly defined boundaries for AI's role within therapy to maintain the therapist-client relationship, ethical safeguards to protect patient autonomy and confidentiality, and training to ensure therapists are well equipped to responsibly integrate into music therapy practice. These findings reflect a nuanced approach by music therapists, who recognise AI's potential utility while prioritising the preservation of the relational and humanistic principles central to music therapy practice. Fostering ongoing dialogue among practitioners, researchers, and technologists; conducting rigorous studies to assess AI's impact on therapeutic outcomes; and developing ethical frameworks that safeguard the integrity of the therapeutic alliance is therefore crucial to ensure that technological advancements enhance and not diminish the deeply personal and human-centred nature of this profession.

6.2 Recommendations for Future Research

Given the exploratory nature of this study and the limited AI experience among participants, future research would benefit from involving music therapists who have engaged directly with AI tools in clinical or educational contexts. This could offer more nuanced insights into both the practical benefits and challenges of AI in real-world settings. Further, studies incorporating educational components about relevant AI technologies could help assess how increased familiarity affects therapists' perceptions, confidence, and openness to integration. Experimental or mixed-methods designs could also evaluate the actual impact of

AI on therapeutic processes and outcomes, providing evidence for its effectiveness, or potential limitations, in practice.

The development and evaluation of tailored training programs are also recommended. These should include practical demonstrations, case-based learning, and ethical scenarios to help therapists navigate the complexities of AI in a way that is consistent with their professional values. Additionally, future research should include the perceptions of clients, particularly as their experiences and preferences are central to ethical care. Understanding how clients perceive AI's presence in therapy, whether as a support or a barrier, will be crucial to shaping ethically grounded and client-centred approaches to AI integration.

Ultimately, as AI technologies continue to evolve, it is essential that music therapy as a profession remains proactive in shaping how these tools are developed and deployed. By prioritising ethical reflection, practitioner training, and client input, the field can ensure that technological advancements serve to enhance, rather than undermine, the uniquely human and relational dimensions of music therapy.

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Appendix

Semi-Structured Interview Guide

1. **Can you describe your current approach to music therapy?**
2. **What role does technology currently play in your music therapy practice?**
3. **What is your understanding of Artificial Intelligence (AI)? Have you used AI in/ outside of your practice?**
4. **Are there any client groups or therapeutic goals for which you think AI integration could be especially beneficial?**
5. **How do you think AI might affect the therapeutic relationship and the session dynamics between therapist and client?**
6. **What ethical considerations may arise with integrating AI into music therapy? What safeguards should be in place?**
7. **How do you think AI might impact the creative aspects of music therapy?**
8. **What do you think would be necessary to effectively use AI in music therapy practice?**