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THE ROLE OF PILOT-TESTING IN DEVELOPING AN INTERVENTION PROTOCOL FOR ROBOTIC PET RESEARCH

Rebecca Westenskow (Rhonda Nelson)
Department of Occupational and Recreational Therapies

Conducting pilot-testing for research has many purposes and benefits. According to Tejlingen & Hundley (2001) this might include testing research instruments, developing research protocols, and determining appropriate techniques and staffing for research facilitation. Pilot-testing becomes more important for studies involving new interventions where previous research lack replicable protocols. One such example is robotic pet studies with older adults. Researchers have recently begun studying how robotic pets such as PARO (Lane et al., 2016; Peterson et al., 2016; Sung et al., 2014) and AIBO (Banks et al., 2008; Kramer et al., 2009; Tamura et al., 2004) might be used to address mood and behavior in older adults with dementia. While results have shown improvements in areas such as communication and interaction (Sung et al., 2015), mood, (Peterson et al., 2017) and loneliness (Banks et al. 2008), these particular robotic pets are expensive and intervention protocols are lacking. In 2015, Hasbro Inc. developed Joy for All Companion Pets (JFACP), a more cost-effective robotic cat and dog, for use with older adults. A study (Marsilio et al., 2018) conducted to understand older adults' physiological response to the JFACP cat indicated interventions using these less expensive robotic pets can also be effective in producing positive clinical outcomes, but again no protocol was published. To assist in generating research findings that facilitate widespread adoption of cost-effective, evidence-based, robotic pet practices, a recent study used pilot-testing to refine research procedures.

Pilot-testing allowed the research team to establish an intervention protocol appropriate for older adults with dementia, refine facilitation techniques, and train staff on implementation and data collection procedures. Testing the protocol began with introducing a JFACP to three older adults residing in a memory care unit of a long-term care (LTC) facility. The research team developed a list of prompts and refined them according to the residents' response. Questions requiring complex answers such as "Tell me a story about a pet you have owned before" evolved into simpler questions such as "Have you owned any cats/dogs?" and "What was your cat's/dog's name?". Facilitation questions were then divided into categories including personal, directional, sensory, and cognitively stimulating which allowed the facilitator to more effectively direct meaningful engagement based on individual resident's needs and abilities. Pilot-testing also led to the identification of important facilitation techniques. Initially, the JFACP cat and dog were brought to the facility in their original cardboard boxes. This led to residents questioning if the facilitator was selling the pet or possibly not providing the appropriate care. The research team made the decision to purchase pet carriers, which greatly improved the interactions and response older adults were having with the pet. Because of the pilot-testing, the research team was also able to identify additional data that should be collected throughout the study, such as the correlation between animal choice and past pet ownership, consistency in animal choice over multiple sessions, and meaningful connections happening in spite of the knowledge that the pet is robotic. Ultimately, pilot-testing with the robotic pets led to a more prepared research team and a refined intervention protocol with greater potential for positive clinical outcomes and replicability.

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