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Future Prospects of Avatar Therapy Scenarios

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Abstract. Avatar therapy is emerging as a promising approach in the treatment of psychological disorders, leveraging the power of virtual reality and personalized avatars to help individuals cope with various mental health issues. Emerging as an alternative to traditional psychotherapy methods, avatar therapies are conducted within a scenario where psychotherapy schools are adapted to virtual environments. In this context, this study aims to explore how psychotherapy methods commonly used in the treatment of mental disorders can be integrated with avatar therapy scenarios, and the potential benefits and challenges of this integration. It also aims to evaluate the future potential of avatar therapy scenarios by examining the adaptability of these scenarios, especially their integration into the Metaverse environment. This study emphasizes the feasibility of applying traditional psychotherapies within immersive virtual reality settings to support the treatment of psychiatric disorders, advocating for the expansion of these study scopes into Metaverse environments for future research.

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1. Introduction

According to a report by the World Health Organization published on June 8, 2022, in 2019, 280 million individuals were diagnosed with depression, 301 million with anxiety disorders, and 40 million with bipolar disorder. The prevalence of mental disorders has significantly increased in recent years, posing a substantial burden on individuals, families, and societies worldwide [26]. Mental disorders often have complex etiologies, resulting from the interaction of genetic, biological, psychological, and environmental factors. Consequently, their treatments are typically long-term and require the combined use of multimodal approaches. Medication, psychotherapy, and lifestyle interventions are often necessary to effectively manage symptoms. Due to their potential for chronic or recurrent courses, ongoing care and monitoring are essential, necessitating long-term treatment and follow-up after diagnosis [3]. Considering the frequency of occurrence, the economic cost and burden on healthcare systems of mental disorders requiring comprehensive treatment and follow-up are remarkably high. The global cost is estimated to be $2.5 trillion and is projected to double by 2030 [7].

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Throughout history, psychotherapy has developed diverse theoretical approaches to interpret an individual's psychological experiences. [13] aimed to analyze the unconscious processes underlying behavior through psychoanalytic theory. Conversely, [18] transcended the individual unconscious, focusing on universal psychological structures such as the collective unconscious and archetypes. Viktor Frankl's logotherapy, within existential therapy approaches, views the search for meaning in life as a fundamental component of psychological resilience [10]. These theories provide in-depth insights into understanding an individual's self-perception, internal conflicts, and relationship with life. However, each approach has specific limitations. For instance, the lengthy and intensive therapy processes required by psychoanalytic theory may reduce accessibility for individuals with resource and time constraints. Existential approaches, with their focus on abstract and philosophical concepts, may present challenges for some clients in understanding practical applications. Similarly, Jungian therapy, with its emphasis on symbolism and archetypal analyses, can offer a complex and subjective experience due to cultural differences and variations in individual interpretations. Therefore, while these theories offer comprehensive frameworks for an individual's psychological processes, they should be evaluated with a critical perspective regarding applicability, accessibility, and sensitivity to individual differences.

The utilization of technological systems in the diagnosis, treatment, and monitoring of mental disorders dates back to the 1950s [31]. An early example of tele-psychiatry involved the Nebraska Psychiatric Institute, where a closed-circuit television system allowed psychiatrists, psychologists, and social workers to receive live or recorded lectures, provide secure assistance to nurses, and offer facility tours to experts [2]. In child and adolescent health, one of the first tele-psychiatry applications was a 1970 connection between a child guidance clinic in New York City and Mount Sinai School of Medicine [8]. With advancements in communication and portable-wearable device technology, digital health and its applications have become widespread, supporting individuals in monitoring their personal health, adhering to treatment protocols, and promoting preventive healthcare practices [21].

Avatar therapy represents an innovative form of psychotherapy that utilizes virtual reality and computer graphics technologies to assist individuals in addressing mental health challenges [14]. In this therapeutic approach, clients create digital representations of themselves, known as avatars, and engage in interactions within virtual therapeutic environments [25]. The limitations inherent in traditional therapy modalities can be mitigated through the implementation of avatar therapy in virtual settings. Research suggests that experiences encountered via avatars in immersive virtual reality environments closely resemble real-life experiences, exerting comparable effects on individuals' minds and bodies, whether positive or negative [27]. Although this field of study is relatively nascent, the volume of virtual reality therapy studies conducted in virtual reality environments is rapidly expanding.

Cognitive behavioral therapy (CBT) is the most frequently utilized therapy approach in virtual reality therapy research [20]. This is mainly because CBT is a type of psychotherapy that seeks to identify and change negative thought patterns and behaviors. CBT treatment is based on sub-dimensions such as cognitive restructuring, behavioral activation, exposure therapy, and skill training. VRT studies provide clients with the opportunity to practice in a safe and controlled environment by integrating these sub-dimensions of CBT into virtual applications. In particular, the application of exposure therapy in a virtual setting makes it easier for clients to confront their fears and manage their anxieties [16]. Exposure therapy is a therapeutic technique designed to reduce anxiety by gradually exposing individuals to situations, objects, or memories that they fear or avoid [1]. The success of VRT scenarios, in which exercise therapy for common anxiety disorders is widely used in the literature, is based on providing a very realistic environment that supports the patient's exposure to the source or context of anxiety without causing danger. Research in this area has reported a significant impact, with six studies clearly indicating that VRT scenarios have a significant impact on the degree of anxiety compared to patients who are not treated [34]. Studies have supported that an individual's anxiety responses in real life and anxiety responses in a VR environment are similar, and that VR technology is a suitable and reliable tool for behavioral therapy protocols [34]. However, different psychotherapy approaches can also be integrated with VRT, and treatment protocols suitable for different client needs can be developed. Significant benefits can be provided in the process of understanding and changing an individual's emotions, thoughts, and behaviors in virtual environments through these approaches.

The Metaverse concept is addressed in this study in a dimension separate from traditional closed-circuit virtual reality systems. While traditional VR therapies typically focus on individual and pre-defined scenarios, the Metaverse adds a social layer to the therapeutic process through its features of "continuity," "simultaneity," and "multi-user interaction." In this context, avatar therapy assumes a dynamic structure within the Metaverse ecosystem, where the client interacts not only with their inner world but also with simulated social structures.

This study critically evaluates avatar therapy scenarios through the lens of various therapeutic approaches. It aims to explore these scenarios' prominent aspects, shortcomings, and future potential. Furthermore, it will discuss the possibilities and challenges of integrating avatar therapy into the metaverse for mental health applications in the future. The original theoretical contribution of this manuscript lies in its systematic reconceptualization of the Metaverse not merely as a technological upgrade over conventional VR, but as a qualitatively distinct therapeutic environment characterized by persistence, social embeddedness, digital identity continuity, and therapeutic frame transformation. Unlike previous reviews that treat VR and Metaverse interchangeably, this study explicitly delineates how these Metaverse-specific properties redefine the therapeutic frame across multiple psychotherapy traditions, offering an integrative conceptual framework that bridges clinical theory with emerging digital ecosystems.

2. Scope of the Study and Theoretical Framework

This study adopts a narrative literature synthesis and theoretical analysis method to evaluate the future usage possibilities of avatar therapy. The literature search was conducted across PubMed, PsycINFO, Web of Science, and Scopus databases using the following search terms: "avatar therapy," "virtual reality psychotherapy," "Metaverse mental health," "immersive virtual reality therapy," and "VR-based intervention." Inclusion criteria encompassed peer-reviewed articles published between 2010 and 2025 that addressed the application of VR or avatar-based technologies in psychotherapy. Exclusion criteria included non-English publications, conference abstracts without full-text access, and studies focused exclusively on non-therapeutic VR applications (e.g., gaming, education). The selection process followed a two-stage screening: initial title and abstract review followed by full-text evaluation. This study is methodologically positioned as a narrative theoretical synthesis rather than a systematic review; accordingly, it does not employ meta-analytic procedures or formal risk-of-bias assessment. Within the scope of the analysis, Cognitive Behavioral Therapy—due to its evidence-based successes—and Psychoanalytic/Humanistic approaches, which provide in-depth insights, have been selected as the primary focus. The article aims to offer a holistic perspective by synthesizing the basic principles of psychotherapy schools with current technological opportunities through the concepts of "interactive environment," "avatar representation," and "therapeutic alliance."

To ensure conceptual clarity, the following key constructs are operationally defined within this framework: (1) Persistence refers to the continuous existence of the virtual environment and user data beyond individual therapy sessions, enabling longitudinal therapeutic engagement and progress tracking across time. (2) Social embeddedness denotes the capacity of the Metaverse to situate therapeutic interactions within a broader social ecosystem involving other real users, thereby enabling naturalistic social exposure and interpersonal skill development. (3) Digital identity continuity describes the maintenance of a consistent avatar-based self-representation across sessions and contexts, which may facilitate identity exploration, self-narrative coherence, and therapeutic rapport. (4) Therapeutic frame transformation refers to the fundamental restructuring of the spatial, temporal, and relational boundaries of the therapeutic encounter when transposed from physical or conventional VR settings into persistent, multi-user Metaverse environments.

3. An Overview of Traditional Therapy Approaches in Virtual Settings

The emergence of avatar therapies is primarily driven by the desire to create an alternative to traditional methods. In this context, the advantages gained and challenges encountered through the integration of conventional therapeutic approaches into virtual environments are crucial for understanding the future role of avatar therapy.

The effective adaptation of diverse therapeutic modalities to virtual environments necessitates a strategic approach that leverages the inherent advantages of the virtual setting while simultaneously preserving the core tenets of each therapeutic approach. This process hinges on the implementation of appropriate technical infrastructure that supports, rather than distorts, the fundamental nature of the therapy. Consequently, the transposition of avatar therapy scenarios to virtual environments, when grounded in a foundation of theoretical diversity, presents both opportunities and limitations, thereby highlighting the critical need for an interdisciplinary roadmap to ensure a seamless and efficacious transition.

3.1. **Cognitive Behavioral Therapy Scenarios.**

Cognitive Behavioral Therapy is an evidence-based psychotherapy approach focused on resolving emotional and behavioral issues by helping clients understand and modify their thought patterns, emotions, and behaviors [4]. CBT is recognized as an effective method for treating various mental health problems, including anxiety disorders, depression, obsessive-compulsive disorder, and post-traumatic stress disorder. Virtual reality environments offer a highly favorable setting for implementing CBT principles. This method is used to

create an effective exposure environment for conditions such as phobias, post-traumatic stress disorder, and generalized anxiety disorder [22].

Avatar therapy facilitates the confrontation of digital representations embodying an individual's internal monologue, self-deprecating thoughts, or anxieties [19]. For instance, [6] facilitated a controlled dialogue for schizophrenia patients with avatars mirroring their auditory hallucinations within a VR environment. This approach demonstrated positive outcomes in terms of emotional regulation and self-perception among patients. Furthermore, in the VR avatar therapy model developed by [12], individuals are immersed in digitally reconstructed social settings to address social anxieties, focusing on modifying negative automatic thoughts associated with social interaction. This model aims to enable clients to devise alternative behavioral patterns and thought processes, aligning with the principles of CBT. Similarly, [9] employed an avatar-based intervention for individuals diagnosed with depression, fostering self-compassion. Their study indicated that initiating the process with individuals conveying compassionate messages to their avatars, subsequently evolved into a reciprocal exchange of empathetic affirmations. The findings suggest that avatar representations can serve as effective tools in both cognitive and emotional therapeutic processes.

In classical VR, exposure is controllable but occurs in an artificial environment. The Metaverse, however, offers the client a living social ecosystem where they can interact with other real users. This enables, in cases such as social anxiety disorder, the transfer of exposure practices from the laboratory setting to a "real-life-like" social flow. This immersive and interactive environment within the metaverse can foster a stronger sense of social presence and connection among participants, potentially leading to improved treatment outcomes compared to traditional in-person interventions [15].

Consequently, fundamental CBT principles such as identifying automatic thoughts, resolving thought-emotion-behavior cycles, and implementing behavioral experiments can be addressed more comprehensively through virtual environments, gaining a deeper visual, experiential, and empathetic dimension.

3.2. **Psychoanalytic (Object Relations) Theory Scenarios.** Psychoanalytic theory is a psychological approach that focuses on understanding the unconscious processes underlying human behavior and examines their effects on an individual's thoughts, emotions, and behaviors [13]. Applying psychoanalytic principles in a virtual environment raises the question of how unique dynamics such as transference and countertransference can be represented in a digital space. However, avatars can be used as a "projection object" that allows the expression of inner figures [32].

For instance, a virtual encounter facilitated through an avatar can enable a client to address their internalized parental figure or engage with emotions like guilt or shame. [9] observed that avatar-based self-compassion exercises led to a reduction in depressive symptoms. Nevertheless, the lack of a therapist's physical presence in the digital setting may pose challenges in establishing a secure attachment environment. Additionally, the revelation of unconscious material raises ethical considerations.

3.3. **Humanistic (Gestalt) Therapy Scenarios.** Humanistic therapy is a psychotherapeutic approach centered on enabling individuals to realize their potential and foster personal growth. It emphasizes the exploration of inner resources, the preservation of authenticity, and self-actualization within an environment of unconditional acceptance. In this context, avatar-based humanistic scenarios in virtual environments can provide experiential opportunities for clients to develop self-empathy. The principles of "unconditional positive regard" and "empathic understanding," as articulated by [28], can be replicated in relationships structured through avatar interaction.

The study by [23] indicates that self-acceptance and self-efficacy exercises conducted with avatars positively influence individuals' self-perception. For example, engaging in self-compassionate dialogue with one's own avatar can be effective in mitigating the inner critical voice. However, the capacity to convey the "live" emotional tone of the therapeutic relationship in virtual environments remains a debated topic.

In Gestalt Therapy, a sub-modality of humanistic therapy as highlighted by [24], techniques aimed at enhancing an individual's awareness can be enriched through avatar interactions within a virtual environment. The empty chair technique, commonly used in Gestalt therapy, involves a person sitting opposite an empty chair and imagining another individual or a part of themselves occupying that chair. The person then openly addresses the chair, expressing thoughts, emotions, or questions that they may not articulate in real life. This technique can be animated via an avatar, allowing the individual to address their unfinished business in a virtual setting. Consequently, emotional expression and confrontation processes can be experienced in a safer environment.

3.4. **Mindfulness and Acceptance Based Approaches Scenarios.** Mindfulness is a psychological state characterized by non-judgmental attention to present moment experiences [29]. Virtual reality technologies offer novel avenues for enhancing mindfulness practices, potentially improving outcomes related to stress, anxiety, and emotional regulation. Within VR environments, individuals can engage in guided exercises, such as breath awareness and thought monitoring, within serene virtual settings. These VR-based interventions provide structured and accessible mindfulness training, particularly beneficial for individuals with limited access to traditional in-person sessions [30]. However, challenges such as digital distraction, screen fatigue, and the effective integration of technology with introspective processes warrant consideration.

Acceptance and Commitment Therapy (ACT), a mindfulness-based approach, endeavors to assist individuals in aligning their lives with personal values and augmenting their psychological flexibility [17]. [33] pioneered a VR-supported avatar therapy, integrating ACT and CBT methodologies for addressing auditory hallucinations in patients with schizophrenia. Their study, involving the presentation of two cases, demonstrated that patients who confronted their auditory hallucinations through avatars in a virtual environment experienced desensitization. This confrontation led to a reduction in the fear and stress associated with auditory hallucinations. It is important to acknowledge that these findings would benefit from further validation through studies incorporating larger sample sizes and control groups.

TABLE 1. Comparative framework of psychotherapy approaches in metaverse environments.

Therapeutic Approach	**Metaverse Transformation**	**Key Metaverse Properties Utilized**	**Advantages Over Conventional VR**	**Limitations and Risks**	**Testable Hypothesis**
Cognitive Behavioral Therapy (CBT)	Exposure shifts from controlled lab scenarios to naturalistic, persistent social ecosystems with real multi-user interactions	Social embeddedness, Persistence	Real-time social context enhances ecological validity of exposure; longitudinal tracking of cognitive-behavioral patterns	Unpredictable social stimuli may trigger uncontrolled anxiety escalation; digital dependency risk; reduced therapist control over exposure parameters	H1: Metaverse-based social exposure will produce greater reduction in social anxiety symptoms (LSAS scores) compared to conventional single-user VR exposure after 12 sessions
Psychoanalytic (Object Relations)	Avatar becomes externalized projection object for internalized figures; persistent digital identity enables longitudinal transference analysis	Digital identity continuity, Therapeutic frame transformation	Tangible externalization of unconscious content; persistent avatar records enable retrospective analysis of transference evolution	Absence of physical co-presence may impair secure attachment formation; ethical risks of uncontrolled unconscious disclosure; countertransference management in avatar-mediated contexts is undefined	H2: Clients engaged in persistent avatar-based psychoanalytic sessions will demonstrate measurable changes in object relations inventory scores compared to non-persistent VR controls over 24 weeks
Humanistic (Gestalt)	Empty chair technique becomes avatar-embodied confrontation; self-compassion exercises gain visual and experiential depth through avatar embodiment	Digital identity continuity, Social embeddedness	Embodied self-compassion with visual feedback; social environment enables group-based unconditional positive regard experiences	Digital medium may attenuate emotional resonance and non-verbal cues essential for Gestalt awareness; avatar limitations in conveying authentic somatic experience	H3: Avatar-embodied empty chair technique will yield higher experiential avoidance reduction (AAQ-II) than standard imaginal empty chair technique over 8 sessions
Mindfulness and ACT	Guided mindfulness shifts to persistent, immersive environments with social co-meditation; ACT defusion exercises gain multi-sensory avatar embodiment	Persistence, Social embeddedness	Persistent environment supports daily practice continuity; group mindfulness sessions with real participants enhance motivation and adherence	Digital distraction and screen fatigue may counteract mindfulness goals; sensory overload in multi-user environments may impede present-moment focus; technology dependence conflicts with self-reliance objectives	H4: Metaverse-based group mindfulness will produce equivalent or superior FFMQ score improvements compared to in-person group mindfulness training over 8 weeks

4. THEORETICAL PROPOSITIONS FOR FUTURE EMPIRICAL RESEARCH

Based on the comparative analysis presented above, the following theoretical propositions are advanced to guide future empirical investigation: Proposition 1 (P1): The persistent and socially embedded nature of the Metaverse will enhance the ecological validity of exposure-based interventions compared to conventional single-user VR environments, as measured by real-world behavioral transfer indices. Proposition 2 (P2): Digital identity continuity in the Metaverse will facilitate deeper transference processes in psychoanalytic therapy compared to session-limited VR encounters,

as assessed through longitudinal object relations measures. Proposition 3 (P3): The social co-presence afforded by multi-user Metaverse environments will strengthen the therapeutic alliance in humanistic and Gestalt-based interventions, as measured by the Working Alliance Inventory (WAI). Proposition 4 (P4): The degree of therapeutic frame transformation required for effective Metaverse-based therapy will vary as a function of the theoretical orientation, with structured approaches (CBT, Mindfulness) requiring less adaptation than relational approaches (Psychoanalytic, Humanistic). These propositions are empirically testable and are offered as a structured research agenda for the nascent field of Metaverse-based psychotherapy.

5. Discussion

The integration of traditional psychotherapy approaches with VR and avatar technologies increases the accessibility of psychological interventions and expands experiential learning opportunities. Avatar therapy scenarios in virtual environments have supportive and enriching features for different theoretical approaches of psychotherapy. However, the transfer of each therapy theory to the digital environment has its own specific advantages and limitations.

CBT, owing to its structured framework, stands out as one of the most readily adaptable approaches to virtual reality based applications. Techniques such as exposure therapy, social skills training, and cognitive restructuring can be safely and effectively implemented within VR environments [5]. Controlled exposure experiences in areas like phobias, trauma, and social anxiety enable clients to confront their negative beliefs in a secure setting [22]. However, the transfer of skills learned in the digital environment to the real world may be limited. Furthermore, the process of acclimatizing to the virtual environment can induce anxiety in some users, potentially affecting their commitment to therapy [11]. A core principle of CBT involves helping individuals restructure negative thoughts and beliefs to modify their emotional and behavioral responses, thus facilitating more functional cognitive processes. IVR offers a rich and interactive medium for these processes, enabling individuals to test their thought patterns through more concrete and realistic scenarios [16]. From this perspective, metaverse environments, incorporating virtual spaces with multiple real individuals, can provide significantly enhanced learning experiences for CBT applications. Consequently, individuals can recognize automatic thoughts arising during interactions with different people and have the opportunity to observe the extent to which these thoughts align with reality. This allows individuals to experience their anxieties in a more realistic and profound manner. For example, the experience of delivering a presentation in a crowded virtual space within the Metaverse, while targeting social anxiety, places users in a social interaction rather than an isolated environment. This experience can offer a more interactive and contextually realistic exposure setting. Nevertheless, some uncertainties persist regarding the extent to which these Metaverse-provided experiences mirror real-world events. Additionally, it may not be fully possible for such avatar-mediated interactions to precisely reflect behaviors and interactions in the real world. Digital dependencies, characterized by users' excessive interest in the virtual environment and tendencies to escape from real life, can undermine the fundamental objectives of CBT.

The psychoanalytic approach, with its emphasis on in-depth insight and symbolic representations, can transform avatars into effective tools for expressing unconscious content [9]. However, the potential for underdeveloped transference-countertransference dynamics on digital platforms may limit the depth of the therapeutic process. Furthermore, it is suggested that VR environments may not offer sufficient flexibility and support in crisis situations that may arise during the disclosure of unconscious material. The application of psychoanalytic theory in virtual environments holds the potential to restructure unconscious processes, transference, and countertransference in a digital context through avatars and VR spaces. The Metaverse can create a space where clients express their inner conflicts through avatars. For example, individuals can confront parental figures or fears through their avatars. However, the absence of the therapist's physical presence in the Metaverse may create challenges in establishing secure attachment and a therapeutic relationship. In the digital environment offered by the Metaverse, the real-time and superficial interaction between therapist and client may struggle to reflect the depth of classical psychoanalytic therapy. While virtual environments can support the disclosure of unconscious content, this situation also brings ethical and psychological responsibilities in the digital world. Issues such as how to manage countertransference processes of avatars and whether the therapist can effectively support these processes may limit the potential of the Metaverse.

Humanistic therapy, which emphasizes self-acceptance, empathy, and self-development within a virtual setting [23], has the potential to experientially present these principles through avatars in the Metaverse. Notably, in avatar-based applications, users can empathetically engage with themselves and use avatars to soften their internal critiques. Carl Rogers' principles of unconditional acceptance and empathetic understanding can be replicated between avatars and

users in the Metaverse environment. Similarly, through the empty chair technique applied within the framework of Gestalt Therapy, individuals can confront different aspects of themselves or internal conflicts in a virtual environment. However, whether the depth of live emotional interactions and therapeutic relationships can be achieved in a digital environment remains debatable. In the virtual environment offered by the Metaverse, interactions with avatars may not fully substitute for real-world experiences. Empathetic resonance may be limited through avatars and virtual interactions, potentially affecting the quality of the therapeutic relationship.

Mindfulness practices aim to enhance awareness of the present moment, enabling individuals to observe their negative emotional reactions without judgment [30]. The Metaverse can serve as an effective space for mindfulness practice, especially for individuals experiencing stress and anxiety disorders. Nature-themed virtual environments, combined with calming sounds and guided exercises, can offer users an experience beyond traditional mindfulness sessions. Mindfulness through the Metaverse provides a guided and structured process, particularly beneficial for those who find meditating in digital environments challenging. Acceptance and Commitment Therapy can also utilize the Metaverse to offer users a new space for desensitization exercises. However, technological dependencies and digital distractions may hinder the effectiveness of mindfulness processes. Screen fatigue or exposure to visual stimuli in the Metaverse can impede the internalization of awareness processes.

Despite the potential advantages outlined above, several critical limitations and risks must be acknowledged. First, the current evidence base for Metaverse-based psychotherapy remains largely preclinical and conceptual; no randomized controlled trials have yet compared Metaverse-specific interventions with conventional VR or in-person therapy. Second, the persistent and socially embedded nature of the Metaverse introduces risks of digital dependency, wherein clients may prefer virtual social interactions over real-world engagement, potentially undermining the generalization objectives of therapy. Third, data privacy and security concerns are amplified in multi-user, persistent environments where therapeutic interactions may be recorded, intercepted, or surveilled by third parties. Fourth, the digital divide—encompassing disparities in hardware access, internet connectivity, and digital literacy—may exacerbate existing inequalities in mental health service provision rather than alleviating them. Fifth, the absence of established ethical guidelines for therapist conduct in persistent multi-user environments creates regulatory uncertainty, particularly regarding informed consent, dual relationships, and crisis management in virtual spaces. Sixth, from a neuropsychological perspective, prolonged immersion in visually intensive Metaverse environments may induce cybersickness, perceptual distortions, or dissociative experiences that are contraindicated for certain psychiatric populations. These limitations warrant cautious interpretation of the optimistic scenarios presented in this analysis and underscore the necessity of rigorous empirical validation before clinical deployment.

6. Conclusion

While the Metaverse presents a potentially revolutionary approach to delivering therapeutic interventions, its integration with various therapeutic theories introduces both significant opportunities and considerable challenges.

While structured, guided approaches like CBT and Mindfulness have demonstrated more straightforward adaptability to digital environments, the effectiveness of therapeutic experiences within the Metaverse for therapies requiring greater depth and live interaction, such as Psychoanalytic and Humanistic therapies, necessitates further investigation. The potential of the Metaverse is poised for increased exploration and development alongside the continuous evolution of virtual environments; however, elements such as ethics, security, and the quality of therapeutic interaction must be carefully considered.

This study suggests that integrating psychotherapy theories into digital environments, specifically IVR and the Metaverse, is both theoretically and practically viable. Avatar-based therapeutic scenarios can establish individualized, experiential, and secure intervention spaces, notably enhancing accessibility. CBT-based virtual scenarios offer effective digital exposure opportunities for conditions like anxiety disorders, phobias, and post-traumatic stress disorder. Psychoanalytic avatar scenarios can serve functions such as revealing unconscious material and confronting internal figures. Humanistic applications facilitate insight through avatar-based self-compassion development and unconditional acceptance-based interactions. Mindfulness-based VR environments are effective in areas like stress reduction, emotion regulation, and internal focus. These findings indicate that avatar-based therapy models are both compatible with traditional theories and offer innovative application possibilities. This field has significant implications not only for clinical psychology practice but also for digital health policies, ethical frameworks, technology design, and education. Therapy models conducted in virtual environments can provide inclusive and cost-effective solutions, particularly

for individuals with limited access to services. However, the ethical, privacy, and therapeutic alliance aspects of these applications must be carefully regulated.

This study provides a review that examines the integration of therapeutic theories into Metaverse and IVR environments from an interdisciplinary perspective and comparatively analyzes the limited number of examples in the literature. Furthermore, it proposes an original conceptual framework regarding how each theory can be adapted to potential digital scenario designs. Future studies should focus on longitudinal research evaluating the long-term effects of avatar-based therapy applications; in-depth qualitative analyses of how psychodynamic dimensions such as therapeutic alliance, emotional transference, and interaction quality function in VR environments; the impact of cultural differences on avatar therapy; the integration of mixed reality systems into therapy; and the restructuring of therapist training programs to include digital therapy skills. Academics, technology developers, and mental health professionals should collaborate on the design, evaluation, and ethical boundaries of virtual therapeutic environments. A multidisciplinary perspective is essential for the healthy advancement of this evolving field.

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this article.

Authors Contribution Statement

All authors contributed to the study conception and design. The first draft of the manuscript was written by Reyhan Şahinbaş and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Declarations

This study employed artificial intelligence to translate the article into English and to conduct a review of its academic writing. The authors did not receive support from any organization for the submitted work.

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