Leiden University Medical Center

H. Smaling[1], T. van Hoorde[1], T. de Kooning[1], E. Adam[1], W. Achterberg[1]

[1] University Network for the Care sector Zuid-Holland, Leiden University Medical Center, Leiden, The Netherlands

An emotional-intelligent robot to facilitate personalized care in long-term care; perceptions of patients, family and staff

Background

With the increasing number of persons requiring long-term care (LTC), the declining work force, and high workload, providing personalized care for LTC residents is challenging. Smart use of technology may aid healthcare professionals in providing personalized care.

Study aim

- To develop an emotional-intelligent (EI) robot for LTC to facilitate personalized care for persons with dementia and persons with intellectual disability (ID).
- 1st step: to explore perceptions of and user requirements for the EI-robot.

Methods

- Qualitative design; two iterative rounds of 7 focus groups and 10 interviews
- Inductive approach to thematic analysis
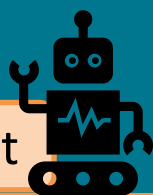
Table 1. Participants first round

Group		N	n ♀	Age range
Persons with dementia		4	2	80 - 86
Persons with ID		6	3	25 - 46
Family caregivers	(6 ID)	14	8	18 - 84
Staff	(9 ID)	24	23	23 - 63

Results

Data collection is still ongoing; these are the preliminary results of the first round.

PERCEPTIONS

Pros and Cons of robot

+ prevent escalation by timely intervention (→ reduce time, better understand resident)
+ aid for staff; when busy and staff shortage
+ attention for residents; buddy, engage them
+ robot is more neutral, patient and consistent
- technical skills are needed

Worries and challenges regarding possibilities robot

- fear of the unknown; being replaced
- distrust regarding data use and privacy
- unsure if a robot can be 'person-centered'
- fear of de-humanizing care; 'necessary evil'

USER REQUIREMENTS

"For privacy-sensitive things or intimate care, I would prefer a robot. You don't have to be ashamed if you are incontinent because the robot has no feelings." – physiotherapist

Design "look-and-feel"
- Look: (not) human, animal
- Feel: soft, pleasant

Functionalities
- Identify stress + unsafe situations
- Stimulate and calm residents
- Offer instructions to maintain self-control and stimulate resilience
- Simple care tasks (e.g., offer drink, clean, administrative tasks)
- Social interaction; human-like

Preconditions for use
- Easy to clean
- Easy to use
- Proper data security
- Sturdy, 'unbreakable'

"Some of our residents feel lonely. Then a robot may be able to help." – person with ID

Conclusion

- Although some concerns were raised, most participants were positive about the idea of an EI-robot in LTC and regarded it as a necessary solution for the upcoming challenges.
- The next step is to analyze the data of the 2nd round and translate the results to specifications for the to-be-developed EI robot.

More information?

Eirobot@lumc.nl

ipse de bruggen

zorggroep elde maasduinen

Funders: European Union — European Regional Development Fund — Investing in your future!

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