Can robots help care for people with dementia?

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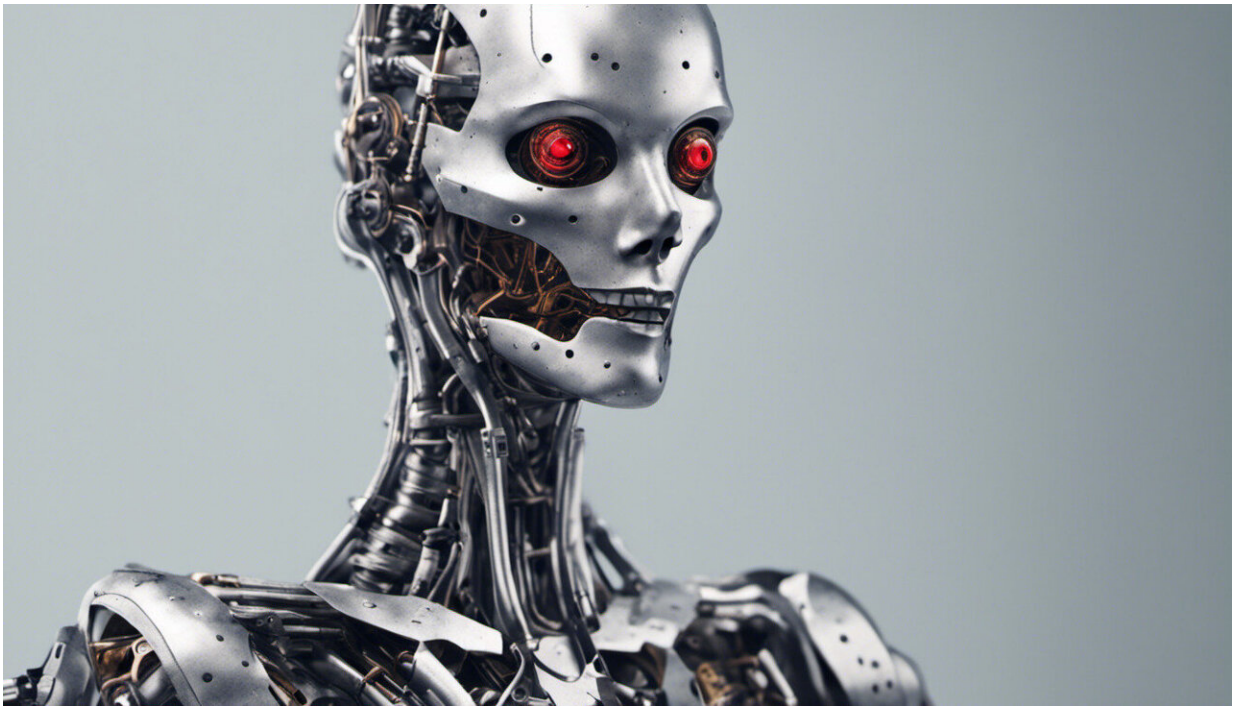

Credit: AI-generated image (disclaimer)

As our populations continue to age the issue of how we deliver care to the elderly continues to be an incredibly important issue. But with the number of older people set to reach 1 billion in the next 10 years and the demand for carers increasing, could robots potentially provide the solution?

As a Registered Nurse and Program Director in the Menzies Health Institute Queensland based at Griffith University, Brisbane, Australia and with a longstanding interest in the area, Professor Wendy Moyle is ideally placed to research such questions.

Delivering a Dean's Lecture at City, University on the subject of 'Socially Assistive Robots: Are they Effective in Care of People with Dementia?', Professor Moyle spoke about her research focus on non-pharmacological interventions, and in particular the use of socially assistive robotics when caring for people with dementia.

At least 50% of residents living in long-term care facilities in Australia, the United States and the United Kingdom have dementia. Of these, over half have behavioural and psychological symptoms of dementia (BPSD) such as agitation, apathy, sleep disturbance and wandering, and some of these may be related to unmet needs.

Such behaviours are often difficult to manage, and it is common for medication to be prescribed as a first-line approach, despite demonstrated adverse effects and inconclusive efficacy. As a result, non-pharmacological interventions offer an alternate means of managing BPSD, and in recent years researchers have sought to investigate how socially assistive robots may be used.

In particular, Professor Moyle spoke about two robots, one known as PARO, which is a companion robot which resembles a seal, and another, which was a telepresence robot. These 'socially assistive robots' feature an AI system designed to interact with humans, and they strictly follow social behaviour and rules. As a result, according to Professor Moyle, these robots "tap into the human need to connect".

To find out more about what kind of impact such robots could have in people with dementia, Professor Moyle has been carrying out a number

of studies. While initial evidence from other researchers suggests that companion robots can improve mood and loneliness, there is limited evidence, so Professor Moyle's work seeks to clarify some of the pros and cons of such technology.

Speaking specifically about PARO, a robotic seal which responds to emotions, Professor Moyle discussed a recent large-scale study she had authored which showed that in general PARO improved quality of life, pleasure and also reduced anxiety. People who interacted with the robot were also more verbally and visually engaged. PARO also reduced agitation, and people who had interacted with it were found to sleep better at night.

As Professor Moyle noted, "social robots offer a chance for staff to see people with dementia as a human being."

As a result, while more research is needed, perhaps these robots could provide part of the solution to dealing with the forthcoming dementia crisis.

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