

## **Are there differences in the opinion of patients with Alzheimer's Disease and their caregivers about having support from a service robot at home?**

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### **Introduction**

Robotic technologies have the potential to give support in activities of daily living (ADLs) to Alzheimer's Disease (AD) patients. In this scope, RAMCIP project is aimed to develop a social robot that will provide assistance to AD patients in early stages (mild cognitive impairment or mild dementia) at their homes. This process comprises the acceptance of a service robot among potential end-users and caregivers.

Here, our objective is to compare the agreement between the perception of users and caregivers in the possibility of receiving support from a robot in ADLs, and their attitude towards technology.

### **Methods**

Questionnaires were administered to 82 potential end-users of the RAMCIP robot and 82 caregivers of patients with MCI or mild dementia due to AD, evaluated at Fundació ACE (Barcelona, Spain) and Medical University of Lublin (Lublin, Poland). Then, we compared the information obtained from 22 questions about ADLs: 7 basic, 11 instrumental and 4 advanced activities; and 5 questions about their attitude towards technology, using chi-squared test.

### **Results**

We found agreement in 12 of 22 queries on ADLs, most of them in the instrumental activities, where potential users and caregivers agreed to receive help in preparing food, stimulating to keep in touch with family, reminding boiling water and turning off electric appliances, reaching and reminding medication, monitoring the correct medication intake, finding objects, calling for help and helping to clean the house (Tables 1 and 2).

However, participants disagreed in 2 instrumental ADLs:

- Getting help to do the shopping list: 18 users agreed [23.9%] vs 54 caregivers [76.1%], 18 users disagreed [54.5%] vs 15 caregivers [45.5%],  $p < 0.05$ ; and
- Recognizing when to open the door: 21 users agreed [23.9%] vs 67 caregivers [76.1%], 9 users disagreed [100%] vs 0 caregivers,  $p < 0.001$ .

On another hand, participants agreed in 3/4 questions with positive attitude towards technology (Table 3).

### **Conclusions**

AD patients and caregivers had similar opinions and agreed in receiving support from a service robot -RAMCIP in our case- in the majority of instrumental ADLs. This is in line with the functional impairment presented by patients with MCI and mild dementia.

Moreover, we found that both groups have a positive attitude towards technology.