

Original Paper

Artificial Intelligence–Supported Psychodrama

Hakan Usakli¹

¹ Sinop University, Sinop, Turkiye

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Abstract

Artificial intelligence (AI) technologies have increasingly been integrated into mental health services, offering new possibilities for psychological assessment, therapeutic support, and behavioral intervention. At the same time, experiential psychotherapy approaches such as psychodrama continue to demonstrate effectiveness in facilitating emotional expression, interpersonal learning, and behavioral change. Despite these parallel developments, relatively little research has examined how artificial intelligence may support psychodramatic processes. The present study aims to conceptualize an Artificial Intelligence–Supported Psychodrama Model through qualitative document analysis of academic literature related to psychodrama, digital psychotherapy, and AI-supported mental health interventions. A corpus of peer-reviewed articles and scholarly books was analyzed using thematic coding procedures commonly applied in qualitative research. Findings were organized into three major themes reflecting core therapeutic processes: cognitive, affective, and behavioral dimensions. Cognitive codes included privacy, decision-making, reflection, and insight; affective codes included trust, emotional expression, empathy, and emotional awareness; behavioral codes included experimentation, persistence, role exploration, and skill practice. Results suggest that AI technologies may extend the possibilities of psychodramatic therapy by supporting reflective feedback, facilitating emotional awareness, and enabling repeated behavioral experimentation within simulated interpersonal scenarios. However, ethical considerations such as confidentiality, technological transparency, and the preservation of authentic therapeutic relationships remain essential. The proposed conceptual model provides a framework for future empirical studies exploring the integration of artificial intelligence with experiential psychotherapy practices.

Keywords

Artificial intelligence, psychodrama, digital psychotherapy, experiential therapy, qualitative research

1. Introduction

Mental health care systems worldwide face growing demands for psychological services. Increasing prevalence of stress, anxiety, and depression has intensified the need for innovative therapeutic approaches capable of reaching broader populations. At the same time, technological developments have opened new opportunities for delivering psychological interventions through digital platforms. Artificial intelligence (AI), in particular, has become a significant area of interest within mental health research because of its potential to support assessment, treatment, and therapeutic engagement (Luxton, 2014).

Artificial intelligence refers to computational systems capable of performing tasks that typically require human cognitive processes, including pattern recognition, language understanding, and decision-making. Within mental health services, AI technologies have been used to develop conversational agents, predictive analytics tools, and emotion recognition systems. These technologies can analyze large volumes of behavioral data, identify patterns in language and emotional expression, and provide feedback to both clinicians and users (Miner et al., 2016).

Parallel to these technological developments, experiential psychotherapy approaches continue to play a central role in psychological practice. Among these approaches, psychodrama represents one of the earliest forms of action-based therapy. Developed by Jacob L. Moreno, psychodrama emphasizes role-playing and dramatization as mechanisms for exploring emotional experiences and interpersonal relationships (Moreno, 1946). Through structured enactments, individuals are able to revisit past experiences, experiment with new roles, and develop alternative responses to interpersonal challenges. The integration of artificial intelligence with experiential therapeutic methods represents a promising but relatively unexplored area of research. While digital technologies have already been used in cognitive behavioral therapy and telepsychology, their potential role in supporting action-based therapies such as psychodrama has received limited scholarly attention. This gap is noteworthy because psychodrama inherently involves simulation, role exploration, and imaginative interaction—processes that may be effectively supported by digital technologies.

The present study seeks to address this gap by examining how artificial intelligence technologies may support psychodramatic processes. Specifically, the study proposes a conceptual model of Artificial Intelligence–Supported Psychodrama (AI-SP) based on qualitative analysis of existing academic literature. The analysis focuses on three core dimensions of therapeutic transformation—cognitive, affective, and behavioral processes.

2. Literature Review

2.1 *Psychodrama as Experiential Therapy*

Psychodrama is widely recognized as an experiential psychotherapy approach that combines elements of drama, role playing, and group interaction. According to Moreno (1946), psychodrama enables individuals to express inner conflicts and interpersonal experiences through action rather than purely verbal dialogue. During psychodrama sessions, participants typically assume various roles within a structured dramatic framework. The central participant, often referred to as the protagonist, enacts a personal experience while other group members serve as auxiliary egos representing significant figures or internal aspects of the protagonist's psyche.

Several therapeutic techniques are central to psychodrama practice. Role reversal allows participants to adopt the perspective of another individual, thereby promoting empathy and perspective-taking. Mirroring enables participants to observe their own behavior through the reenactment performed by another participant. Doubling involves a supporting participant who verbalizes unexpressed emotions or thoughts on behalf of the protagonist. These techniques facilitate emotional expression and cognitive insight simultaneously (Blatner, 2000).

Empirical research has supported the therapeutic value of psychodrama. Meta-analytic evidence indicates that psychodrama interventions produce meaningful improvements in psychological well-being and interpersonal functioning (Kipper & Ritchie, 2003). Similarly, Orkibi and Feniger-Schaal (2019) concluded that psychodrama is effective in promoting emotional regulation, self-awareness, and social competence.

2.2 *Artificial Intelligence in Mental Health Care*

Artificial intelligence technologies have recently become a focal point of innovation in mental health services. AI-based systems can process large datasets and identify patterns that may be difficult for humans to detect. For example, machine learning algorithms can analyze linguistic features in written or spoken communication to detect indicators of depression or emotional distress (Miner et al., 2016).

Conversational agents, commonly referred to as chatbots, represent one of the most visible applications of AI in mental health. These systems use natural language processing to simulate conversational interactions with users. Some chatbots are designed to deliver structured psychological interventions, such as cognitive behavioral therapy exercises or mindfulness practices. Research has shown that digital conversational agents can reduce symptoms of anxiety and depression when used consistently (Fitzpatrick et al., 2017).

Another emerging application of AI involves emotion recognition technologies. These systems analyze facial expressions, vocal tone, and physiological signals to infer emotional states. Such technologies may provide valuable insights into emotional experiences during therapeutic interactions (Topol, 2019).

Despite these promising developments, scholars have emphasized the need for caution when integrating AI into psychotherapy. Ethical concerns include privacy protection, data security, algorithmic bias, and the potential erosion of human therapeutic relationships (Blease, 2019). Consequently, many researchers advocate viewing AI technologies as supportive tools rather than replacements for human therapists.

2.3 Integrating AI and Experiential Therapy

The theoretical integration of AI and psychodrama is supported by the shared emphasis on interactive experience. Psychodrama involves the simulation of interpersonal situations, while AI technologies can generate interactive scenarios and analyze behavioral responses. Virtual environments, for example, have already been used to facilitate exposure therapy and social skills training (Freeman et al., 2017). Digital technologies may therefore enhance psychodrama by enabling participants to engage in simulated interactions that extend beyond the physical therapy space. AI systems may also provide reflective feedback on emotional expression, communication patterns, and decision-making processes. However, the integration of AI with experiential psychotherapy remains largely conceptual. Further research is needed to identify specific mechanisms through which AI technologies may support psychodramatic interventions. The present study contributes to this emerging area by examining relevant literature through qualitative document analysis.

3. Method

3.1 Research Design

This study employed a qualitative document analysis approach. Document analysis is commonly used in qualitative research to examine written materials such as academic articles, books, and reports in order to identify recurring patterns and conceptual themes.

3.2 Data Sources

The analysis included scholarly sources related to:

Psychodrama therapy

Artificial intelligence in mental health

Digital psychotherapy technologies

Experiential learning theory

Approximately 40 academic publications were reviewed.

3.3 Data Analysis Procedure

The analysis followed three stages:

Open Coding – Key concepts related to AI and psychodrama were identified.

Axial Coding – Related codes were grouped into categories.

Selective Coding – Categories were organized into three overarching themes: cognitive, affective, and behavioral processes.

4. Findings

The analysis revealed three primary thematic dimensions that characterize the integration of AI and psychodrama.

Theme 1: Cognitive Processes

Cognitive processes involve mental activities such as thinking, reflection, and decision-making.

Privacy

Privacy concerns were frequently mentioned in discussions of AI-supported psychotherapy. One author noted that:

“Digital mental health platforms must ensure strict protection of sensitive therapeutic data in order to maintain user confidence” (Luxton, 2014, p. 335).

Privacy therefore represents a foundational cognitive consideration in AI-supported therapy.

Decision-Making

AI systems may assist therapists and clients in identifying patterns and evaluating therapeutic options.

According to Topol (2019):

“Artificial intelligence has the capacity to analyze behavioral data and support clinical decision-making processes through pattern recognition.”

Reflection

Reflective learning emerged as another important cognitive process. AI-generated feedback may encourage individuals to analyze their communication styles and emotional responses during psychodramatic enactments.

Theme 2: Affective Processes

Affective processes involve emotional experience and relational dynamics.

Trust

Trust is a central factor in psychotherapy effectiveness. Norcross and Lambert (2018) emphasized that:

“The therapeutic alliance remains one of the strongest predictors of treatment outcomes across psychotherapy approaches.”

In AI-supported therapy environments, maintaining trust requires transparency regarding technological processes and data usage.

Emotional Expression

Psychodrama encourages participants to express emotions through dramatic enactment. Digital tools may support this process by providing interactive scenarios that evoke emotional responses.

Empathy

AI systems can simulate empathic responses using natural language processing, although scholars caution that genuine empathy remains uniquely human.

Theme 3: Behavioral Processes

Behavioral processes refer to observable actions and behavioral change.

Experimentation

Psychodrama encourages participants to experiment with new behaviors and roles. AI-generated scenarios may provide opportunities for repeated practice in simulated interpersonal situations.

Persistence

Digital platforms enable individuals to repeat exercises and refine their responses over time.

Role Exploration

Participants can explore alternative perspectives through simulated role interactions.

Table 1. Themes and Codes Identified

Theme	Codes
Cognitive	Privacy, Decision-making, Reflection, Insight
Affective	Trust, Emotional expression, Empathy, Emotional awareness
Behavioral	Experimentation, Persistence, Role exploration, Skill practice

Table 1 illustrates that the proposed model is structured around three primary domains of the therapeutic experience:

The Cognitive Theme, which encompasses the internal processing of the user, focusing on the security of privacy, the process of decision-making, and the development of reflection and insight through AI interaction. The Affective Theme, which addresses the relational and emotional quality of the intervention, specifically highlighting trust, emotional expression, empathy, and the cultivation of emotional awareness. The Behavioral Theme, which focuses on the action-oriented goals of psychodrama, such as experimentation, persistence in treatment, role exploration, and the practical application of skill practice.

Table 2. AI Functions and Therapeutic Contributions

AI Technology	Therapeutic Function	Psychodrama Process
Natural language processing	Dialogue simulation	Role enactment
Emotion recognition	Emotional feedback	Emotional reflection
Machine learning	Pattern detection	Insight development
Scenario generation	Interactive simulation	Role experimentation

Table 2 illustrates that the integration of specific AI technologies provides distinct functional contributions across the psychodramatic process:

Natural Language Processing (NLP) serves the primary function of dialogue simulation, which directly facilitates role enactment by allowing the protagonist to engage in realistic verbal exchanges with digital auxiliary egos. Emotion Recognition technologies provide real-time emotional feedback, supporting the emotional reflection phase of psychodrama and helping the client identify and process underlying feelings during a scene. Machine Learning algorithms enable sophisticated pattern detection within a client's narrative, which ultimately accelerates insight development and helps the therapist identify core recurring themes. Scenario Generation capabilities allow for interactive simulation, providing a safe and controlled environment for the client to engage in role experimentation and practice new behavioral responses.

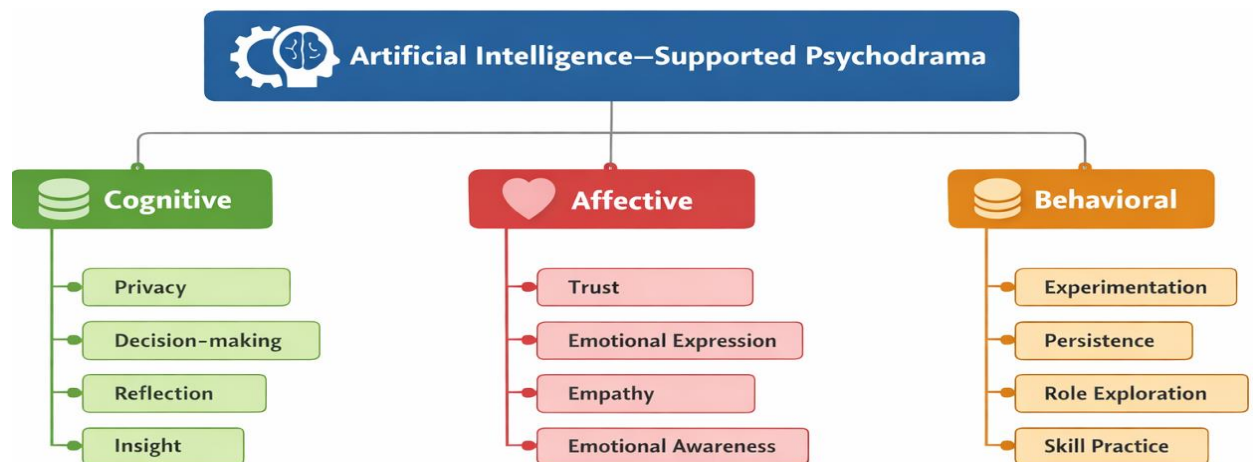


Figure 1. Artificial Intelligence-Supported Psychodrama

Figure 1 illustrates artificial intelligence supported psychodrama with cognitive, affective and behavioral themes.

5. Discussion

The present study aimed to conceptualize how artificial intelligence technologies may support psychodrama processes by examining the literature through qualitative document analysis. The findings suggest that the integration of artificial intelligence into psychodramatic practice can be understood through three interconnected dimensions: cognitive, affective, and behavioral processes. These dimensions correspond to key mechanisms of therapeutic change commonly discussed in experiential psychotherapy literature (Blatner, 2000; Orkibi & Feniger-Schaal, 2019).

From a cognitive perspective, the results indicate that AI technologies may contribute to reflective learning and decision-making processes within psychodramatic therapy. Psychodrama traditionally promotes insight by allowing individuals to reenact personal experiences and observe their behavior from multiple perspectives (Moreno, 1946). Artificial intelligence systems capable of analyzing linguistic patterns, behavioral responses, and emotional cues may further enhance this reflective process by providing structured feedback. For example, machine learning algorithms can detect patterns in communication styles or emotional expression that may not be immediately apparent to participants or therapists. Such feedback may encourage deeper cognitive reflection and facilitate the recognition of previously unnoticed interpersonal dynamics.

Another significant cognitive dimension emerging from the analysis concerns privacy and ethical awareness. Digital mental health technologies inevitably involve the collection and analysis of sensitive personal data. Scholars emphasize that maintaining confidentiality and data security is essential to sustain trust in digital therapeutic environments (Luxton, 2014). In the context of AI-supported psychodrama, participants may share highly personal experiences during role enactments, making privacy protection particularly important. Therefore, ethical frameworks governing digital psychotherapy must be carefully integrated into the design of AI-supported psychodramatic systems.

The affective dimension of the findings highlights the importance of emotional expression, empathy, and trust in therapeutic interactions. Psychodrama is fundamentally an emotionally driven therapeutic approach. Through role playing and dramatization, participants are encouraged to express emotions that may otherwise remain suppressed or difficult to articulate (Blatner, 2000). The integration of AI technologies may support these processes by providing tools that facilitate emotional awareness. For instance, emotion recognition systems capable of analyzing vocal tone or facial expressions may help identify subtle emotional signals during role enactments. Such feedback could support participants in recognizing emotional reactions and exploring their significance within interpersonal contexts.

However, the findings also underscore the complexity of integrating AI into emotionally sensitive therapeutic settings. While artificial intelligence systems can simulate empathic responses through natural language processing algorithms, genuine empathy remains rooted in human relational experience. The therapeutic alliance—often described as a collaborative relationship characterized by trust, empathy, and shared goals—continues to be one of the most reliable predictors of successful psychotherapy outcomes (Norcross & Lambert, 2018). Consequently, AI technologies should be viewed as supportive tools that enhance, rather than replace, the interpersonal aspects of therapy.

The behavioral dimension identified in the analysis emphasizes the potential of AI technologies to facilitate experimentation and skill development within psychodramatic practice. Psychodrama encourages participants to explore alternative behaviors by reenacting interpersonal scenarios and experimenting with different responses. This process allows individuals to test new strategies for communication, conflict resolution, and emotional regulation in a supportive environment. Artificial

intelligence technologies may extend these opportunities by generating simulated scenarios or interactive dialogues that allow repeated behavioral practice.

Digital platforms offer a unique advantage in this regard because they enable individuals to revisit therapeutic exercises outside traditional therapy sessions. Participants may engage in role-playing simulations multiple times, refining their responses and reinforcing newly acquired skills. Such repetition may strengthen behavioral learning processes and promote persistence in therapeutic engagement. From a theoretical perspective, this aligns with experiential learning models suggesting that behavioral change occurs through cycles of action, reflection, and experimentation (Kolb, 1984).

At the same time, the integration of AI technologies into psychodrama raises several practical and ethical questions that require careful consideration. One concern involves the potential overreliance on automated feedback systems. Although AI tools can provide valuable insights, therapeutic interpretation requires contextual understanding and professional judgment. Therapists must therefore remain actively involved in guiding the interpretation of AI-generated feedback to ensure that it contributes meaningfully to therapeutic goals.

Another important consideration involves technological accessibility and digital literacy. While AI-based therapy tools may expand access to mental health resources, not all individuals possess equal access to digital technologies or the skills necessary to use them effectively. Researchers and practitioners must therefore consider issues of digital inclusion when designing AI-supported therapeutic interventions.

Overall, the findings suggest that artificial intelligence technologies may offer valuable opportunities to enhance psychodramatic therapy by supporting cognitive reflection, emotional awareness, and behavioral experimentation. Nevertheless, the successful integration of AI into psychodrama requires careful attention to ethical principles, technological limitations, and the preservation of human-centered therapeutic relationships.

6. Conclusion

The present study explored the potential integration of artificial intelligence technologies with psychodrama therapy through qualitative document analysis of existing literature. The analysis identified three major thematic dimensions that characterize the role of AI within psychodramatic processes: cognitive, affective, and behavioral mechanisms.

The cognitive dimension highlights the capacity of AI technologies to facilitate reflective thinking, decision-making, and insight development. By analyzing communication patterns and emotional cues, AI systems may provide feedback that enhances participants' awareness of their cognitive processes during therapeutic enactments. At the same time, issues related to privacy and data protection remain central considerations in the development of AI-supported therapeutic environments.

The affective dimension emphasizes the importance of emotional expression, trust, and empathy within psychodrama. While AI technologies may support emotional awareness through analytical tools and interactive simulations, the therapeutic alliance remains fundamentally grounded in human relationships. Consequently, AI technologies should be understood as complementary resources that enhance rather than replace the emotional dimensions of psychotherapy.

The behavioral dimension focuses on the role of experimentation, persistence, and skill development within psychodramatic practice. Artificial intelligence technologies may create opportunities for repeated behavioral rehearsal through simulated interpersonal scenarios, enabling participants to practice new responses and strengthen adaptive behavioral patterns.

Taken together, these findings suggest that artificial intelligence has the potential to expand the possibilities of psychodramatic therapy by creating interactive environments that support experiential learning. However, the integration of AI into psychotherapy must be approached with caution, ensuring that ethical considerations, technological transparency, and human-centered therapeutic relationships remain central.

Future empirical studies are needed to test the effectiveness of AI-supported psychodrama interventions in clinical and educational settings. Such research may provide valuable insights into how digital technologies can complement traditional therapeutic methods and contribute to more accessible and innovative mental health services.

7. Recommendations

Based on the findings of this study, several recommendations can be proposed for researchers, practitioners, and technology developers interested in integrating artificial intelligence with psychodramatic therapy.

1) Development of AI-Supported Psychodrama Platforms

Researchers and software developers should collaborate to design digital platforms specifically tailored for psychodramatic interventions. These platforms may include features such as scenario generation, role-playing simulations, and emotional feedback tools that support experiential learning processes.

2) Ethical Frameworks for AI in Psychotherapy

Given the sensitivity of psychological data, clear ethical guidelines must be established for AI-supported therapeutic systems. These guidelines should address issues such as data privacy, informed consent, algorithmic transparency, and professional responsibility.

3) Training Programs for Therapists

Mental health professionals should receive training on how to integrate digital technologies into psychodramatic practice. Such training programs may include instruction on interpreting AI-generated feedback, managing digital therapeutic environments, and maintaining strong therapeutic alliances within technology-assisted settings.

4) Empirical Research and Experimental Studies

Future research should conduct empirical studies examining the effectiveness of AI-supported psychodrama interventions. Experimental designs comparing traditional psychodrama with technology-assisted approaches may provide valuable evidence regarding therapeutic outcomes.

5) Interdisciplinary Collaboration

The integration of artificial intelligence and psychotherapy requires collaboration among psychologists, educators, computer scientists, and ethicists. Interdisciplinary research teams can contribute diverse perspectives that enhance the development of effective and ethically responsible therapeutic technologies.

6) Accessibility and Digital Inclusion

Developers and policymakers should ensure that AI-supported mental health tools are accessible to diverse populations. Efforts should be made to reduce technological barriers and promote digital literacy so that individuals from different socioeconomic backgrounds can benefit from these innovations.

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