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## ROBOPETS MAY BE BENEFICIAL FOR CARE HOME RESIDENTS

“Mum just loved it. She talked to it...it definitely made a difference to her mood”



ROBOPET SYNTHIA ENJOYING THE SUN

### WHAT IS THE IMPACT OF ROBOPETS ON THE HEALTH AND WELLBEING OF OLDER PEOPLE RESIDENT IN CARE HOMES?

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Pet or animal assisted therapy may be helpful in providing sensory enhancement for older people in care homes. But, health and safety concerns, the limited availability of appropriate animals and the inability of care homes to meet the needs of living animals mean that

not all care homes are able to provide pet therapy. Robopets, small robotic animals that mimic living animals and respond to human interaction are receiving increasing attention but what's their role in the care and nursing home setting?



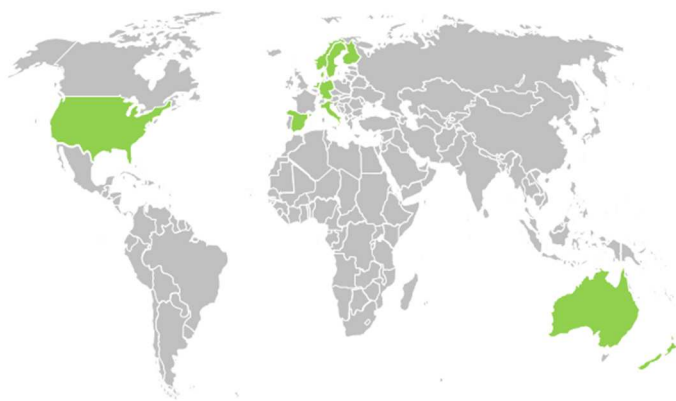
This is the question that researchers at the University of Exeter Medical School recently set out to address. They conducted a systematic review to bring together all the evidence about the **experiences of staff, residents and family members** of interacting with robopets and the **effects of robopets** on the health and wellbeing of older people living in care homes to try and shed light on this important area.





Lead author, Rebecca Abbott explained that the team followed best practice guidelines for the methods of the systematic review and worked with three relevant professionals (a care home owner, a care home manager, and a veterinarian) to ensure that the findings were as useful as possible.

They found a total of 19 studies (10 qualitative, 2 mixed methods and 7 quantitative) that contained relevant information to address the research questions.



EVIDENCE: Studies were conducted in 11 countries

Five different robopets were used in the studies – Necoro and Justocat (cats), Aibo (a dog), Cuddler (a bear) and Paro (a seal). Paro is perhaps the best known robotic animal used in therapeutic settings and was the most studied. Paro has even featured in an episode of The Simpsons!

Over 900 care home residents, staff and family members contributed to the included studies.

## ENGAGEMENT WITH ROBOPETS APPEARS TO HAVE BENEFICIAL EFFECTS ON THE HEALTH AND WELLBEING OF OLDER ADULTS LIVING IN CARE HOMES, BUT NOT ALL CHOOSE TO ENGAGE

The qualitative evidence synthesis provides rich detail about the nature of interactions between robopets, residents, staff and family members and describes positive experiences on resident loneliness, depression and quality of life.



Noreen Orr, the qualitative researcher in the team provided some informative quotes from the literature to demonstrate what this might mean in practice for older people living in care homes.

This quote from a family member shows how a robocat might be a trigger for communication –

*“...now we have something to talk about - the robot cat! Conversations about the weather and the meals are so meaningless; the robot cat has given us meaning in our communication.”*

(Gustafsson et al 2016)

Having something to care for was also a prominent theme in the literature as illustrated by this quote from a staff member –

*“...when I saw them interacting with it... you saw their loving personality come*





*back. They knew that they needed to look after this thing that was being handed to them.”*

(Moyle et al 2018a)

Robopets may provide an opportunity for reminiscence as this quote from a professional care giver illustrates –

*“[the participant] began to talk about animals he had had and...that he had worked with and he said he liked being out in the forest looking at the animals and just sitting and enjoying nature. ‘I miss that a little bit,’ he said...He had not talked about it like that before; it was the first time that happened like that.”*

(Gustafsson et al 2016)

Finally, these resident quotes suggest that robopets may help improve loneliness and bring pleasure –

*“He [Paro] is a good companion when you are lonely.”*

*“Very happy, relaxed. It was a pleasure to be with her [Paro]”*

(Robinson et al 2016)

These positive impacts of robopets were not always reflected in the results of the quantitative studies. Many different outcomes were measured including loneliness, depression, agitation, quality of life, engagement/interaction, anxiety, medication use, apathy and sleep, but important differences associated with robopets were only seen for agitation. Although, there was also a suggestion that

robopets may increase interaction and engagement as seen in the qualitative evidence.

It is clear that not everyone will respond positively to robopets,

*“I didn’t particularly feel anything towards it. I can’t go gushy over a soft animal like some of the others do.”*

(Robinson et al 2016)

so consulting with family members about preferences and history with pets is likely to be important.

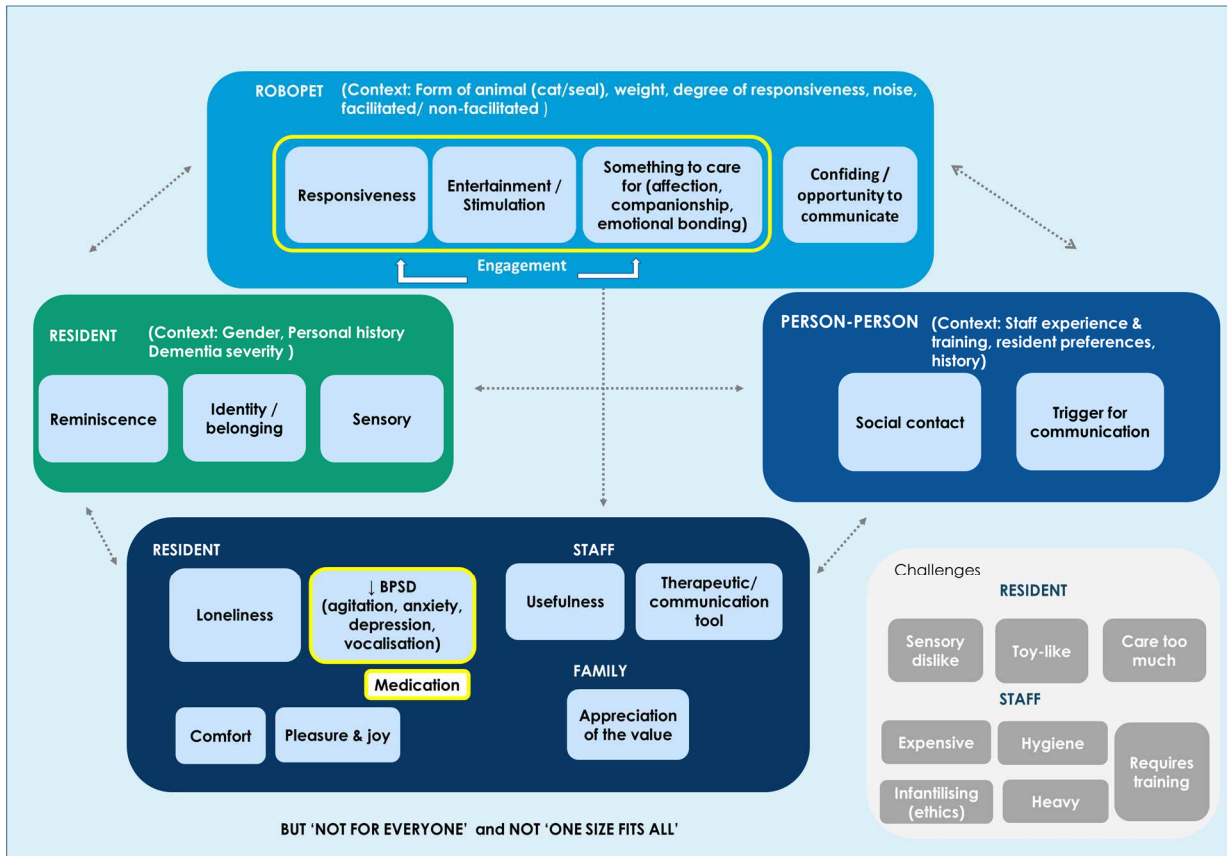
Jo Thompson Coon, who also worked on the systematic review, commented that staff training may be needed to ensure that the robopet is used appropriately, including when to use as part of a group or one-to-one activity.



Image courtesy of Hasbro

Further details of all the studies that contributed to the review and the illustrative quotes provided can be found in the published paper available on the project webpage.





LINKS AND RELATIONSHIPS: Visualising the information in the research studies

The researchers produced a 'logic model' to describe the information in the research studies.

Each block represents a theme from the qualitative studies. For example the green box depicts robopets providing an opportunity for reminiscence, a sense of identity and belonging and a sensory experience for residents and also illustrates some of the contextual factors that may be

important e.g. gender, personal history and dementia severity. Where a block is outlined in yellow, this indicates that as well as seeing these themes in the qualitative studies, they also saw evidence of an effect in the quantitative studies.

This QR code will take you directly to the project webpage.

This project was conducted by Becca Abbott, Noreen Orr, Paige McGill, Becky Whear, Alison Bethel, Ruth Garside, Ken Stein and Jo Thompson Coon from the University of Exeter. The project is funded by the NIHR Collaboration for Leadership in Applied Health Research and Care (CLAHRC) South West Peninsula. The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health and Social Care.