

Beyond Empathy: Emotional Intelligence and Artificial Intelligence in Clinical Social Work Practice, Therapeutic Alliance and Human Services

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Received: 25 May 2026; **Accepted:** 28 Jun 2026; **Published:** 05 Jul 2026

Citation: Gary B Bailey. Beyond Empathy: Emotional Intelligence and Artificial Intelligence in Clinical Social Work Practice, Therapeutic Alliance and Human Services. Int J Ment Health Res. 2026; 1(3): 1-11.

ABSTRACT

Background: Artificial intelligence (AI) is increasingly integrated into behavioral health care, social work practice, and human services. Concurrently, emotional intelligence (EI) remains a foundational competency underlying therapeutic alliance, empathic communication, leadership effectiveness, and client outcomes. The emergence of large language models (LLMs), conversational agents, and affective computing systems has raised important questions regarding the relationship between human emotional intelligence and artificial intelligence.

Objective: This integrative review examines the relationship between emotional intelligence and artificial intelligence and explores implications for clinical social work practice, therapeutic alliance, ethical decision-making, and future service delivery.

Methods: Peer-reviewed literature published between 2020 and 2026 was reviewed across social work, psychology, psychiatry, counseling, affective computing, human-computer interaction, and artificial intelligence. Sources included systematic reviews, meta-analyses, empirical studies, theoretical analyses, and social work practice frameworks.

Results: Four themes emerged from the literature. First, AI systems increasingly demonstrate sophisticated emotional-recognition capabilities through advances in affective computing and LLMs. Second, AI technologies may enhance emotional intelligence development through reflective feedback, communication coaching, and psychoeducational support. Third, AI-generated responses are frequently perceived as empathic, although significant differences remain between simulated empathy and authentic therapeutic relationships. Fourth, ethical concerns persist regarding privacy, algorithmic bias, emotional dependency, accountability, transparency, and therapeutic substitution.

Conclusions: Artificial intelligence possesses growing capacity to recognize, interpret, and simulate emotional responses. However, core dimensions of emotional intelligence—including authentic empathy, moral reasoning, contextual judgment, cultural responsiveness, and relational attunement—remain fundamentally human competencies. Clinical social workers are uniquely positioned to integrate AI technologies while preserving the profession's commitment to human relationships, social justice, and ethical practice.

Keywords

Emotional intelligence, Artificial intelligence, Clinical social work, Therapeutic alliance, Empathy, Affective computing, Large language models.

Introduction

Artificial intelligence has emerged as one of the most transformative technologies affecting health care, education, organizational leadership, and human services. Recent developments in machine learning, natural language processing, and generative artificial

intelligence have expanded the capabilities of AI systems beyond traditional computational tasks into areas involving communication, emotional recognition, behavioral support, and clinical workflow assistance. Large language models such as ChatGPT and related conversational systems can engage in sophisticated dialogue, generate contextually relevant responses, summarize clinical information, and provide forms of emotional support that many users perceive as helpful and empathic [1,2].

The rapid adoption of AI technologies is occurring simultaneously

with growing recognition of emotional intelligence as a critical determinant of effective professional practice. Emotional intelligence encompasses the capacity to perceive, understand, regulate, and utilize emotional information in oneself and others. Research has consistently linked emotional intelligence to leadership effectiveness, interpersonal functioning, psychological well-being, workplace performance, and therapeutic success. Within clinical social work, emotional intelligence contributes directly to assessment, engagement, intervention planning, crisis management, and the development of therapeutic alliance.

Historically, emotional intelligence has been viewed as a distinctly human capacity. Empathy, compassion, emotional attunement, and relational understanding have traditionally been regarded as qualities that emerge through lived experience, self-awareness, and interpersonal connection. The emergence of emotionally responsive AI systems challenges this assumption by demonstrating capabilities that appear to approximate certain aspects of emotional functioning. Contemporary AI systems can recognize emotional language, identify patterns associated with distress, generate supportive responses, and adapt communication styles based on user input [2-4].

The growing sophistication of AI has prompted debate regarding whether machines can possess forms of emotional intelligence or merely simulate emotional understanding through advanced pattern recognition. Research suggests that some LLMs perform surprisingly well on structured emotional-intelligence assessments and can generate responses perceived as empathic by users [5-7]. At the same time, scholars caution that AI lacks consciousness, subjective emotional experience, moral accountability, and the relational capacity necessary for authentic empathy [8,9].

These developments are particularly significant for clinical social work. The profession has long emphasized the importance of human relationships as vehicles for change. Social work values service, dignity and worth of the person, social justice, and the importance of human relationships. As AI becomes integrated into assessment, documentation, psychoeducation, risk monitoring, and therapeutic support, social workers must determine how these technologies can be utilized without undermining the relational foundations of practice.

The relevance of this issue extends beyond professional practice. Increasing numbers of individuals report using AI systems for emotional support, mental health information, and self-reflection [10]. Conversational agents are increasingly available through mobile applications, telehealth platforms, and consumer technologies. Studies suggest that AI-driven conversational agents may reduce symptoms of anxiety and depression under certain conditions [11-13]. However, concerns remain regarding privacy, emotional dependency, algorithmic bias, misinformation, and the possibility that users may substitute AI interactions for meaningful human relationships [14,15].

The intersection of emotional intelligence and artificial intelligence

therefore represents an important area of inquiry for clinical social work. Understanding how AI systems recognize, simulate, and respond to emotions may help clarify both the opportunities and limitations of technology-assisted practice. Moreover, examining the relationship between emotional intelligence and artificial intelligence may provide insight into the competencies that will remain uniquely human in increasingly digital environments.

The purpose of this integrative review is to examine the emerging relationship between emotional intelligence and artificial intelligence and to explore implications for clinical social work practice. Specifically, this review addresses three research questions: What is currently known about the relationship between emotional intelligence and artificial intelligence? To what extent can artificial intelligence demonstrate or simulate emotional intelligence? What implications do these developments have for clinical social work practice, therapeutic alliance, and future service delivery? By synthesizing evidence from social work, psychology, psychiatry, affective computing, and artificial intelligence, this review contributes to emerging discussions regarding the future role of emotionally intelligent professionals in technology-enhanced helping environments.

Review Method

This article used an integrative review approach to synthesize literature examining the relationship between emotional intelligence and artificial intelligence, with particular attention to clinical social work practice, therapeutic alliance, and human services. The review focused on peer-reviewed literature published between 2020 and 2026 across social work, psychology, psychiatry, counseling, affective computing, human-computer interaction, digital mental health, and artificial intelligence.

Sources were identified through targeted searches using combinations of terms such as emotional intelligence, artificial intelligence, affective computing, large language models, conversational agents, AI chatbots, empathy, therapeutic alliance, clinical social work, mental health, behavioral health, ethics, and digital human services. Sources were included when they addressed AI applications relevant to emotional recognition, empathic communication, mental health support, clinical practice, social work ethics, or human-AI interaction. Systematic reviews, meta-analyses, scoping reviews, empirical studies, theoretical articles, and practice-oriented frameworks were considered for inclusion.

Sources were excluded when they were not substantively related to emotional intelligence, artificial intelligence, therapeutic alliance, behavioral health, clinical social work, or human services; when they focused exclusively on technical AI development without clear practice implications; or when they did not provide sufficient relevance to the review questions. The selected literature was synthesized thematically to identify recurring patterns, conceptual distinctions, ethical concerns, and practice implications. This review was not designed as a formal systematic review or meta-analysis; rather, it aimed to integrate interdisciplinary scholarship to clarify emerging issues and guide future clinical social work practice.

To illustrate how these broader technological and clinical concerns may emerge in practice, the following case example describes a client's use of an AI conversational system for emotional support and highlights implications for therapeutic alliance, emotional attachment, and professional boundaries.

Clinical Case Illustration

This case illustration is presented as a composite, de-identified vignette intended to demonstrate emerging practice concerns rather than report identifiable client data.

A retired schoolteacher returned to therapy after an absence of several months and reported that she had been relying on a large language model (LLM), a form of artificial intelligence (AI), to provide guidance and support for personal and emotional concerns. During the session, she disclosed that she had anthropomorphized the AI system by assigning it the human name "Sam" and had begun interacting with it as though it were a trusted advisor. Her experience reflects an emerging trend in which individuals increasingly utilize AI-powered conversational agents for emotional support, self-reflection, and mental health guidance. As AI technologies become more sophisticated and accessible, reliance on these systems for quasi-therapeutic interactions appears to be growing, raising important questions regarding therapeutic alliance, emotional attachment, professional boundaries, and the role of AI in mental health care.

Literature Review

Emotional Intelligence Theory

The concept of emotional intelligence emerged as an attempt to explain dimensions of human functioning not adequately captured by traditional measures of cognitive intelligence. While intellectual ability has long been recognized as important for problem solving and academic achievement, researchers increasingly observed that successful adaptation frequently depended upon emotional awareness, interpersonal competence, and self-regulation [3].

The foundational ability model conceptualizes emotional intelligence as a set of capacities involving perceiving emotions, using emotions to facilitate thought, understanding emotions, and managing emotions. According to this framework, emotional intelligence represents a form of information processing that enables individuals to interpret emotional signals and respond adaptively. Emotional information is viewed as a resource that can enhance judgment, decision-making, and interpersonal functioning [3].

Subsequent conceptualizations broadened the construct. Competency-based frameworks emphasize self-awareness, self-regulation, motivation, empathy, and social skills. These models became influential in leadership development and organizational psychology because they linked emotional competencies to workplace effectiveness and relationship management. Emotional intelligence was increasingly viewed not merely as an ability but as a set of competencies that influence performance across multiple domains [3].

Within helping professions, emotional intelligence has particular relevance because professional effectiveness depends heavily upon interpersonal interactions. Social workers routinely encounter emotionally complex situations involving trauma, grief, conflict, crisis, social exclusion, and vulnerability. Effective practice requires sensitivity to emotional cues, awareness of one's own reactions, and the ability to establish trust with clients from diverse backgrounds. Research has demonstrated that emotional intelligence contributes significantly to therapeutic alliance. Clients who perceive clinicians as empathic, emotionally attuned, and responsive are more likely to engage in treatment and achieve positive outcomes. Emotional intelligence also appears to protect practitioners from burnout by enhancing emotional regulation and resilience. In leadership contexts, emotionally intelligent leaders demonstrate greater effectiveness in communication, conflict resolution, and organizational change [3].

The growing importance of emotional intelligence has prompted researchers to explore whether elements of emotional functioning can be modeled computationally. This question lies at the center of contemporary debates regarding artificial intelligence and human emotional capacities.

Artificial Intelligence and Affective Computing

Artificial intelligence refers broadly to computational systems capable of performing tasks that typically require human intelligence. Traditional AI applications focused on prediction, classification, optimization, and decision support. Advances in machine learning and deep learning have dramatically expanded these capabilities, enabling AI systems to process complex patterns within large datasets and generate increasingly sophisticated outputs.

One of the most significant developments relevant to emotional intelligence is the emergence of affective computing. Affective computing seeks to enable machines to recognize, interpret, process, and respond to emotional information. Rather than focusing exclusively on cognitive tasks, affective computing addresses the emotional dimensions of human experience. Emotion-recognition systems utilize multiple sources of information to infer emotional states, including facial expressions, vocal characteristics, physiological indicators, behavioral patterns, and linguistic content. Advances in multimodal learning have improved the ability of AI systems to integrate these diverse forms of information and generate increasingly accurate predictions regarding emotional states [16].

Large language models represent another major advancement. Trained on vast textual datasets, LLMs can generate contextually appropriate responses that often appear emotionally responsive and conversationally sophisticated. Within mental health contexts, researchers have explored applications involving psychoeducation, clinical documentation, symptom screening, emotional support, crisis prediction, and therapeutic communication [1,17]. Several systematic reviews document the rapid growth of AI applications in mental health care. Guo et al. [1] found increasing interest in using

LLMs for assessment, intervention, and clinical support. Bucher et al. [18] similarly identified expanding applications involving prevention, treatment, monitoring, personalization, and behavioral support. Reviews of conversational agents indicate that AI systems may improve certain mental health outcomes, particularly among individuals experiencing mild-to-moderate symptoms of anxiety and depression [7,13,19].

Research has also examined whether AI systems demonstrate emotional intelligence-like capabilities. Schlegel et al. [5] reported that several large language models performed well on standardized emotional intelligence assessments. Similarly, Wang et al. [7] and Vzorin et al. [6] found evidence that LLMs can recognize emotional content and generate responses consistent with emotional-intelligence frameworks. Despite these advances, important distinctions remain between human emotional intelligence and artificial emotional performance. AI systems identify statistical patterns associated with emotions but do not experience emotions subjectively. They lack consciousness, lived experience, embodiment, and intrinsic motivation. Consequently, many scholars argue that AI demonstrates emotional simulation rather than genuine emotional intelligence [8,9].

Table 1 summarizes key distinctions between human emotional intelligence and artificial emotional intelligence across emotional awareness, empathy, self-awareness, ethical judgment, cultural adaptation, therapeutic alliance, and accountability.

Therapeutic Alliance Theory

Therapeutic alliance represents one of the most consistently supported predictors of positive psychotherapy outcomes. Alliance typically encompasses agreement regarding treatment goals, collaboration concerning therapeutic tasks, and the development of an emotional bond between practitioner and client. Clinical social work has historically emphasized the relational nature of change. Relationship-based practice assumes that growth, healing, and adaptation occur through collaborative interactions characterized by trust, empathy, respect, and authenticity. Emotional intelligence contributes directly to these processes by facilitating emotional attunement, perspective-taking, and effective communication.

As AI systems become increasingly involved in behavioral health, researchers have begun examining whether AI can contribute to or replicate elements of therapeutic alliance. Studies suggest that many users perceive AI-generated responses as supportive and empathic [2,20]. Human-AI collaboration studies further

indicate that AI-generated suggestions may improve empathic communication among peer supporters when humans remain actively involved in the interaction process [21].

However, important limitations have also emerged. Scholich et al. [22] found that AI-generated therapeutic responses frequently overemphasized affirmation, reassurance, and psychoeducation while demonstrating insufficient inquiry, exploration, and personalization. Similarly, Kuhail et al. [23] reported that although AI interactions may appear plausible, significant concerns remain regarding safety, appropriateness, and clinical judgment.

These findings suggest that therapeutic alliance involves more than empathic language alone. Authentic therapeutic relationships require contextual understanding, ethical accountability, cultural responsiveness, emotional reciprocity, and collaborative meaning-making. While AI may simulate some linguistic features associated with empathy, substantial questions remain regarding whether genuine therapeutic alliance can exist in the absence of human relational engagement. The distinction between simulated empathy and authentic therapeutic connection provides a critical foundation for examining the relationship between emotional intelligence and artificial intelligence.

Conceptual Framework

The rapid expansion of artificial intelligence into behavioral health care requires a conceptual framework capable of explaining how human emotional capacities interact with increasingly sophisticated technological systems. While much of the current literature evaluates the technical performance of AI systems, relatively little attention has been devoted to understanding how artificial intelligence and emotional intelligence function together within clinical relationships. The present review proposes that emotional intelligence and artificial intelligence should be understood as complementary rather than competing forms of intelligence.

Historically, discussions regarding AI have often been framed around replacement narratives. Technological advancements are frequently evaluated according to whether machines can perform tasks traditionally carried out by humans. Within behavioral health, this framing has generated questions regarding whether AI systems can replace therapists, social workers, counselors, or psychologists. However, evidence from recent studies suggests that a replacement framework is inadequate because emotional intelligence and artificial intelligence operate through fundamentally different mechanisms [8,24].

Table 1: Comparison of Human Emotional Intelligence and Artificial Emotional Intelligence.

Dimension	Human Emotional Intelligence	Artificial Emotional Intelligence
Emotional awareness	Based on subjective experience	Based on pattern recognition
Empathy	Experiential and relational	Simulated and computational
Self-awareness	Reflective consciousness	Absent
Ethical judgment	Contextual and values-based	Rule-based and programmed
Emotional regulation	Internal emotional management	Algorithmic response optimization
Cultural adaptation	Dynamic and experiential	Dependent on training data
Therapeutic alliance	Relationally co-created	Simulated interaction
Accountability	Personal and professional responsibility	Human oversight required

Human emotional intelligence emerges from subjective emotional experience, interpersonal relationships, socialization, cultural learning, and reflective self-awareness. Artificial intelligence operates through statistical pattern recognition, predictive modeling, and computational learning. This distinction suggests that the two should be conceptualized as complementary systems with different strengths and limitations. Artificial intelligence excels in processing large volumes of information, identifying subtle patterns, maintaining consistency, and providing scalable support. Emotional intelligence contributes empathy, ethical judgment, contextual understanding, cultural sensitivity, and relational authenticity.

The proposed model consists of five domains: human emotional intelligence, human-AI interaction, AI-augmented clinical support, therapeutic alliance, and clinical outcomes. Trust, ethics, cultural responsiveness, and digital literacy operate as moderating

factors. The model positions emotional intelligence as the essential human foundation of clinical practice while recognizing artificial intelligence as a potentially valuable augmentation tool that can support, but not replace, emotionally intelligent professional relationships.

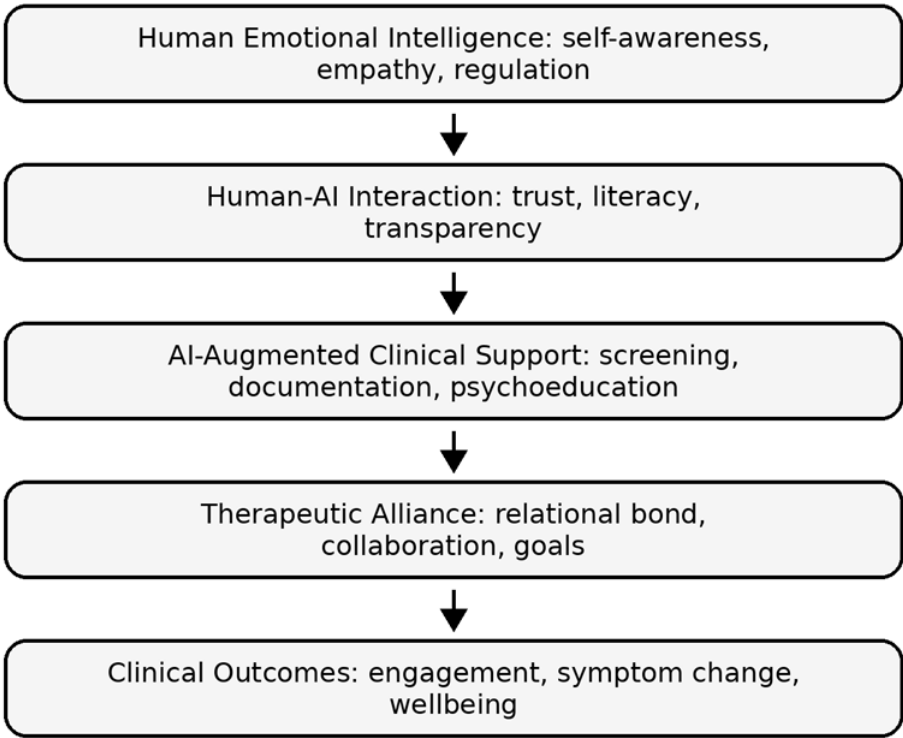
Figure 1 illustrates the proposed integration model linking human emotional intelligence, human-AI interaction, AI-augmented clinical support, therapeutic alliance, and clinical outcomes.

Findings

Theme 1: AI-Assisted Emotional Recognition

One of the most significant points of convergence between emotional intelligence and artificial intelligence involves emotional recognition. Emotional intelligence theory emphasizes the ability to perceive and interpret emotional signals as a foundational competency underlying empathy, communication,

Emotional Intelligence and AI Integration Model



Moderators: ethics, cultural responsiveness, privacy, accountability, and digital access

Figure 1: Emotional Intelligence and Artificial Intelligence Integration Model.
Note. The conceptual model illustrates the proposed relationship between human emotional intelligence, human-AI interaction, AI-augmented clinical support, therapeutic alliance, and clinical outcomes. Trust, ethics, cultural responsiveness, and digital literacy function as moderating variables. Generative AI was used to assist with language refinement and formatting of tables and figures. The author reviewed, verified, and approved all final content.

and interpersonal effectiveness. Advances in affective computing have sought to replicate aspects of this capability through computational systems capable of identifying emotional patterns.

Affective computing research has evolved rapidly. Early systems relied heavily on facial-expression analysis, whereas contemporary approaches incorporate multimodal data sources including speech characteristics, textual content, physiological indicators, behavioral data, and contextual information [16]. Foundation models have further accelerated these developments by enabling large-scale integration of emotional signals across multiple modalities. Large language models are especially important because language is a primary vehicle through which emotional experiences are communicated. Through exposure to massive textual datasets, LLMs have learned patterns associated with emotional expression, distress, support-seeking, empathy, and interpersonal communication.

Recent studies suggest that AI systems perform well on structured emotional-intelligence tasks. Schlegel et al. [5] evaluated large language models using established emotional-intelligence assessments and found that several models exceeded average human performance on multiple measures. Wang et al. [7] reported that large language models demonstrated measurable emotional-intelligence-related capabilities across several emotional reasoning tasks. Vzorin et al. [6] found that GPT-4 achieved strong performance on emotional-intelligence assessments designed to evaluate recognition, interpretation, and management of emotional information. These findings suggest that AI systems can recognize emotional content and generate responses consistent with emotional-intelligence frameworks. However, strong test performance does not necessarily indicate genuine emotional intelligence. Rather, AI systems appear effective at identifying patterns associated with emotional situations and selecting responses that align with expected emotional norms.

The ability of AI systems to recognize emotional content has substantial implications for mental health care. Multiple systematic reviews document emerging applications involving depression screening, anxiety detection, crisis identification, suicide-risk assessment, symptom monitoring, and emotional support [1,17,25]. Such tools may become increasingly valuable for early identification of distress, particularly within populations facing barriers to care. Yet emotional experiences are highly contextual, culturally influenced, and often ambiguous. White and Katsuno [9] caution that artificial emotional intelligence frequently relies upon culturally specific assumptions regarding emotional expression. Overall, evidence suggests that AI systems increasingly demonstrate sophisticated emotional-recognition capabilities, but these capabilities remain dependent upon pattern recognition rather than subjective emotional experience.

Theme 2: Artificial Intelligence as an Enhancer of Emotional Intelligence

A second major theme involves the potential for artificial intelligence to enhance rather than replace emotional intelligence.

Rather than viewing AI as a substitute for human emotional competencies, many researchers conceptualize AI as a tool capable of supporting emotional development, communication, reflection, and learning.

One promising application involves the use of AI systems as reflective partners. LLMs can facilitate self-reflection by helping users explore emotional experiences, identify patterns, consider alternative perspectives, and practice emotional labeling. Because emotional intelligence depends heavily upon self-awareness, opportunities for reflection may contribute indirectly to emotional development. AI systems can provide immediate feedback, generate reflective questions, and encourage examination of emotional experiences in ways that support self-understanding. Kazazoglu [26] found that AI-assisted educational environments may influence emotional-intelligence-related communication and reflective processes.

Research indicates that AI may also improve empathic communication when humans remain actively involved. Sharma et al. [21] demonstrated that AI-generated suggestions increased the empathic quality of peer-support conversations. Importantly, AI did not replace human interaction; rather, it functioned as a scaffold that enhanced communication. Within clinical social work, such applications could support practitioner training, supervision, and communication skill development. AI-assisted feedback systems may help clinicians refine empathic responding while preserving the human nature of therapeutic relationships.

Several reviews suggest that AI systems may support psychoeducation through personalized explanations, coping strategies, emotional skills training, and resource recommendations [24,27]. Unlike traditional educational materials, AI systems can adapt responses to individual questions and learning styles. This flexibility may increase engagement and facilitate emotional learning. However, enhancement differs from replacement. Emotional intelligence emerges through relationships, lived experience, and self-reflection rather than information processing alone. Brown and Halpern [8] argue that AI systems cannot replace the human relationships necessary for inclusive and equitable mental health care. Similarly, Reamer [28] emphasizes that professional judgment, ethical reasoning, and relational accountability remain human responsibilities. The evidence therefore supports an augmentation model rather than a substitution model.

Theme 3: AI-Mediated Empathy and Therapeutic Alliance

Among the most significant questions emerging from the intersection of emotional intelligence and artificial intelligence is whether AI systems can demonstrate empathy and contribute meaningfully to therapeutic alliance. Empathy has long been recognized as one of the most important mechanisms of change in psychotherapy and clinical social work. The emergence of conversational AI systems capable of generating emotionally supportive responses has generated considerable interest regarding the potential role of AI within helping relationships.

Empathy is a multidimensional construct encompassing cognitive, affective, and behavioral components. Cognitive empathy involves understanding another person's emotional experience and perspective. Affective empathy refers to sharing or resonating with another person's emotional state. Behavioral empathy includes communicating understanding and support in ways that promote connection and trust. Clinical social work relies heavily on all three dimensions.

Recent research suggests that AI systems increasingly demonstrate capabilities associated with cognitive empathy. Sorin et al. [2] conducted a systematic review examining empathy in large language models and found that contemporary LLMs frequently recognize emotional content, respond appropriately to emotional disclosures, and generate language perceived as supportive. Howcroft et al. [20] reviewed patient-facing AI systems and reported that many users perceived AI-generated responses as empathic.

Research examining AI and therapeutic alliance has produced mixed findings. Kuhail et al. [23] found that mental health professionals often perceived AI-generated therapeutic interactions as plausible and coherent. However, participants expressed concerns regarding appropriateness, safety, accountability, and clinical judgment. Scholich et al. [22] compared responses generated by therapists and large language model-based chatbots. While chatbot responses frequently appeared supportive, they overused reassurance, affirmation, and psychoeducation while asking fewer exploratory questions and engaging in less individualized inquiry.

These findings suggest that AI systems may approximate certain observable components of empathy without fully replicating the relational processes underlying therapeutic alliance. Effective therapy requires ongoing adaptation to client needs, integration of historical context, management of complex relational dynamics, and ethical decision-making in ambiguous situations. AI systems do not experience emotions, possess self-awareness, or engage in reciprocal emotional relationships. Therefore, AI-mediated empathy may best be conceptualized as supportive communication rather than genuine empathic engagement.

Theme 4: Ethical Challenges and Professional Responsibilities

While advances in artificial intelligence create opportunities for innovation within mental health care and social work, they also generate significant ethical concerns. Across the reviewed literature, six major ethical themes consistently emerged: privacy and confidentiality, algorithmic bias, transparency, accountability, emotional dependency, and professional responsibility.

Table 2 provides a concise overview of the four major themes identified in the literature and their relevance to emotional intelligence, artificial intelligence, and clinical social work practice.

Privacy is among the most frequently cited concerns. AI systems often process highly sensitive personal information, including

disclosures related to trauma, mental illness, substance use, family relationships, and suicidal ideation. Meadi et al. [15] identified privacy as a central ethical challenge in conversational AI systems. Users may disclose information to AI systems without fully understanding how data are stored, processed, or utilized. For clinical social workers, confidentiality is a foundational ethical obligation. The use of AI tools therefore requires careful evaluation of data management practices, informed consent procedures, and compliance with privacy regulations.

Table 2: Major Themes Identified in the Literature.

Theme	Description
AI-assisted emotional recognition	AI systems increasingly recognize emotional content through affective computing and LLMs.
AI as an enhancer of emotional intelligence	AI supports reflection, communication, and emotional learning.
AI-mediated empathy and therapeutic alliance	AI generates supportive responses but differs from authentic therapeutic relationships.
Ethical challenges and professional responsibilities	Privacy, bias, transparency, accountability, and professional competence remain central concerns.

Algorithmic bias represents another major concern. AI systems learn from existing datasets that may reflect historical inequities, cultural assumptions, and systemic discrimination. White and Katsuno [9] argue that artificial emotional intelligence frequently relies on culturally specific assumptions regarding emotional expression. This issue has profound implications for social work because the profession is committed to cultural competence, social justice, and anti-oppressive practice. Reamer [28] emphasizes that social workers have an ethical responsibility to evaluate potential biases in AI systems before incorporating them into practice.

Questions regarding accountability become increasingly complex when AI systems contribute to clinical decision-making. Despite advances in AI capability, professional responsibility remains within the domain of human practitioners. AI systems do not possess professional licensure, ethical obligations, or legal accountability. Stade et al. [29] argue that behavioral health applications should undergo rigorous evaluation comparable to other safety-critical technologies. Rousmaniere et al. [10] caution against treating LLMs as autonomous mental health providers.

A distinctive ethical concern involves emotional dependency. Laestadius et al. [14] examined emotional dependence among users of the social chatbot Replika and found evidence of both perceived benefits and psychological harms. Anthropomorphism may increase vulnerability to emotional dependency because users naturally attribute intentions, emotions, and personalities to interactive technologies. Clinical social workers should therefore assess client use of AI systems as part of comprehensive psychosocial evaluations. Overall, ethical AI implementation depends not only on technological development but also on the emotional intelligence of practitioners themselves.

Clinical Social Work Implications

The findings suggest that artificial intelligence will increasingly influence the environment in which clinical social work services are delivered. Rather than representing a temporary technological trend, AI appears poised to become a permanent component of assessment, documentation, treatment support, psychoeducation, supervision, and organizational decision-making. Consequently, clinical social workers must develop strategies that integrate technological innovation while preserving the profession's foundational commitment to human relationships, social justice, dignity, and self-determination.

One immediate application involves assessment and screening. AI systems demonstrate increasing capability in identifying emotional distress, monitoring symptom patterns, analyzing textual content, and recognizing indicators associated with depression, anxiety, and other behavioral health concerns [1,17]. Clinical social workers may utilize AI-assisted assessment tools to enhance information gathering and identify patterns that warrant further exploration. However, AI-generated assessments should not be viewed as diagnostic conclusions. Clinical interpretation remains the responsibility of trained professionals.

AI systems may also enhance psychoeducation and client engagement. Conversational agents can provide accessible information regarding coping skills, emotional regulation, symptom management, and mental health resources [24,27]. For some clients, AI systems may function as a bridge to professional services. Nevertheless, psychoeducation delivered through AI should complement, not replace, professional assessment, therapeutic intervention, and relational support.

Documentation represents another area in which AI may influence practice. Studies examining AI-assisted summarization indicate that large language models can support documentation processes by generating summaries, organizing information, and assisting with record preparation [30]. Administrative burdens contribute substantially to clinician stress and burnout. By reducing time spent on documentation, AI may allow practitioners to devote more attention to direct client care. Yet AI-generated records should be viewed as drafts requiring professional verification.

The most important implication concerns preservation of therapeutic alliance. Clinical social work has historically emphasized relationship-based practice as a mechanism of change. The evidence reviewed suggests that while AI can generate empathic language, it cannot fully replicate the relational qualities associated with therapeutic alliance. Practitioners should therefore avoid viewing AI as a substitute for therapeutic relationships. Instead, AI should be conceptualized as a support tool that enhances aspects of practice while preserving the centrality of human connection.

Table 3 summarizes potential benefits and risks of AI integration in clinical social work, including accessibility, psychoeducation, documentation support, privacy concerns, algorithmic bias,

emotional dependency, and reduced human interaction.

Table 3: Benefits and Risks of AI Integration in Clinical Social Work.

Potential benefits	Potential risks
Increased accessibility	Privacy concerns
Enhanced psychoeducation	Algorithmic bias
Documentation support	Emotional dependency
Symptom monitoring	Therapeutic substitution
Client engagement	Overreliance on technology
Screening assistance	Misclassification of risk
Personalized resources	Lack of transparency
Administrative efficiency	Reduced human interaction

AI literacy should become a core professional competency within social work education and continuing professional development. Ahn [31] argues that social workers require sufficient knowledge to evaluate AI-generated outputs, identify limitations, recognize bias, and make informed decisions regarding implementation. AI literacy should include knowledge regarding algorithmic bias, data privacy, explainability, ethical use, cultural implications, and clinical limitations. Importantly, AI literacy should complement rather than replace emotional intelligence.

Figure 2 presents a clinical social work AI utilization framework that positions professional judgment as central across assessment, information gathering, clinical interpretation, intervention, and outcome evaluation.

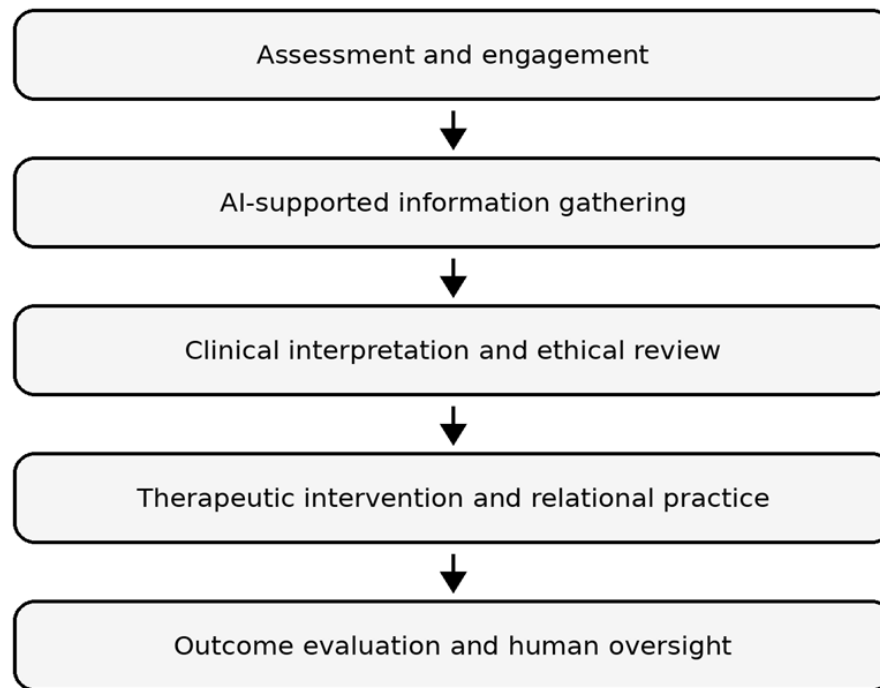
Limitations

Several limitations should be considered when interpreting the findings of this integrative review. First, the literature on artificial intelligence, affective computing, and digital mental health is evolving rapidly. As a result, findings regarding AI capabilities, safety, effectiveness, and ethical implications may change as new technologies and empirical studies emerge. Second, the reviewed literature includes diverse study designs, populations, intervention types, and outcome measures, which limits the extent to which findings can be directly compared across studies.

Third, much of the available research evaluates perceived empathy, user satisfaction, short-term engagement, or task performance rather than long-term therapeutic outcomes. Consequently, conclusions regarding therapeutic alliance, clinical effectiveness, emotional dependency, and client well-being remain provisional. Fourth, because this review synthesizes literature from multiple disciplines, findings may not generalize uniformly to all clinical social work settings, populations, or service delivery models.

Finally, this review was not designed as a formal systematic review or meta-analysis. Although the review method used targeted searches and thematic synthesis, it did not include formal quality appraisal, risk-of-bias assessment, or statistical aggregation of findings. These limitations underscore the need for continued empirical research, longitudinal studies, and social work-specific evaluation of AI-assisted practice models.

Clinical Social Work AI Utilization Framework



Human professional judgment remains central at every stage.

Figure 2: Clinical Social Work AI Utilization Framework.

Note. The framework depicts AI integration across assessment, information gathering, clinical interpretation, intervention, and outcome evaluation. Human professional judgment remains central throughout.

Future Research Directions

The rapid evolution of artificial intelligence has created substantial opportunities for future research. Although the literature has expanded dramatically since 2020, important questions remain regarding efficacy, safety, ethics, and long-term outcomes. Most existing research focuses on short-term interactions with AI systems. Longitudinal studies are needed to examine how ongoing AI use influences emotional development, mental health outcomes, help-seeking behaviors, interpersonal relationships, emotional dependency, therapeutic substitution, and social connectedness over time.

Although several systematic reviews report promising outcomes associated with AI-assisted interventions, evidence remains uneven. Additional randomized controlled trials are needed to evaluate effectiveness across diverse populations and clinical conditions. Future studies should compare AI-assisted interventions, traditional interventions, and hybrid human-AI approaches. Such research would help clarify the circumstances under which AI contributes most effectively to positive outcomes. An important unanswered question concerns whether AI can enhance emotional intelligence over time. Preliminary evidence

suggests that AI-assisted reflection and communication support may influence emotional-awareness processes [26]. Future studies should examine whether AI-supported interventions improve self-awareness, emotional regulation, empathy, perspective taking, and communication skills.

Current studies frequently assess perceived empathy rather than therapeutic alliance. Future research should employ validated alliance measures to evaluate the relationship between AI interactions and therapeutic processes. Researchers should investigate client trust, emotional bonding, collaboration, treatment engagement, retention, and clinical outcomes.

Additional research is needed to evaluate AI performance across culturally diverse populations. Existing concerns regarding bias and cultural assumptions highlight the importance of examining how AI systems perform within different linguistic, racial, ethnic, and cultural contexts. Future studies should prioritize culturally responsive methodologies and include diverse participant samples.

Conclusion

Artificial intelligence is transforming behavioral health care,

social work practice, and human services at an unprecedented pace. Advances in large language models, affective computing, and conversational agents have created systems capable of recognizing emotional content, generating supportive responses, and participating in increasingly sophisticated interactions with users.

The findings of this review suggest that the relationship between emotional intelligence and artificial intelligence is best understood as complementary rather than competitive. Artificial intelligence excels at information processing, pattern recognition, scalability, and consistency. Emotional intelligence contributes empathy, ethical reasoning, cultural responsiveness, contextual understanding, and relational authenticity.

Evidence indicates that AI systems increasingly demonstrate capabilities associated with emotional recognition and empathic communication. Some large language models perform remarkably well on structured emotional-intelligence assessments and can generate responses perceived as supportive and compassionate. At the same time, substantial differences remain between artificial emotional performance and human emotional intelligence. Human emotional intelligence emerges from lived experience, self-awareness, interpersonal relationships, and subjective emotional understanding. Artificial intelligence identifies patterns associated with emotional phenomena but does not experience emotions, possess self-awareness, or participate in reciprocal human relationships.

For clinical social work, these distinctions are critically important. The profession's commitment to human relationships, dignity, self-determination, and social justice remains highly relevant within increasingly technological environments. Rather than replacing clinicians, AI appears most valuable when used to augment emotionally intelligent practice. Ultimately, the question is not whether artificial intelligence can replace emotional intelligence; the evidence suggests that it cannot. Instead, the more important question is how emotionally intelligent professionals can harness artificial intelligence to strengthen human relationships, improve access to care, and promote well-being in an increasingly digital world.

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