"Can I have my friend attending with me?": Design Implications for Using Virtual Supporters in Remote Psychotherapy

Jiashuo Cao
Empathic Computing Lab, Auckland
Bioengineering Institute
The University of Auckland
Auckland, New Zealand
jcao403@aucklanduni.ac.nz

Yun Suen Pai
School of Computer Science
The University of Auckland
Auckland, New Zealand
Empathic Computing Lab, Auckland
Bioengineering Institute
The University of Auckland
Auckland, New Zealand
yun.suen.pai@auckland.ac.nz

Chen Li
Department of Computing
The Hong Kong Polytechnic
University
Hong Kong, Hong Kong
richard-chen.li@polyu.edu.hk

Simon Hoermann
School of Product Design
University of Canterbury
Christchurch, Canterbury, New
Zealand
simon.hoermann@canterbury.ac.nz

Mark Billinghurst
Empathic Computing Lab, Auckland
Bioengineering Institute
The University of Auckland
Auckland, Auckland, New Zealand
mark.billinghurst@auckland.ac.nz
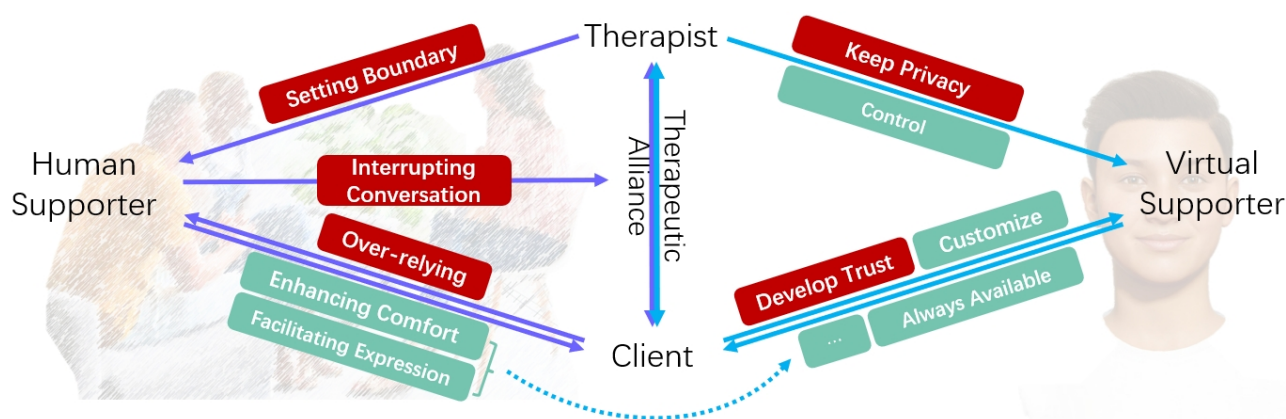
Figure 1: Summary of identified benefits (green boxes) and challenges (red boxes) of using a human supporter, and the potential benefits (green boxes) and concerns (red boxes) of using a virtual supporter in remote therapy.

Abstract

Virtual agents have shown promising potential in mental health-care applications, but current research has predominantly focused on contexts outside of traditional therapy sessions. In contrast, this study explores the design implications for integrating virtual supporters within remote therapy sessions. Drawing from the experiences of five therapists' using human supporters in therapy, our findings reveal both opportunities and challenges in translating human supporter functions to virtual agents. We highlight key considerations for trust development, role boundaries, and privacy concerns. This research extends the understanding of virtual agents in mental health beyond conventional applications, offering insights for designing AI-supported interventions that could complement traditional therapeutic practices while maintaining appropriate clinical boundaries.

CCS Concepts

• **Human-centered computing → Interaction design**.

Keywords

Interview, Therapist, Supporter, Significant Other, Virtual Agent, Qualitative Research

1 Introduction

This paper explores how virtual agents could be used as supporters
for people in remote therapy sessions. Mental health challenges
affect a significant portion of the global population, with approx-
imately one in eight people living with a mental disorder [20].
To address this growing concern, practitioners have increasingly
turned to technology supported solutions for mental healthcare
delivery, such as video conferencing [13, 30]. Recent advances in
Artificial Intelligence (AI) driven virtual agents could enable them
to provide accessible mental health support, such as using conver-
sational interfaces to offer ongoing emotional support [8, 22].

The development of virtual agents in mental healthcare has
predominantly focused on two main areas: emotion regulation,
and expert service provision. Some existing applications employ
virtual agents to help users manage their emotional states through
breathing exercises, and mindfulness practices [27]. Others position
virtual agents as expert consultants, offering counseling services
and mental health education through automated interactions [18].

However, there has been limited research on how virtual agents
might support clients within remote therapy sessions led by hu-
man therapists. The presence of real supporters in psychotherapy
settings, such as trusted friends, or paid carers, has been shown
to play a crucial role in providing support to clients [19, 25]. For
example, they create positive experiences for people with intellec-
tual disabilities [25], emphasizing how supporters can facilitate
therapy participation, improve communication, and foster stronger
relationships between the individual and therapist.

Inspired by these benefits of human supporters in therapy ses-
sions, we conducted a study to explore the potential of virtual
supporters. Our research examines how the supportive functions
typically provided by human supporters might be adapted and im-
plemented through virtual means, while carefully considering the
unique challenges and opportunities this technological transition
presents (see Fig 1). Our contributions are as follows: we present
one of the first papers exploring the use of virtual supporters for
real therapy settings, we increase the understanding of benefits and
challenges of human supporters, from there we provide insights
for designing virtual supporters in therapy settings.

2 Related Work

2.1 Using Human Supporters in Psychotherapy

The term "supporter" can broadly encompass any individual provid-
ing assistance, but we specifically focus on trusted individuals who
accompany clients to therapy sessions. The presence of supporters
in psychotherapy sessions is quite common, as evidenced by nu-
merous therapeutic practitioner reports and posts on the Internet
[23, 28].

Existing research on human supporters in therapy has primarily
focused on their impact on treatment outcomes [1]. For instance,
the presence of supporters can significantly enhance therapeutic
engagement and retention [14, 19]. In PTSD treatments, supporter
presence reduces dropout rates and increases motivation to enter
therapy [19]. Similar findings emerged in studies of gambling dis-
order treatment, where groups with significant others attending
therapy sessions with the clients showed markedly lower dropout
rates compared to those where clients attended alone [14]. Scott
et al. has explored the experience of supporters themselves, par-
ticularly in the context of supporting individuals with intellectual
disabilities [25], finding that most supporters felt their participa-
tion enhanced both treatment effectiveness and strengthened their
relationships with the clients they supported. Rather than focusing
solely on treatment outcomes, we analyze both the benefits and
challenges that human supporters could bring to therapy sessions.

2.2 Using Virtual Agents in Psychotherapy

Virtual agents have been widely used in various contexts in psy-
chotherapy, ranging from disorder diagnosis to the delivery of
therapeutic services [3, 30]. Current research predominantly fea-
tures one-on-one interactions between the virtual agent and the
participant, reflecting a direct service delivery model that mimics
traditional therapeutic relationships [29]. For instance, Philip et al.
[21] implemented a virtual agent in the role of an interviewer, en-
gaging in one-on-one dialogues with participants about depression
symptoms. Similarly, Luerssen et al. [31] used a virtual agent as a
therapist, delivering Low-intensity Cognitive Behavioral Therapy
directly to participants through a mobile application [18]. A no-
table exception to this pattern is found in [15], where researchers
designed a chatbot to serve as a mediator, helping participants
achieve deeper self-disclosure when interacting with human thera-
pists. While this study incorporated both participant and therapist
presence, the chatbot's interactions remained exclusively focused
on the participant, maintaining the one-to-one interaction para-
digm characteristic. Our research aims to explore the potential role
of virtual supporters in scenarios where both the participant and
therapist are simultaneously present.

3 Methodology

3.1 Interview Participants

This qualitative study captured feedback from five psychotherapists
(one male, four female) between the ages of 30 and 54 years old.
Three participants self-identified as White, one as Asian, and one
as Pacific Islander. All participants had experience with support
persons in therapy sessions. Psychotherapist P2 reported "A Lot"
of relevant experience, with 15 years of clinical practice utilizing
primarily cognitive behavioral therapy (CBT) [2, 9] and Acceptance
and Commitment Therapy (ACT) [12]. Three participants - P3, P4,
and P5 - reported "Some" experience: P3 had nine years of practice
using CBT and Emotionally Focused Therapy (EFT) [10]; P4 had six
years of experience exclusively practicing Interpersonal Therapy
(IPT) [32]; and P5 had two years of experience, primarily employing
ACT. P1 reported "Little" experience, with three years of practice
mainly using CBT and Solution-Focused Brief Therapy (SFBT)[7].

3.2 Study Procedure

Interviews were conducted with each of the participants. Prior to which, each participant completed a demographic questionnaire and had a brief intake conversation. Participants had different levels of understanding and familiarity with virtual agents. Thus, we determined that demonstrating a specific type of virtual agent in the interviews would better facilitate therapists' expression of their thoughts regarding virtual supporters. Since support persons represent roles traditionally fulfilled by humans in real-world settings, we selected an embodied agent with more realistic appearances and behaviors. For this study, we used virtual agents from Soul Machines [1] for the capability demonstration.

The interview was divided into three parts. The first part focused on questions (see Appendix A) about therapists' observations and thoughts regarding supporters during their therapeutic practice. The second part involved demonstrating the virtual agent's appearance and functions, including dialogue and non-verbal behavior. The third part focused on therapists' expectations and concerns about the virtual supporter. All participant interviews were conducted via Zoom. The interview duration ranged from 40 to 61 minutes long (mean=49.6, SD=8.44).

3.3 Data Analysis

We used thematic analysis[4] to code the transcripts of participant interview responses. We first transcribed the interviews and generated initial codes by systematically analyzing the transcripts, identifying meaningful patterns. After coding, we organized the codes into five broad groups; 1) the benefits and 2) the challenges of human supporters, 3) potential and 4) concern of virtual supporters, and 5) attitude towards human and virtual supporters. Based on these categories and codes, we generated themes that emerged from the data. These themes were developed through an iterative process of reviewing and refining, ensuring that they captured the key patterns and interview insights.

4 Results

4.1 Observation of human supporter in face-to-face therapy

4.1.1 Attitude towards human supporter. Participants expressed positive attitudes towards human supporter in therapy sessions, based on their experiences confirming that supporters can provide genuine help to clients. As P2 noted, *"I'm very open about support person joining the session... Honestly, most people are fantastic."* This sentiment was echoed across all interviews, with participants emphasizing the value of having a supporter in the therapeutic environment.

For therapists, their primary focus was on positive therapeutic outcomes while meeting client needs. When clients expressed interest in bringing a support person, therapists verified that this request stemmed from the client's genuine needs rather than external influences. After confirming this, therapists implemented a structured approach to integration, establishing clear boundaries and expectations with supporters before the session commenced.

[1] https://www.soulmachines.com/

This included explicit discussions about the supporter's role boundaries and reinforcing that the therapeutic focus would be on the client's needs.

Beyond client-initiated requests, participants demonstrated proactive consideration of support person inclusion as a therapeutic tool. They described thoughtfully evaluating client states and session dynamics to determine when suggesting support person involvement might be beneficial. As P4 explained, *"if there's someone who is very distressed, I would say, would you like to bring a support person with you?"* This proactive suggestion was described as part of their therapeutic toolkit, offering an additional resource for enhancing session effectiveness and client comfort.

The participants emphasized that their positive stance towards a supporter attending therapeutic sessions was grounded in practical experience rather than theoretical understanding. They observed tangible benefits such as enhanced client comfort, improved session engagement, and better retention of therapeutic insights when appropriate support persons were present. However, they also stressed the importance of maintaining professional boundaries and ensuring that the supporter's presence enhanced rather than hindered the therapeutic process.

4.1.2 Benefit of human supporter in therapy. Analysis of the interviews revealed two main benefits of including supporters in therapy sessions: enhancing client comfort and facilitating client expression.

Enhancing Client Comfort - Participants reported that clients demonstrated increased comfort and confidence with supporters in therapy sessions. P4 noted that a supporter's presence was instrumental in *"creating a more safe environment ... for the client."* This enhanced comfort came from the long-term social relationships supporters share with clients[6], characterized by familiarity and mutual trust. This comfort-enhancing effect was particularly significant during first sessions, when both the therapist and therapy environment were unfamiliar. During these initial encounters, supporters helped mitigate clients' anxiety and feelings of insecurity arising from the novelty of the setting.

Supporters also actively contributed to client comfort through validation of client expressions. P2 described a common interaction pattern where clients would seek confirmation from their supporters about the accuracy of their narratives: *"...they (clients) might turn around to the support person and ask them about it. 'You remember this is what happened right' or 'is that correct' or 'do you think that am I missing something here?'"*. Such validation from supporters effectively addressed clients' self-doubt, facilitated session progress, and strengthened clients' confidence.

Facilitating Client Expression - Supporters aided client expression through two mechanisms: supplementary communication and emotional encouragement. During therapy sessions, clients occasionally encountered difficulties in articulating their thoughts due to fluctuations in emotions and mental state. In these instances, supporters helped clients complete their narratives, clarify their intentions, and organize their thoughts. This supplementary support can come from the client actively requesting help from the supporter. A common phrasing is: *"... Do you (supporter) know what I'm (client) talking about?"* (P2). Sometimes, the supporter may also take the initiative to help the client complete the sentence,

observed from P3, *"I have noticed that ... sometimes they'll like finish the sentence for them sometimes."*.

Supporters also played a crucial role in providing emotional encouragement during client hesitation, helping them feel more comfortable disclosing their experiences. This was usually observed when clients faced uncertainty about revealing sensitive or personal experiences to their therapist. The presence of a trusted individual offering gentle encouragement, such as *"Do you wanna share that? I'm here."*, could facilitate deeper levels of therapeutic disclosure.

4.1.3 Challenge of human supporter in therapy. Our analysis identified two primary challenges when incorporating supporters in therapy sessions: over-reliance and conversational interference.

Over-reliance on Supporters - A significant challenge was clients' potential over-dependence on their supporters during sessions. This manifested in several ways: 1) Communicating with therapists indirectly through supporters, 2) Difficulty making independent decisions, and 3) Excessive seeking of supporter validation.

This over-reliance posed particular concerns because client agency is fundamental to therapeutic effectiveness and progress [34]. As the central subject of therapy, clients need to actively participate in the treatment process, including sharing personal experiences and emotions, responding to therapeutic guidance, and developing self-awareness. However, the presence of supporters sometimes led to diminished client agency, resulting in an overly passive therapeutic process that could potentially impede client growth. In response, therapists reported establishing clear expectations at the beginning of sessions, *"I probably not want to see the client over-rely on the support person ... and I make it very clear that I'm not there to do couples counseling. We're all here for the client."*, said by P5, emphasizing to both supporters and clients that the primary purpose of therapy was to help the client.

Conversational Interference - All participants reported experiences with supporters who disrupted therapeutic sessions, such as with excessive supporter self-disclosure, or making statements that misaligned or contradicted client wishes or experiences, *"you always get the people that talk too much and it's not about them. It's about the person who's having the therapy."* (P3). These interventions typically originated from supporters' unclear understanding of their role boundaries within the therapeutic context. Participants observed that problematic supporters often prioritized their own subjective feelings or opinions over client needs, which diminished the session's effectiveness.

This boundary ambiguity frequently led to power dynamics and attention shifts within sessions, potentially preventing clients from fully expressing themselves or, in some cases, feeling dominated or overlooked. To address this challenge, participants reported implementing proactive role education for supporters before sessions began, helping establish clear boundaries and expectations for supporter involvement.

4.2 Insights of virtual supporter in remote therapy

4.2.1 Potential of virtual supporter. Our analysis identified two themes regarding the potential of virtual supporters in therapy sessions: transferable skills from human supporters and unique advantages inherent to virtual agents.

Transferable Skills from Human Supporters - Participants identified several behaviors from human supporters that could be effectively implemented in virtual supporters: 1) Providing affirmation during client narratives, 2) Assisting with detail recollection, and 3) Demonstrating active listening behaviors (nodding, smiling, maintaining eye contact). Participants thought that these supportive functions could be effective when implemented in virtual supporters, contingent upon establishing trust between the client and virtual agent, *"these supportive behaviors can be equally effective if there's a foundation of trust in the relationship between them (client and virtual supporter)."* (P4).

Unique Advantages of Virtual Supporter - We found three distinct advantages of virtual supporters in therapeutic settings: First, participants emphasized controllability through the programmable nature of virtual supporters as a significant advantage over human counterparts. This enables pre-established behavioral and linguistic boundaries, consistent adherence to therapeutic protocols, and elimination of potentially harmful or disruptive behaviors. These controls effectively replicate the boundary-setting phase conducted with a human supporter, but with greater reliability. Second, the perpetual availability of virtual supporters emerged as a crucial advantage. Unlike human supporters who may face scheduling conflicts or other commitments, virtual supporters can provide consistent attendance at therapy sessions, offer continuous availability for client support, and create a reliable sense of security through their consistent presence. Third, based on demonstrations of Soul Machines virtual agents during interviews, P2 highlighted the potential for customization. This feature would allow clients to create personalized virtual supporters by changing their cultural background, physical appearance, personality traits, behavioral styles, and interaction preferences.

4.2.2 Concerns about virtual supporter. As described in the previous section, the efficacy of virtual support largely depends on *"there being a foundation of trust in the relationship between them."* (P4), participants expressed several concerns around relationship building with clients. Three primary areas of concern emerged from our analysis:

Trust Development and Maintenance - Participants mentioned several times about virtual supporters' capacity to establish authentic trustworthy relationships with clients, particularly their ability to demonstrate genuine understanding and empathy through language and behavior. This concern extends to maintaining consistent performance over extended periods, which is crucial for therapeutic rapport, added from P1, *"It's not easy for a therapist to build and maintain mutual trust during the therapy process. I'm not sure how a virtual supporter could manage to do that."*.

Role Boundary Clarity - The maintenance of clear role boundaries emerged as a second key concern. Since the relationship building not only happens inside of therapy session, and everyday interactions between virtual supporter and client play an even more important role. Participants worried about potential overstepping of supportive roles and excessive intervention that could diminish client agency and lead to unhealthy dependencies impacting long-term therapeutic outcomes. While participants recognized that developers could implement various constraints on virtual supporters, they noted that it remains uncertain how such constraints

might shape clients' perceptions of virtual supporters and what effects they may have on the relationship between them.

Privacy Assurance - Privacy emerged as a critical concern in our analysis, given its fundamental role in facilitating therapeutic outcomes and establishing trust relationships. Participants emphasized the importance of maintaining privacy for all stakeholders - clients, therapists, and the therapeutic process itself - when introducing virtual supporters into therapy sessions. Participants highlighted the need for virtual supporters to demonstrate high levels of transparency and security in their collection of client information to prevent potential data breaches or misuse. This concern extended beyond client privacy; several participants also expressed the need for understanding of virtual supporters to ensure the security and privacy of the entire therapeutic session. *"Do my clients know what is happening with the virtual supporter? ... It's all about keep the session private and safe"* (P5).

4.2.3 Attitude towards virtual supporter. Overall, participants view virtual supporters as worthy of exploration and experimentation. Virtual supporters were perceived as complementary tools that could augment conventional support mechanisms by offering functionalities that may be impractical in face-to-face interactions. Though they expressed uncertainty about how virtual supporters might alter therapy session dynamics, P3 maintained professional confidence, noting, *"As a therapist, I'm confident in my expertise to handle therapy sessions in any situation, it's part of our practice.".* They also shared their views on which specific demographic groups could benefit from virtual supporters, including those who face geographical and social isolation from their established support networks, such as international students and first-generation immigrants. Another group mentioned is individuals who experience significant social stigma associated with therapeutic intervention. These individuals often hesitate to solicit support from their social circles due to perceived stigmatization. In this context, virtual supporters emerge as a potentially safer, more anonymous alternative that could mitigate the social barriers to seeking support.

5 Discussion

5.1 Balancing Human-like Qualities and Programmatic Control in Virtual Supporters

Our findings reveal a tension in the design requirements of virtual supporters in therapeutic settings: they must simultaneously exhibit human-like qualities to build authentic relationships while maintaining programmatic control to ensure therapeutic effectiveness. Recent advances in generative AI, particularly large language models, have enhanced virtual agents' ability to generate human-like responses[16, 24]. Coupled with improvements in graphics, embodied virtual agents now exhibit increasingly realistic appearances and behaviors[26]. Numerous studies explore how these human-like qualities could contribute to establishing trustful relationships with humans[5, 17], but we took a closer look into mental health settings, and suggest that maintaining clear programmatic boundaries is crucial.

Given the dynamic nature of psychological therapy[11], co-design sessions with therapists during the development phase are important for implementing effective programmatic controls in

virtual supporters. Therapists' expertise can directly inform how to program appropriate behavioral constraints that align with therapeutic practices. For instance, their input is vital in defining specific response patterns that should be restricted or encouraged based on different therapeutic approaches, helping developers establish precise rules for virtual supporter behavior. Therapists can also provide valuable insights into identifying therapeutic contradictions and potential trigger points that should be controlled through programming. This collaborative approach ensures that the technological capabilities of virtual supporters are guided by clinical expertise, resulting in programmatic controls that maintain therapeutic safety while allowing for meaningful client interaction. Furthermore, therapists' understanding of therapeutic dynamics can help determine how to adjust these controls based on client progress and therapeutic goals, enabling the development of adaptive systems that remain within appropriate therapeutic boundaries while providing personalized support.

5.2 Transit between daily life and therapy session

The nature and requirements of support differ significantly between daily life and therapy sessions[33]. In daily interactions, supporters typically engage in casual conversation, provide emotional comfort, and offer practical assistance through more reciprocal relationships. However, in therapy sessions, the support role becomes more structured and focused - supporters must maintain clear boundaries, avoid dominating conversations, and prioritize the client's therapeutic journey over mutual exchange. Our results from therapists' observation of human supporters highlight these distinctions, P4 described a 'false' transition she met during practice, *"She(client) was answering my question and suddenly, he(supporter) started to discuss with her about some details she mentioned ... I have to ask him to leave in the end"*, showing how human supporter could struggle to adjust their usual interaction patterns when entering the therapeutic space. Thus, we believe this transitional phase emerges as a critical design consideration for virtual supporter.

Virtual supporters could be designed to shift between different support modes, adjusting their behavior, language, and interaction style to match the context. The transition between the modes must be carefully managed to maintain relationship authenticity while ensuring therapeutic effectiveness. If clients feel unfamiliar with the virtual supporter's behavior and responses during therapy sessions, it could have devastating consequences for their relationship and ultimately impact the therapeutic outcomes. To address this challenge, we believe that specific transitional dialogues could be implemented at key moments - both before and after therapy sessions - when the virtual supporter shifts between modes. These dialogues not only signal the transition but also help clients prepare mentally for entering and exiting the therapeutic space. As suggested by P1, before transitioning into a therapy session, the virtual supporter might say, *"I notice we're about to start our therapeutic work together. Would you like to take a moment to settle in?"*. This gentle introduction acknowledges the shift while maintaining relationship continuity.

5.3 Limitations

Despite the valuable insights gained from this study, it is essential to recognize certain limitations that should be considered when interpreting its results. First, our understanding of virtual supporters in therapeutic settings is primarily based on therapists' perspectives and experiences with human supporters. While these insights provide valuable guidance for virtual supporter development, they may not fully capture the unique dynamics that could emerge when introducing AI-based support systems into therapy sessions. The therapists' views were largely speculative regarding virtual supporters, as they had limited direct experience with such technology in therapeutic contexts.

Second, we focused on the therapeutic session context, with less emphasis on the broader ecosystem of support in clients' daily lives. While we identified the importance of relationship building and trust, our findings may not fully address the complexities of maintaining consistent support across different contexts and environments. Cultural considerations and their impact on virtual supporter acceptance and effectiveness were also not extensively explored.

Furthermore, as our demonstrations during interviews utilized embodied virtual agents, therapists' feedback and insights predominantly centered around this specific human form of virtual support. We recognize that virtual supporters could take various forms beyond embodied human-like agents, such as voice-only assistants, text-based chatbots, animal-like agents, or other innovative interfaces that might offer unique advantages in therapeutic settings. These alternative forms might present different opportunities and challenges for building trust, maintaining therapeutic relationships, and providing effective support.

6 Conclusions and Future Work

This study analyzed the benefits and challenges of human supporters in therapy sessions, and used these insights to identify opportunities and concerns for virtual supporter design. Our findings reveal the delicate balance required in therapeutic support - between enhancing client comfort and maintaining appropriate boundaries, between providing consistent availability and preventing over-reliance, and between demonstrating human-like qualities and ensuring programmatic control. These insights both deepen the understanding of the supporter's role in therapy sessions and illuminate the considerations necessary when designing virtual supporters for mental health contexts.

As highlighted in the discussion section, there are several directions for future work to address some of the limitations in the paper. In particular, we will next complete a working prototype system using the Soul Machines character that will enable us to test responses to a virtual character with target end users. We're also planning to investigate the trust-building mechanisms between clients and virtual supporters, particularly studying how these relationships evolve across both therapy sessions and daily interactions. In addition to human supporters, emotional support animals are common companions in psychotherapy. Like human supporters, they provide comfort and emotional security to clients during therapy sessions.

Given the established benefits of emotional support animals in therapeutic settings, we believe animal-like virtual agents also hold significant potential in psychotherapy contexts.

Acknowledgments

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A Semi-structured Interview Questions

As this is a semi-structured interview format, these questions serve as initial guidelines rather than a rigid script. The actual flow of conversation and participant responses will guide subsequent questions and their specific wording.

A.1 General Unstructured Questions

- What does supporter mean to you?
- How do you understand the word "virtual agent"?
- Do you have any questions for me about this research?
- Is there anything you want to add?

A.2 Experience with Human Supporters

- Could you describe your experience working with supporters in therapy sessions?
    - How frequently do clients bring supporters?
    - How do you feel when supporter attending therapy session?
- What are your observations about how supporters influence therapy sessions?
    - Could you share a specific example of a positive influence?
    - Have you encountered any challenges?
- How do you manage the dynamics between client, supporter, and you?
    - Will you establish some restriction ahead?

A.3 Virtual Supporters for Remote Therapy

- What potential benefits do you see in using virtual supporters in remote therapy?
    - For which types of clients might this be most helpful?
    - In what therapeutic contexts could this be valuable?
- What concerns do you have about incorporating virtual supporters?
    - How might these concerns be addressed?
- How do you think virtual supporters might affect the therapeutic relationship?
    - How might it influence the therapy dynamics?
    - What role boundaries would be important?