TOWARDS A STUDY TO ASSESS CONVERSATION-BASED INTERACTION BETWEEN PEOPLE WITH DEMENTIA AND ROBOTS

Dagoberto Cruz-Sandoval & Jesus Favela Vara
Computer Science Department
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INTRODUCTION

Therapies and interventions supported by Socially Assistive Robot technologies for a person with dementia (PwD)[1].

Can a robot enact an intervention to deal with problematic behaviors from PwD?

INTRODUCTION

Caregivers often deal with problematic behaviors through verbal communication [3].

<table>
<thead>
<tr>
<th>Category</th>
<th>#</th>
<th>Genre</th>
<th>Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caregivers</td>
<td>4</td>
<td>Female (2) Male (2)</td>
<td>+6 months (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>+2 years (1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>+4 years (1)</td>
</tr>
<tr>
<td>Specialist in non-pharmacological interventions</td>
<td>1</td>
<td>Female</td>
<td>+6 years</td>
</tr>
<tr>
<td>Specialist (female) in behavior and cognition</td>
<td>1</td>
<td>Female</td>
<td>+8 years</td>
</tr>
<tr>
<td>Geriatrician</td>
<td>1</td>
<td>Male</td>
<td>+9 years</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Dementia</th>
<th>#</th>
<th>Genre</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alzheimer</td>
<td>4</td>
<td>Female (3) Male (1)</td>
<td>Between 75 to 85 years</td>
</tr>
<tr>
<td>Lewy bodies</td>
<td>1</td>
<td>Male</td>
<td></td>
</tr>
<tr>
<td>cognitive impairment</td>
<td>1</td>
<td>Female</td>
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STUDY GOALS

We propose the use a robot to enact a personalized conversation to deal with problematic behaviors from a PwD.

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 does a PwD perceive the social presence of the robot?

Variables [5,6]

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

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

MIXED APPROACH

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.
¡THANK YOU!
dagoberto@cicese.edu.mx