



Bright Hill Evergreen Home residents in Punggol interacting with Dexie, the humanoid robot. The versatile social robot is used in dementia care to foster social interaction. PHOTO: BRIGHT HILL EVERGREEN HOME

For lonely seniors, AI companions can be a lifeline

Robots driven by artificial intelligence offer promising support for an ageing population, with careful attention to ethical considerations.

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Seventy-five-year-old Deng Jie Huan paces up and down his HDB flat in Bukit Batok, waiting for visitors who never come. With a strained relationship with his son and no friends to check on him, he feels isolated and lonely.

When asked by a media interviewer how he spends his day, the senior citizen replied: "I live with my son, just the two of us. He goes out around nine and doesn't come back until 11 or 12 at night. So we seldom communicate. I want to keep myself from being bored at home. I just walk around by myself."

Deng's circumstances improved when he joined his local THK Active Ageing Centre, conveniently located downstairs from his flat. Although his loneliness diminished, not every older adult has access to, or the

ability to seek, similar help. Deng's case highlights how loneliness is a growing problem among Singapore's elderly people.

By 2030, one in four Singaporeans will be over the age of 65. For many who are older, this can result in a deep loneliness that quietly consumes their days. This is not a future problem – it is a present crisis, taking a heavy toll on the mental and physical health of the elderly. Loneliness elevates the risk of premature death to levels comparable with smoking, obesity and physical inactivity, US studies have found. Prolonged social isolation is linked to heart disease, obesity, depression, anxiety and even suicide. For older adults, loneliness increases the risk of dementia by 50 per cent and stroke by 32 per cent.

The Singapore Government is making mental health and well-being a key priority. In February 2024, then Deputy Prime Minister Lawrence Wong highlighted plans to increase the

number of public sector psychologists and psychiatrists by 30 and 40 per cent by 2030. Mental health services will also be introduced at polyclinics and 900 GP clinics, with 28,000 front-line workers and volunteers trained for early support.

However, filling these roles can be difficult. Mental health work requires specialised skills. Recruiting and training enough qualified professionals takes time. The work can be emotionally taxing, leading to burnout, which makes it difficult to retain workers. What is needed here is a supportive tool that complements the work of professionals.

Studies have found that AI companions – digital interaction partners like chatbots and robots – show promise in helping to address senior isolation. One example is the robot called ElliQ being trialled in the US, that uses AI to conduct human-like conversations with its owners. ElliQ remembers information it has been told and is more focused on projecting empathy and emotional support.

The robot has a simple, non-human look but talks to you, remembers what you like, checks in on your day and even cracks a joke. Most importantly, it listens. In a world where silence and loneliness sometimes reign, a voice – even an artificial one –

can be a lifeline.

PROS AND CONS

AI, in general, is evolving to offer companionship and support to those who may be isolated. AI's potential benefits include therapy bots that help people express their emotions, and apps that remind people to take medication.

There are even apps that create digital avatars of loved ones who have died, using photos, videos and voice data. These can bring temporary comfort, though they also raise ethical questions about prolonged attachment and data privacy.

Massachusetts Institute of Technology sociologist Sherry Turkle has kept her eye on the rise of tools promising artificial intimacy and empathy. She highlights the harm caused by replacing genuine human interaction, noting that "the feeling of being in conversation becomes conversation enough".

What are we missing when older adults engage with AI instead of real people? Are we losing valuable perspectives by not hearing their voices directly?

Robot experts Amanda and Noel Sharkey from the University of Sheffield point out a hard truth: while robots might provide a sense of comfort, it's a deceptive

façade. These machines don't possess real emotions or cognitive depth. This projected empathy can mislead users into overestimating what AI is truly capable of.

Over-reliance on these artificial companions could deepen social isolation, particularly for older adults who might start favouring robotic interactions over human connections, under the illusion that these machines genuinely care for them.

However, neuroscientist Julie M. Robillard points out that humans regularly form emotional attachments to toys or dolls without ethical concerns. Perhaps the capacity to care for non-reciprocal objects is part of human empathy and should be respected, not criticised, as journalist Andrew Brown suggests.

Another issue is that AI companions pose privacy risks. The data collected – daily routines, preferences or health information – may be used in ways that aren't transparent, feeding into "surveillance capitalism". Companies could exploit this data for profit without the user's consent, though Mr Dor Skuler, CEO and co-founder of Intuition Robotics – which created ElliQ – said his firm does not sell user data and is focused on maintaining high standards of data privacy.

RESEARCH BACKING AI COMPANIONSHIP

Despite the risks, it's hard to ignore the evidence on the positive impact AI companions have had on lonely seniors.

A recent study led by Harvard Business School found that AI companions are just as effective in reducing loneliness as interacting with another person, whereas activities like watching YouTube offer little to no help.

A recent longitudinal study revealed that older adults who regularly engaged with AI companions experienced a significant drop in feelings of loneliness after just one week. The most striking reduction came on the very first day, followed by sustained improvements as the days progressed.

One participant described the experience as unexpectedly positive: "It's funny. I wasn't sure how I'd feel about this – talking to an AI for 15 minutes a day about whatever came to mind – but now it's become a rather pleasant routine. I can see this would benefit people who feel isolated."

What sets AI companions apart is their ability to do more than just engage in surface-level conversation. Not all AI interactions are equally effective in reducing loneliness. Research found that AI companions designed to make users feel "heard" significantly outperformed generalist assistants and basic chatbots in alleviating loneliness – a quality crucial for reducing feelings of isolation.

BALANCING TECH AND HUMAN CONNECTION

Critics might scoff – can a robot really replace a family member or friend? Of course not. But for many Singaporeans who are older, a robot might be the only consistent presence in their day-to-day life.

In Singapore, around one in 27 older adults suffers from depression, which can increase the likelihood of developing dementia.

The Government's initiative to address the shortage of mental health professionals is a step in the right direction. However, integrating AI companions could provide an even more comprehensive solution to the mental health crisis among older adults. The goal is not to substitute human care with machines, but to use AI as a supportive tool within a larger system of care.

In the US, New York state is offering free subscriptions to AI companions. Singapore could consider similar initiatives.

Singapore is already embracing technological integration. RoboCoach Xian, for example, guides senior citizens through physical exercise routines, while Dexie, a versatile social robot, is used in dementia care to foster social interaction.

With Smart Nation initiatives paving the way for technological integration, AI could become a seamless part of eldercare.

Still, we need to ensure that these technologies are used to complement, not replace, real human connections. AI can serve as a companion when family and friends are unavailable. Real social support networks are still critical.

To combat the loneliness epidemic, the Ministry of Health and eldercare facilities should consider piloting AI-companion programmes. These robots won't solve everything, but they can provide some relief – a voice in the quiet, a companion in solitude.

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