

Leveraging AI for Clinician and Service Member Suicide Prevention Training: Developing an Empirical Roadmap for Future Use-Cases

Elizabeth A. Penix-Smith, PhD¹; Sidney C. Allotey-Addo, BS¹; Phillip J. Mastrosimone, BS²; Paul Y. Kim, MA¹; SSG Jordan P. Kessler²; Joshua E. Wilk, PhD¹; COL Brian R. Johnson, PhD²; Phillip J. Quartana, PhD¹

¹Walter Reed Army Institute of Research, Silver Spring, MD; ²Walter Reed Army Institute of Research – West, Joint Base Lewis-McChord, WA

Table 1

Sample Characteristics

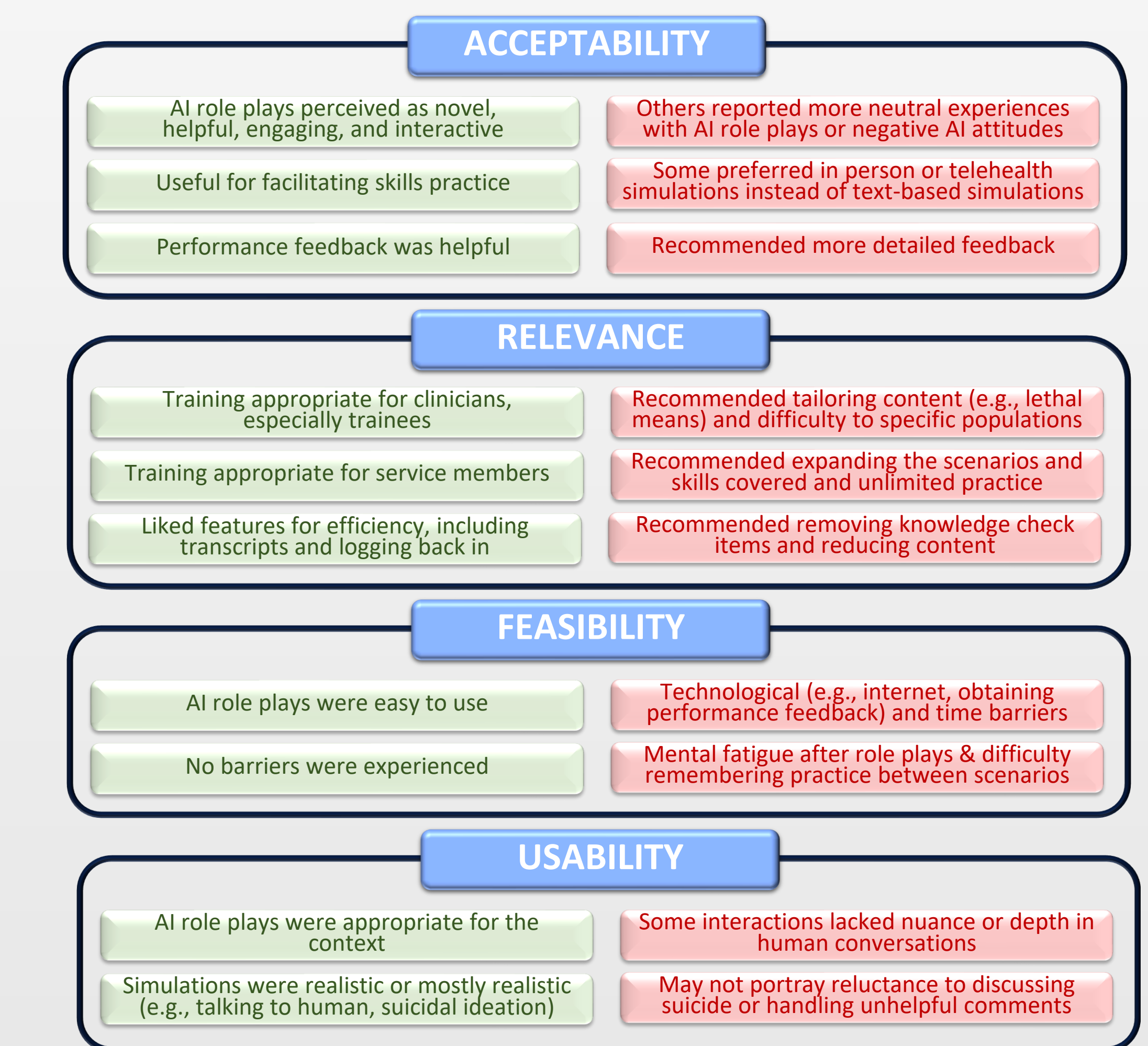
Variable	DoW clinicians (n = 15)	Service members (n = 37)
Occupation	53% social work, 13% psychiatry, 13% psychology 60% licensed, 40% non-licensed	49% medics, 24% mental health techs, 11% other techs
Experience	60% experience with suicidal ideation/behaviors	87% received suicide prevention in past year 57% helped someone navigate suicidal ideation in past year
Sex	53% female	22% female
Race & ethnicity	93% White, 7% Black, 7% Hispanic	51% White, 14% Black, 22% Hispanic, 22% Asian
Service member	67% service members, 33% DoW civilians	100% service members
Branch	73% Army, 13% Navy	95% Army

Results

- See [Figure 2](#) for quantitative ratings of training acceptability, relevance, feasibility, usability, and perceived impact of the training
- Participants reported that tailoring the AI practice scenarios (25.0%), receiving more performance feedback (42.3%), and using a different modality for practice scenarios (e.g., telehealth encounter; 25.0%) would have improved their experiences
- Qualitative themes and codes regarding the acceptability, relevance, feasibility, and usability of the training are provided in [Figure 3](#)

Figure 3

Qualitative Feedback About AI Simulations and Future Recommendations



Conclusions

- Findings provide preliminary support that AI role play simulations can be a helpful tool for facilitating suicide prevention training. While these tools should not replace traditional training methods, they can serve as supplemental training opportunities that may be useful for overcoming barriers to training engagement in military populations (e.g., logistics, time)
- Results highlight important considerations for future trainings, including emphasizing performance feedback, tailoring for service members, expanding the range of scenarios and skills included, and improving conversational complexity
- Future studies (e.g., randomized controlled trials) are needed to evaluate the relative efficacy of trainings leveraging AI role plays compared to control groups (e.g., training-as-usual) to establish the added utility of integrating AI
- Research evaluating interventions that address engagement barriers in this study (e.g., negative AI attitudes, adaptations accommodating preferences for telehealth simulations) may improve AI simulation engagement and support future implementation efforts

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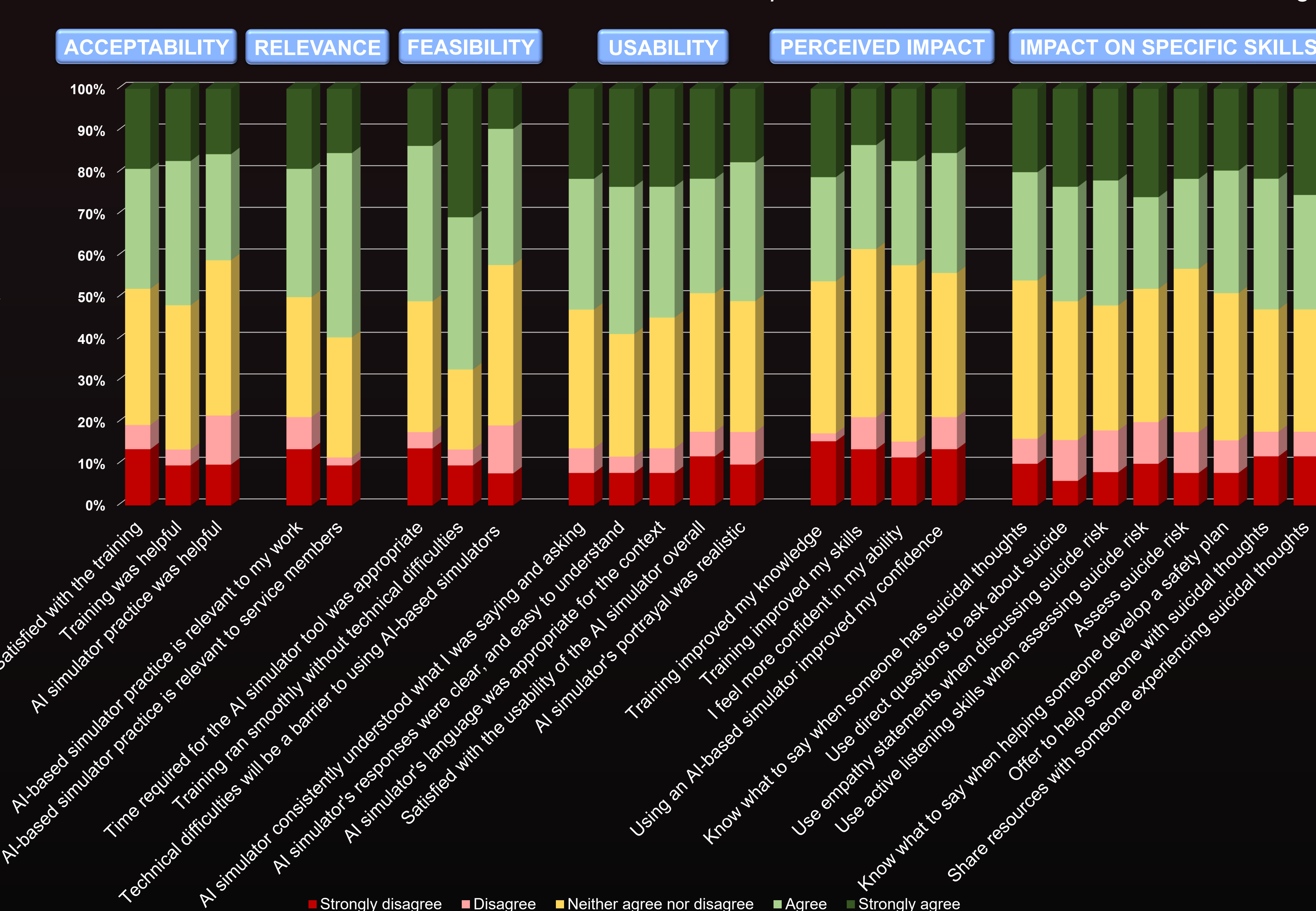
In a sample of 52 DoW clinicians and service members, about half agreed or strongly agreed that AI role play activities during suicide prevention training were **helpful, realistic, and improved confidence in using suicide prevention skills** (Figure 2)

Barriers to engagement with AI training tools included **negative attitudes towards AI**, preferences for **alternative training modalities, technological difficulties, time constraints, and cognitive factors** (Figure 3)

Clinicians and service member recommendations included providing **detailed performance feedback**, expanding the **range of practice scenarios and skills covered**, increasing the **difficulty of practice scenarios**, incorporating **unlimited practice opportunities**, and improving **conversation complexity** (Figure 3)

Figure 2

Quantitative Feedback About Clinician and Service Member Experiences with AI Suicide Prevention Training



Background

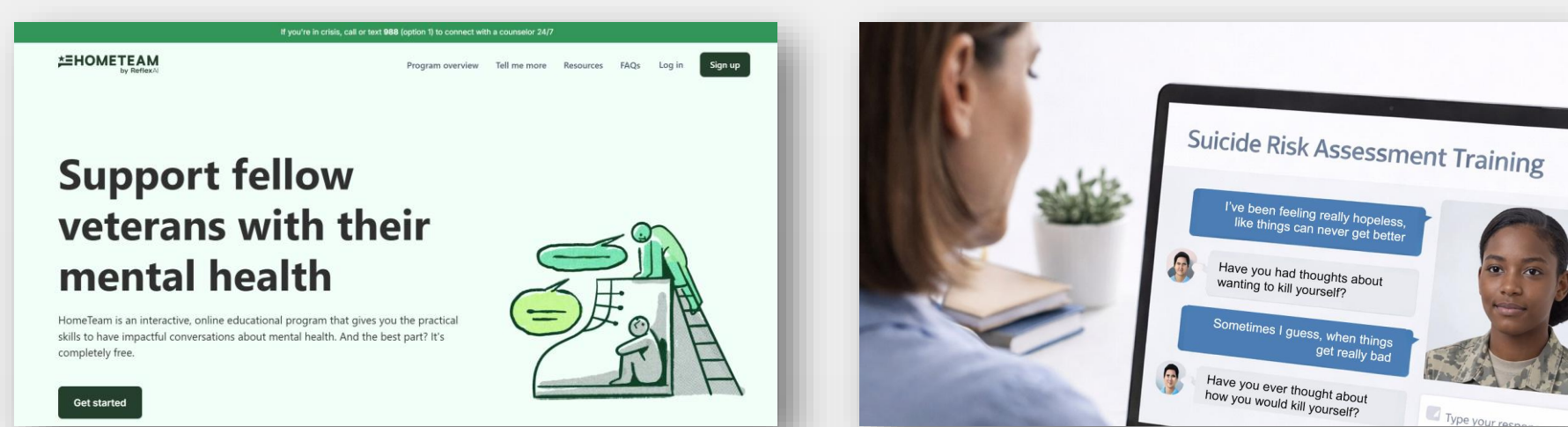
- The Department of War (DoW) has invested considerable resources in suicide prevention training efforts. However, both clinicians (Norr et al., 2024) and service members (Ayer et al., 2024) still request additional opportunities to address related knowledge gaps
- Generative artificial intelligence (AI) can facilitate military suicide prevention training by providing trainees with additional opportunities to practice skills and obtain immediate performance feedback
- Although findings suggest that such AI tools are cost-effective and perceived as helpful, their utility has yet to be evaluated for military suicide prevention training

Aims

- Leverage quantitative methods to establish initial benchmarks for the perceived acceptability, appropriateness, feasibility, and usability of the AI suicide prevention training
- Utilize qualitative methods to assess clinician and service member perceptions of the training and identify recommendations for informing AI training efforts

Method

- Procedure:** Clinicians working with military populations in Army, Navy, and National Guard settings and service members whose occupational roles may entail serving as non-traditional providers of mental health support (e.g., combat medics) completed the AI suicide prevention training and provided quantitative and qualitative feedback about their experiences
- HomeTeam suicide prevention training that integrates AI role play activities:** See [Figure 1](#) for a description of the training modules, including didactics, knowledge check items, performance feedback, and AI role play activities that simulated messaging a veteran experiencing suicidal ideation (“Blake”). The training is freely available at: <https://hometeam.reflexai.com>



- Sample:** See [Table 1](#) for sample characteristics (clinicians $n = 15$; service members $n = 37$)
- Measures:** Quantitative items assessing acceptability, relevance, feasibility, and perceived impact of the training were developed for this study. Usability items were adapted from the Comprehensive Evaluation Scale for LLM Counseling Chatbots (Bolpagni & Gabrielli, 2025). Participants provided qualitative responses to open-ended questions assessing experiences with the training and future recommendations
- Statistical analyses:** For quantitative analyses, descriptive statistics were performed using SPSS Version 28.0. For qualitative analyses, NVivo Version 14 and reflexive thematic analysis (Braun & Clarke, 2006, 2019) were used

Figure 1

HomeTeam Suicide Prevention Training Modules and AI Role Play Simulations

