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Integrating AI Tools into Teletherapy for Personalized Mental Health Support

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ABSTRACT : This article explores the transformative role of artificial intelligence (AI) in teletherapy, a growing field within mental health care. As mental health challenges continue to rise globally, especially in underserved regions, AI-enhanced teletherapy offers personalized and accessible solutions. This integration significantly enhances patient care and provider efficiency, from real-time emotional analysis to AI-powered therapy assistants. However, while promising, it also raises ethical concerns, including data privacy, algorithmic bias, and the potential erosion of human empathy in therapeutic relationships. The future of AI in teletherapy depends on responsible implementation guided by collaboration between technologists, clinicians, and patients.

I. INTRODUCTION

Integrating AI Tools into Teletherapy for Personalized Mental Health Support is the incorporation of artificial intelligence (AI) technologies within teletherapy frameworks to enhance mental health care delivery. As mental health challenges grow globally, the need for accessible and effective treatment solutions has never been more urgent, particularly for individuals in underserved areas. AI-driven teletherapy addresses this demand by leveraging technology to break down geographical barriers, facilitating access to personalized mental health support for diverse populations, particularly during the wake of the COVID-19 pandemic (Olawade et al., 2024). The integration of AI in teletherapy encompasses various functionalities, including natural language processing and sentiment analysis, which empower mental health professionals to gain insights into patients' emotional states in real time (Getten, 2024). These tools enable the development of personalized treatment plans, enhance patient engagement, and streamline administrative tasks, ultimately improving the therapeutic experience for patients and providers (Getten, 2024; Sunoh.ai, 2025). Notably, AI chatbots and virtual assistants are emerging as pivotal resources, providing continuous support and therapeutic exercises, increasing overall engagement and satisfaction (Canadian Pharmacy King, 2024; XR.Health, 2024). Despite the numerous benefits, integrating AI tools into teletherapy raises significant ethical considerations, including data privacy concerns, algorithmic bias, and the challenge of maintaining a human touch in therapeutic relationships. Critics argue that AI can augment treatment capabilities but may also risk depersonalizing care, particularly for vulnerable populations requiring nuanced support (XR Health, n.d.; ITRex Group, 2024). The ongoing debate about the balance between technology and human interaction underscores the importance of therapeutic alliance in clinical practice, as AI cannot fully replicate human therapists' empathy and emotional nuance (Netguru, 2024). As the field continues to evolve, the promise of AI integration in teletherapy lies in its potential to democratize mental health care, enhancing accessibility and efficacy for those in need. Future advancements will necessitate collaborative efforts among mental health professionals, patients, and technologists to address ethical considerations, mitigate biases, and ensure that AI tools align with the complex needs of diverse populations (Behavioral Health News, 2024; University of Maryland, 2025).

II. AI Tools in Teletherapy

As teletherapy gained prominence, particularly during the COVID-19 pandemic, AI applications emerged as vital resources for mental health professionals and patients, enabling real-time emotional analysis, predictive diagnostics, and automated administrative tasks. This integration improves patient engagement and retention and helps practitioners manage their workload more effectively, making mental health services accessible and responsive to needs across diverse populations (Intelliprove, n.d.; TechTarget, 2023).

Types of AI tools in Teletherapy

Patient-Centered AI Tools

1. Chatbots and Virtual Assistants:

AI-driven chatbots like Ada and Eliza have become essential in providing immediate support and guidance to individuals seeking mental health assistance. For instance, Ada demonstrated substantial diagnostic agreement with standardized mental disorder cases, particularly when used by trained psychotherapists (κ=0.78),

showcasing its potential as a reliable screening tool in clinical settings. Although its accuracy varied by user expertise, the chatbot's ability to deliver timely, user-responsive insights in under ten minutes reinforces its value as a supplementary resource in teletherapy environments (Jungmann, Klan, Kuhn, & Jungmann, 2019). These virtual assistants are programmed to recognize speech and text patterns indicative of mental health issues, allowing them to offer appropriate advice and resources. They play a significant role in ensuring accessibility and anonymity for users, making it easier for individuals to seek help without stigma (Bassett, 2024; Levy, 2024; Mission Connection Healthcare, n.d.).

2. **Digital Therapeutics**

Digital therapeutics leverage AI technologies to deliver therapeutic interventions directly to patients. These applications can track user responses, evaluate illness progression, and provide cognitive-behavioral interventions tailored to individual needs. Such tools have shown effectiveness in enhancing treatment outcomes and fostering engagement in mental health care (Behavioral Health News, 2024; Mission Connection Healthcare, n.d.; Sun & Zhou, 2023). For instance, AI-driven digital therapeutics personalize care by analyzing behavioral patterns and real- time feedback, which improves individual treatment outcomes (Behavioral Health News, 2024). Systematic reviews further support the efficacy of internet-based cognitive behavioral therapy (iCBT) self-help interventions, showing long-term reductions in depressive symptoms, even with minimal therapist involvement (Karyotaki et al., 2023). These tools are especially valuable in low- and middle-income countries where access to traditional therapy is limited, offering scalable and accessible alternatives (Naslund et al., 2023). Additionally, the FDA's recent approval of Rejoyn, a prescription digital therapeutic for major depressive disorder, reflects the clinical recognition of these tools and their role in alleviating depressive symptoms (Park, 2024).

Practitioner-Centered AI Tools

1. **AI Scribes for Therapy Notes:**

As the demand for mental health services grows, therapists face mounting administrative workloads, particularly in documenting sessions. AI scribes offer a practical solution by automating the creation of therapy notes using natural language processing and speech recognition. These tools transcribe and format clinical documentation (e.g., SOAP or DAP notes), helping therapists focus more on client interaction than paperwork. Beyond saving time, AI scribes improve consistency in documentation and reduce therapist burnout, all while maintaining compliance with healthcare privacy standards like HIPAA.

Several AI-powered platforms are making significant contributions to this space. Supanote and Upheal provide session transcription and structured note generation tailored to mental health professionals. TherapyFuel Scribe, integrated with TherapyNotes, simplifies note writing for telehealth and in-person sessions. Tools like Freed AI and ScribePT further demonstrate the adaptability of AI scribes across different therapeutic disciplines. While these tools enhance clinical workflows, their implementation must be guided by strong data protection protocols and transparent patient consent to ensure ethical and secure use in practice.

2. **Feedback and Evaluation Tools**

In addition to assisting with documentation, AI is increasingly being deployed to evaluate the quality and dynamics of therapist–patient interactions. These feedback tools leverage natural language processing and behavioral analytics to assess session transcripts and identify tone, language, and emotional engagement patterns. They offer therapists structured, data-driven insights into their therapeutic style, helping identify areas of strength and opportunities for growth. They can illuminate relational dynamics that may not be immediately evident in sessions. For instance, AI systems can analyze turn-taking, empathy expression, and alignment with therapeutic goals. This allows clinicians to refine their approach, apply evidence-based techniques more effectively, and improve overall treatment outcomes (Cecil et al., 2025). Platforms like Upheal and Harmonize are examples of such tools. Upheal transcribes and summarizes sessions and provides feedback on therapist-client interaction patterns, including emotional tone and therapeutic consistency.

III. BENEFITS OF INTEGRATION

Integrating AI tools into teletherapy for personalized mental health support offers numerous advantages that enhance patients' and providers' overall treatment experience. These advantages span clinical efficiency, patient engagement, treatment accessibility, and long-term outcomes.

Improved Access to Care

One of the primary benefits of integrating AI into teletherapy is its ability to expand access to mental health care, particularly in regions with limited clinical infrastructure. AI-driven applications remove traditional barriers such as geographical distance, limited mental health workforce, and clinical wait times, making services readily available to individuals in remote communities. For example, in Nigeria, where there is approximately one doctor per 10,000 people, far below the World Health Organization's recommendation of one

doctor per 600 individuals, access to mental health professionals is exceptionally constrained (Nigerian Medical Association, 2022). Compounding this issue, over 60% of the population resides in rural areas where medical infrastructure and trained personnel are lacking (Vanguard News, 2023). In such settings, AI- enabled teletherapy platforms offer a scalable solution by delivering timely support through location-independent technologies. For example, online cognitive behavioral therapy (eCBT) provides structured, evidence-based modules that individuals can engage with, thus improving access for those who may hesitate to seek in-person treatment due to stigma or logistical challenges (Knyahnytskyi et al., 2025; Cecil et al., 2025).

Enhanced Personalization of Treatment

AI enables personalized mental health care by helping clinicians design data-driven, individualized treatment plans. AI helps tailor interventions to each patient's unique profile. By analyzing a wide range of inputs, including genetic markers, clinical histories, lifestyle behaviors, and continuous real-time data from digital tools, AI helps tailor interventions to each patient's unique profile. This shift from standardized to precision-based care improves therapeutic alignment and enhances patient engagement and long-term outcomes. As Appleton (2024) notes, AI-powered platforms can detect subtle changes in behavior and mental state, allowing for proactive, customized interventions that were previously unimaginable. Integrating digital phenotyping and predictive analytics accelerates this trend, making mental health support more responsive, timely, and effective.

Increased Engagement and Satisfaction

AI technologies improve patient engagement and satisfaction, particularly in virtual mental health settings. During telehealth sessions, machine learning models can now analyze behavioral and contextual cues, such as facial expressions, vocal tone, and response latency, to estimate patient
engagement levels in real time. These insights empower therapists to adjust their approach dynamically, fostering a more responsive and practical therapeutic experience. Additionally, AI- powered healthcare bots facilitate shared decision-making by enabling continuous, real-time communication between patients and providers. Trinetix (2025) shows that patients are more satisfied with their care when they feel actively involved in decision-making and supported by tools that personalize their treatment journey.

Cost-Effectiveness

Another advantage of integrating AI into teletherapy is its potential to reduce the cost of mental health care while maintaining or even enhancing service quality. AI-powered platforms can automate administrative tasks, streamline patient intake, and deliver therapeutic support through chatbots and virtual agents, often at a fraction of the cost of traditional in-person therapy. These innovations lower the overall cost of care, making mental health services more affordable and accessible to underserved populations. Ciambotti (2025) notes that the financial efficiency of AI- driven therapy solutions can help remove economic barriers that often discourage individuals from seeking timely support, thereby expanding the reach of mental health services to a broader and more diverse audience.

Streamlined Administrative Processes

AI integration can transform the operational backbone of mental health care by automating routine administrative tasks. From managing appointment scheduling and sending follow-up reminders to predicting and preventing no-shows, AI tools reduce the administrative burden on therapists and support staff. This increased efficiency allows clinicians to devote more time to direct patient care, ultimately improving the quality of service delivery. These streamlined processes contribute to more effective resource utilization and a smoother patient experience, helping healthcare systems operate with greater precision and scalability (Trinetix, 2025).

Support for Mental Health Professionals

AI tools reduce the administrative burden on mental health practitioners by automating time- consuming tasks such as scheduling, documentation, and billing processes. For instance, ambient clinical intelligence can generate notes and flag key diagnoses during virtual consultations, allowing clinicians to devote more time to patient care and reduce the risk of burnout (Fomenko, 2024; Knyahnytskyi et al., 2025). This operational automation translates into lower administrative costs and enhances the overall efficiency of healthcare delivery, enabling providers to focus on delivering quality, human-centered care (Fomenko, 2024).

Enhanced Crisis Response

AI tools also offer scalable solutions during crises, such as pandemics or conflicts, where traditional mental health services may be overwhelmed. For instance, AI-powered platforms have effectively provided immediate mental health support during the COVID-19 pandemic, filling gaps when conventional treatments are unavailable (Smith et al., 2025). This adaptability ensures that vulnerable populations continue to receive essential mental health support during periods of need, reinforcing the resilience and responsiveness of healthcare systems in challenging times.

IV. CHALLENGES AND LIMITATIONS

Despite its transformative potential, integrating AI into teletherapy for personalized mental health support presents several significant challenges. These obstacles can affect the effectiveness of AI- driven interventions and their widespread adoption, highlighting the need for careful consideration of ethical, technical, and practical factors in their implementation.

Ethical and Privacy Concerns

Ethical considerations are central to the responsible integration of AI into teletherapy. One of the most pressing issues is the risk of data breaches and the misuse of sensitive personal information. Many AI platforms are not fully compliant with health privacy regulations such as HIPAA, raising serious concerns about confidentiality and patient rights. Mental health professionals must be aware that non-compliant technologies could expose client data, undermining the foundational trust of therapeutic relationships. To ensure ethical practice, it is essential to uphold informed consent standards, provide transparency about how data is collected and used, and implement robust safeguards against unauthorized access. Maintaining these principles is important for protecting patients and preserving the integrity of AI-enhanced mental health care.

Lack of Human Touch

Another limitation is the potential loss of genuine human connection. While AI technologies can improve efficiency, scalability, and access to care, they may fall short in replicating the empathy, emotional nuance, and relational depth central to effective therapy. This absence of human interaction can weaken the therapeutic bond, a critical factor in patient engagement and recovery (Khristich, 2024). Vulnerable populations, including those dealing with trauma or severe mental illness, may be especially affected, as they often require more personalized, emotionally directed support than AI alone can provide.

Technical Incompatibilities

Another barrier to integrating AI into teletherapy is technical incompatibility and the necessity for substantial infrastructure upgrades. Many healthcare systems face interoperability issues, including compatibility with existing workflows and the absence of standardized systems across facilities, which complicates integration (Li et al., 2024; Rafalski, 2025). Furthermore, limited network capabilities and device availability pose significant obstacles, particularly in rural areas where connectivity issues and inadequate access to electricity further worsen these challenges (Li et al., 2024).

Evaluation and Oversight

There is a lack of robust data to assess the efficacy and safety of digital mental health interventions, leading to questions about the reliability and reproducibility of outcomes (Khristich, 2024; Calabrò & Mojdehdehbaher, 2025). Moreover, the lack of standardized oversight and regulatory frameworks contributes to inconsistent service quality and standards, further complicating the responsible integration of AI into mental health care.

User Experience and Engagement

A deep understanding of user experience from both clinician and patient perspectives is important for the success of digital mental health tools. The complexities involved, such as disentangling various mental health conditions, require careful consideration in designing and delivering digital mental health tools (Calabrò & Mojdehdehbaher, 2025). Additionally, engagement strategies must proactively tackle challenges such as high attrition rates and the necessity for ongoing user interaction to sustain therapeutic benefits over time (Khristich, 2024; Calabrò & Mojdehdehbaher, 2025).

Algorithmic Bias and Inequality Issues

Algorithmic bias refers to systematic and unfair disparities in the outcomes produced by AI systems, often stemming from skewed training data, flawed algorithms, or prejudiced design assumptions [26]. These biases can harm vulnerable populations and affect the accuracy of diagnoses and treatment recommendations, potentially discouraging individuals from seeking help (Rahsepar Meadi et al., 2025). When AI systems are trained on data that underrepresents these groups, the resulting algorithms may yield poor or inequitable outcomes, compromising the quality of care and access to services. Discussions around fairness, transparency, and stakeholder engagement are crucial to developing guidelines that prevent the perpetuation of health disparities and ensure equitable access to AI-driven therapeutic interventions. Addressing these challenges requires a collaborative approach involving different social groups and mental health professionals in the development and implementation processes (Tavory, 2024).

V. CASE STUDIES

Mount Sinai's AI-Enabled Telehealth for Mental Health

Mount Sinai Health System is at the forefront of integrating artificial intelligence (AI) into telehealth services specifically for mental health care. They combine cutting-edge technology with evidence-based psychiatric protocols, which allows them to demonstrate how AI can meaningfully enhance diagnosis, treatment, and management of mental health conditions.

AI in Depression Screening and Treatment

A key component of Mount Sinai's digital mental health strategy is its use of AI-powered voice biomarkers for depression screening. This non-invasive tool analyzes a patient's speech for subtle indicators of moderate to severe depression. When benchmarked against the gold-standard PHQ- 9 score, the tool demonstrated a sensitivity of 71.3% and specificity of 73.5%. Requiring just 20– 25 seconds of recorded speech, the tool offers a scalable and accessible alternative to traditional screening methods, which currently reach fewer than 4% of patients in primary care settings (Rafalski, 2025).

Further advancing its AI strategy, Mount Sinai partnered with IBM Research to launch the Phenotypes Reimagined to Define Clinical Treatment and Outcome Research (PREDiCTOR) study. Backed by a $20 million grant from the National Institute of Mental Health, PREDiCTOR analyzes multi-modal data, including audio-visual cues from clinical interviews (e.g., eye contact, spoken language, facial expressions) and behavioral data from smartphones (e.g., physical activity, sleep, and social interaction patterns). The initiative focuses on individuals aged 15–30, a demographic with increasing rates of anxiety, depression, and suicide.

The impact on clinical decision-making has been notable, with 86% of physicians reporting that the AI-enabled system enhanced their understanding of patients, and 71% found the predictive models valuable in guiding treatment decisions.

Effectiveness of Virtual Therapy

Mount Sinai's data also demonstrates the therapeutic efficacy of AI-enhanced telehealth platforms. Virtual therapy sessions have proven comparably effective to in-person care for depressive disorders and even more effective for treating anxiety, particularly among young people. This suggests a strong case for prioritizing telehealth in anxiety-related interventions.

Engagement metrics reflect growing acceptance:

- Average sessions per user rose from 2.3 in 2019 to 8.7 in 2022.
- 68% of young people reported positive perceptions of teletherapy, with convenience (45%) and privacy (38%) cited as key benefits.

Among the broader patient population:

- 62% reported improved care through AI tools.
- 46% noted better physician-patient relationships.
- 62% considered the AI tools trustworthy.

AI-Driven Crisis Intervention and Risk Modeling

Mount Sinai's application of AI in crisis intervention is noteworthy in the context of suicide prevention and behavioral crises. In pilot studies involving AI-assisted telehealth interventions:

- Out of 181 high-risk encounters flagged for potential involuntary commitment, only 19 required inpatient care, a 90% reduction in unnecessary hospitalizations.
- Over 50% of these calls involved suicidal ideation, while 15% involved aggression or violence.

This success is powered by advanced risk modeling algorithms that evaluate clinical data (diagnoses, medication history, service utilization) alongside real-time data from wearable devices and social determinants of health. This allows Mount Sinai to move beyond first-come, first-served triage systems and instead allocate care based on clinical urgency and predicted risk (Rafalski, 2025).

V. CLIENT AND THERAPIST FEEDBACK

Enhancements to the Therapeutic Experience

Integrating AI tools into teletherapy redefines the therapist-client dynamic by enhancing the quality and efficiency of mental health care delivery. Feedback from clinicians and clients underscores a key benefit: the ability of AI to reduce the administrative burden, allowing therapists to focus solely on their patients during sessions. A notable example is the adoption of AI-powered documentation tools like Mentalyc, which enable therapists to record sessions securely and auto-generate clinical progress notes. This functionality streamlines documentation and elevates the therapeutic experience by freeing therapists from the distraction of real-time notetaking. The result is more focused, empathetic, and responsive engagement during each session (Chande,

2024).

From the therapist's perspective, these AI tools are not viewed as a replacement for human judgment but as a valuable resource, an intelligent assistant that supports clinical workflow without undermining the therapist's role. This preserves the core therapeutic relationship, which is central to effective mental health care. Therapists report greater session presence and emotional connection, with many expressing increased job satisfaction due to reduced administrative fatigue.

Clients, in turn, benefit from more engaged and attentive sessions, with many reporting a stronger sense of being heard and understood. This dynamic contributes to improved rapport, increased trust in the therapeutic process, and higher overall satisfaction with care.

Ultimately, AI-enhanced teletherapy represents a balanced integration of technology and human touch, where artificial intelligence empowers clinicians to focus on what matters most: building meaningful, healing relationships with their clients.

Client Comfort and Engagement

Clients increasingly report greater comfort and openness when engaging with AI-driven mental health tools, particularly those offering conversational interfaces. These tools are often described as emotionally neutral and nonjudgmental, allowing users to disclose sensitive information without the fear of social evaluation. In a large-scale thematic analysis of 7,929 user reviews of the Wysa app, Malik, Ambrose, and Sinha (2022) found that users repeatedly cited the platform's friendliness and anonymity as central to their engagement. For many, the AI's consistent presence offered a sense of companionship and psychological safety.

One user reflected on their experience by stating:

"I have been struggling with depression since I was a child and was terrified of reaching out for help. Finally, a few weeks ago, I hit rock bottom worse than ever before. I was really scared for a while. I was seeking some form of comfort or communication but didn't want to go to anyone, not to mention money is tight. This app really helped me when I needed it most. Who knew an AI penguin would cause me to sing again?"
(Malik et al., 2022, p. 6)

This testimonial exemplifies how AI interfaces can serve as meaningful emotional outlets, especially for individuals hesitant or unable to seek traditional therapy. The ability to express oneself freely in a perceived judgment-free environment fosters openness and reinforces the therapeutic value of AI tools. Furthermore, many users noted that the app's availability during off- hours and its affordability made it particularly valuable in moments of acute distress.

Addressing Ethical Concerns

The integration of artificial intelligence (AI) into therapeutic practice presents significant ethical challenges that must be proactively addressed to ensure client safety, autonomy, and trust. Among the most pressing concerns are the dynamics of informed consent and the potential for subtle shifts in power between therapists and clients. When AI is introduced into the therapeutic space, whether for assessment, documentation, or client interaction, it is essential that clients fully understand the role, limitations, and implications of these tools.

As highlighted by McGeehan (2025), there is a growing need for therapists to engage in transparent discussions about the use of AI, especially in scenarios where clients may feel compelled to accept its use without fully understanding its function. This is particularly important given the implicit authority therapists hold, which can unintentionally pressure clients to conform to technological interventions they may not be comfortable with.

The *Resources to Recover* (RTOR, 2025) initiative further underscores the ethical tension between innovation and caution. While AI can enhance access and efficiency, mental health professionals must remain vigilant against over-reliance on automated systems that may not fully account for the complexities of human behavior and emotion. The article warns against uncritical adoption and advocates for ongoing practitioner reflection and client collaboration when deploying AI-based tools.

To support ethical implementation, the National Board for Certified Counselors (NBCC) issued formal guidelines emphasizing transparency, client autonomy, and data stewardship. These guidelines call on clinicians to inform clients of how AI tools function, what data they collect, and how that data is stored and used. Moreover, counselors are encouraged to routinely evaluate whether the use of AI aligns with the client's best interests and therapeutic goals (NBCC, n.d.).

VI. CONCLUSION

Integrating Artificial Intelligence into teletherapy represents a transformative opportunity in mental healthcare, offering opportunities to enhance accessibility, personalize treatment, and improve the efficiency of therapeutic services. This article explored AI tools, ranging from chatbots and virtual assistants to sophisticated platforms for real-time emotional analysis and administrative support, that already demonstrate their potential to

revolutionize how mental health support is delivered and received. The benefits are substantial, including breaking down geographical barriers, offering cost-effective solutions, and providing continuous support that can increase patient engagement and satisfaction.

However, the journey towards seamless AI integration is not without its significant challenges. Critical ethical considerations surrounding data privacy, the potential for algorithmic bias, and the irreplaceable nature of the human therapeutic alliance must be proactively addressed. Technical hurdles, robust evaluation frameworks, and equitable access require diligent attention and innovation.

Ultimately, the future of AI in teletherapy relies on a balanced and collaborative approach. It requires ongoing dialogue and partnership between technologists, mental health professionals, policymakers, and the individuals receiving care. AI can serve as a powerful addition to human- led therapy by fostering innovation responsibly, prioritizing ethical guidelines, and committing to rigorous research and development. The goal is not to replace the empathetic human connection at the heart of mental wellness, but to augment and extend its reach, ensuring that more individuals can access the personalized and practical support they need to thrive in an increasingly complex world. As we move forward, the focus must remain on harnessing AI's capabilities to build a more inclusive, responsive, and human-centered mental healthcare landscape for all.

Future Trends

To harness the full potential of AI in mental health care, further research is necessary. Current literature suggests a significant gap in the quality and quantity of data required to effectively develop and deploy machine learning models in diverse clinical settings (Calabrò & Mojdehdehbaher, 2025). Future studies should address these gaps while exploring the scalability and accessibility of immersive technologies like virtual reality (VR) for mental health interventions, particularly during the COVID-19 pandemic (Calabrò & Mojdehdehbaher, 2025). Furthermore, ongoing dialogue about the ethical implications of AI, including the need for explainable AI (XAI), will be crucial in fostering trust among stakeholders. The potential for XAI to enhance credibility and accountability in mental health applications positions it as a key area for future exploration (Calabrò & Mojdehdehbaher, 2025). As the landscape evolves, researchers and practitioners must remain aware of the ethical ramifications and seek to develop AI tools that align with fundamental principles of beneficence, justice, and patient autonomy (Calabrò & Mojdehdehbaher, 2025).

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