Towards a Study to Assess Conversation-based Interaction between People with Dementia and Robots

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Introduction
Therapies and interventions supported by SAR technologies for a person with dementia (PwD) [1].
Caregivers often deal with problematic behaviors through verbal communication [2].
We propose the use a robot to enact a personalized conversation to deal with problematic behaviors from a PwD.

Study Goals
Better understand of PwD-Robot interaction in terms of:
- Adoption
- Engagement
- Application scenarios

Research Questions
1. Can a person with dementia engage in a conversation with a robot?
2. How effectively are the conversation strategies proposed by the Alzheimer's Association [3] to be implemented in a PwD-robot conversation?
3. How a PwD perceives the social presence of the robot?

Variables [4,5]
- Interaction
- Social Presence
- Engagement
- Enjoyment
- Conversation Recommendations

Participants
Small group (4-5). 10-20 MMSE rate. 60-85 old. Capacity to speak. Good diction level Be sociable

Setup
- Video recording
- Facilitator
- Same conditions for all
- Script for each conversation
- Wizard of Oz setup

Tasks
- Completing famous sayings
- Reminiscence about pleasurable moments
- Talk about recent events
- Ask about her favorite topics of conversation

Study Design
1. A group session to familiarize the participants with the robot.
2. A conversation based on:
   - Completing famous sayings
   - Reminiscence about pleasurable moments
   - Talk about recent events
   - Ask about her favorite topics of conversation

Analysis
Observation
Coding
Measuring
Answers

Expected Results
- Assess PwD-robot interactions.
- Discover issues affecting the adoption of a conversational SAR by a person with dementia.
- Inform the design of an autonomous conversational SAR to interact with people with dementia.

References