

SOPHIE: Testing a Virtual, Interactive, AI-Augmented End-of-Life Communication Training Tool (RP122)

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Outcomes.

1. Comprehension - Participants will demonstrate an understanding of how SOPHIE addresses the challenges of traditional communication workshops and its potential to enhance clinician-patient interactions.

2. Application - Participants will be able to assess the research design used in the study and evaluate its appropriateness for investigating the effectiveness of communication training tools.

Key Message. SOPHIE is a web-based digital tool designed for healthcare professionals to practice and improve communication skills with realistic, diverse virtual patients. Our results show that SOPHIE training improved key communication skills. It is scalable and customizable, potentially improving availability of high-quality communication training worldwide.

Importance. Effective clinician-patient communication is vital for improving care for patients with serious illness, however, traditional training is often costly, challenging to scale, and logistically complex [1, 2, 3, 4, 5, 6].

Objective(s). To evaluate whether a virtual, interactive, AI-augmented communication training program can provide an effective, easily accessible alternative for improving end-of-life communication [7, 8, 9, 10].

Scientific Methods Utilized. We conducted a randomized, controlled pilot study to determine whether SOPHIE (Standardized Online Patient for Health Interaction Education), a digital tool using an on-screen “virtual patient” with automated, personalized feedback, can improve end-of-life communication skills. Participants (N=30) included 12 medical students, 9 nurses, 4 residents, 2 physician assistants, 2 psychologists, and 1 chaplain who were randomly assigned to Control (no training) or training using SOPHIE. Feedback criteria and outcome measures using human standardized patients included validated measures of end-of-life communication skills (e.g., Empathize, be Explicit, and Empower) based on the Medical Situation, Values, Plan (MVP) model [11].

Results. SOPHIE participants outperformed ($p < 0.05$) control in aggregate scores (36.06 vs 29.6), overall communication quality (6.0 vs 5.067), patient empowerment (6.133 vs 5.267), and empathy (0.8 vs 0.333). Participants reported that the system was easy to use, and that SOPHIE looked realistic, responded appropriately to medically-related questions, and showed emotion through voice and language. They suggested improvements in SOPHIE’s fluency, understanding and facial expressiveness [12].

Conclusion(s). SOPHIE is a promising prototype for a new generation of accessible, scalable, inclusive, low-cost communication skills training resources

Impact. The SOPHIE training system has the potential to provide communication skills training to clinicians worldwide; augmenting, reinforcing or partially replacing in-person training, making access more equitable. Importantly, SOPHIE’s age, race, language, clinical scenarios, and feedback criteria can be easily customized, allowing for the training to be available to clinicians in diverse cultural contexts and settings.

Keywords. Innovative technologies/Educational, training and supervision

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