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# Improving Patient Experience: Robotic Pet Therapy for Patients with Cognitive Impairment

## Introduction

The elderly are the biggest consumers of healthcare resources as Singapore greys. Being an inpatient can be a stressful experience due to their physical illness, surgery, new environment, changes to their routines and unfamiliar staff. Hence, it is critical to improve their experience, outcome and well-being through their entire journey of hospital stay. The Changi General Hospital Patient Experience Transformation (PXT) team, together with clinicians, nurses and therapists piloted a robotic pet therapy programme for selected elderly patients.

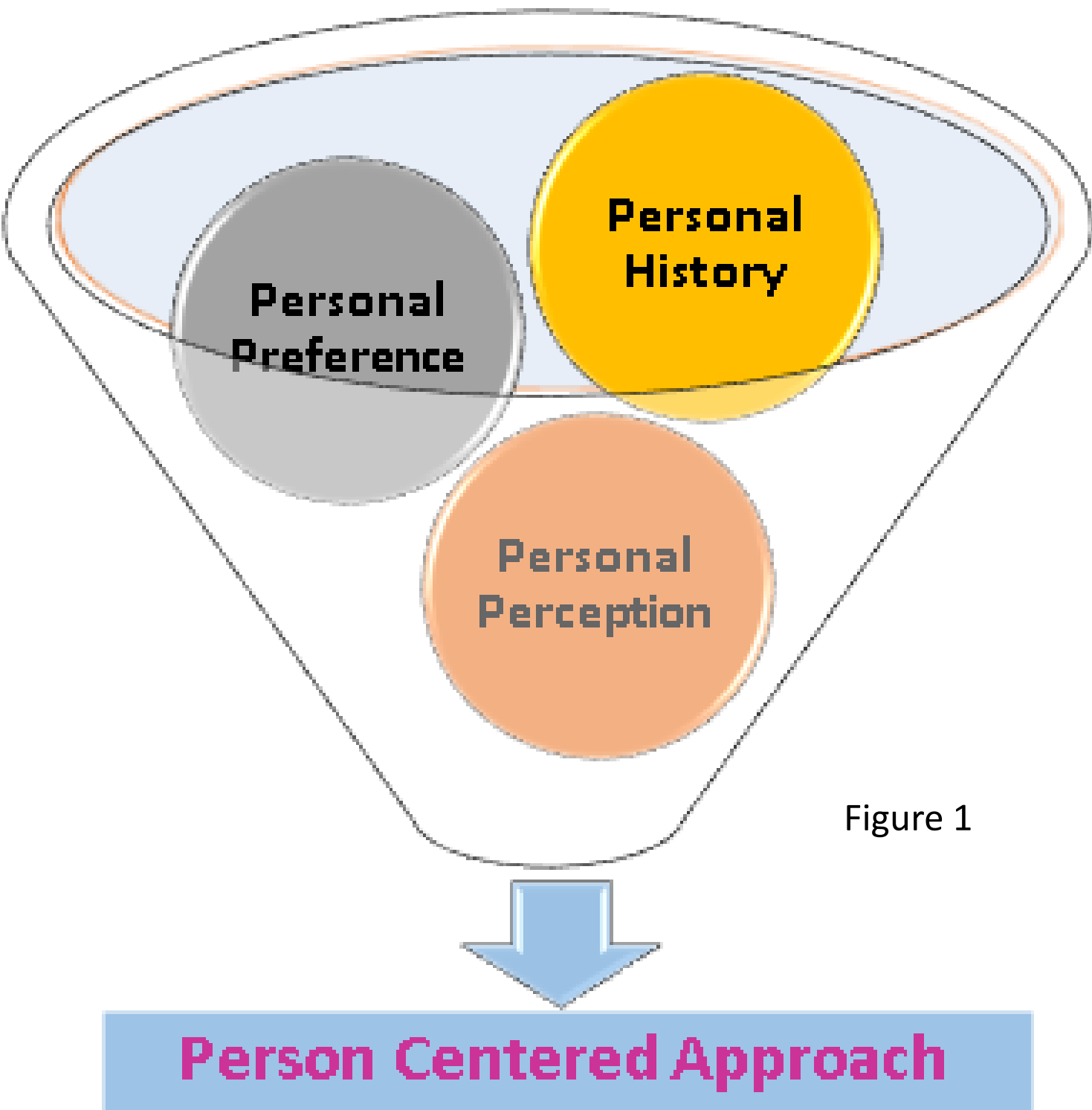
## Aims

- Our aims of this project are to:
- Enhance patient experience and improve the moods of elderly inpatients
  - Improve communication and engagement of patients with caregivers as the robotic pets are interactive
  - Improve clinical outcomes for elderly inpatients, especially the elderly who are lethargic and not willing to engage in rehabilitative therapies
  - Maximise quality of care and avoid harm by avoiding usage of physical and chemical restraints

## Methodology

A pilot project with robotic pets was initiated in 4 wards. Robotic pets were introduced as companions for patients with cognitive impairment.

Person-centered care framework (Figure 1) was used as the guiding assessment to select the appropriate patients for robotic therapy.



PDSA cycle (Figure 2) was adopted during the implementation process.

PDSA Cycle	Implementation of this new innovative project in 2 each of the Geriatric and non-Geriatric wards.
Date	Jan 2019
Description of the new solution	1)Information collected from family members on admission included patient's personal history, interests and hobbies, previous pets, personal likes / dislikes on people, events and food. 2)Use of robotic therapy (Figure 3 & 4) for the selected patients
Evaluation	Engagement and quality of life improved, with reduced agitation. Also noted was improvement of inpatient's BPSD without medication.

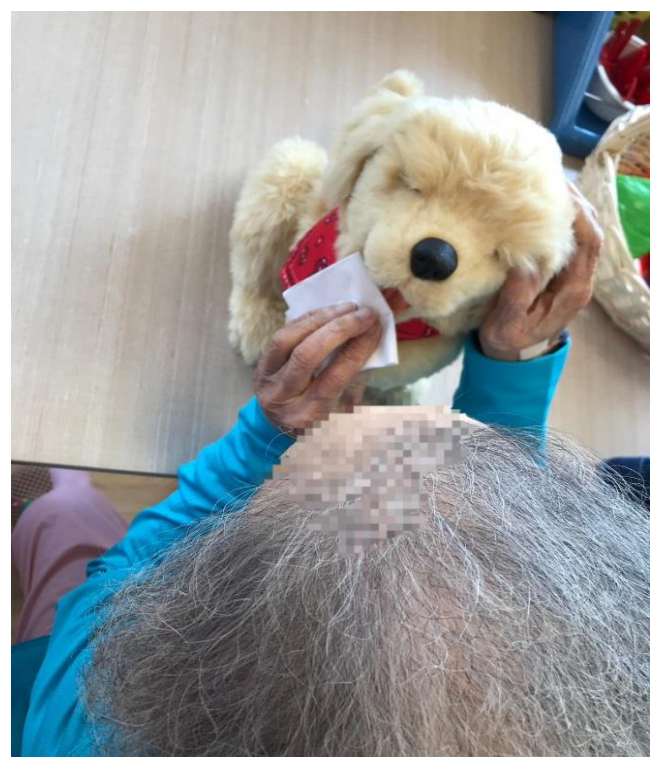


Figure 3

Figure 4

## Results

A study of 12 patients were identified as suitable for robotic pet therapy. The average duration of the patients spent and engaged with robotic cat/dag was 21 mins. 33.3% of the patients were accompanied by the caregiver during the robotic pet therapy session (Figure 5). The indications for robotic therapy are shown in figure 6.

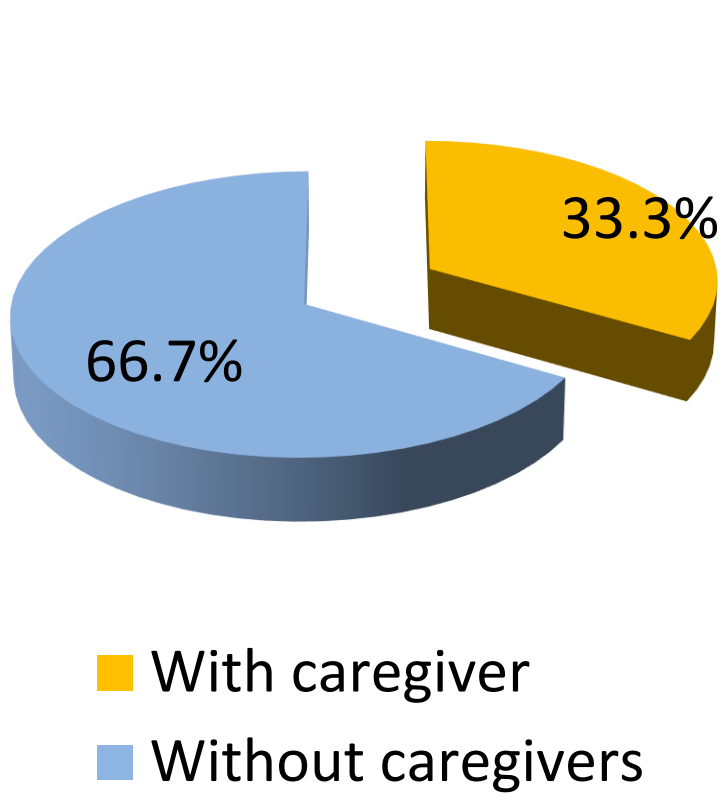


Figure 5

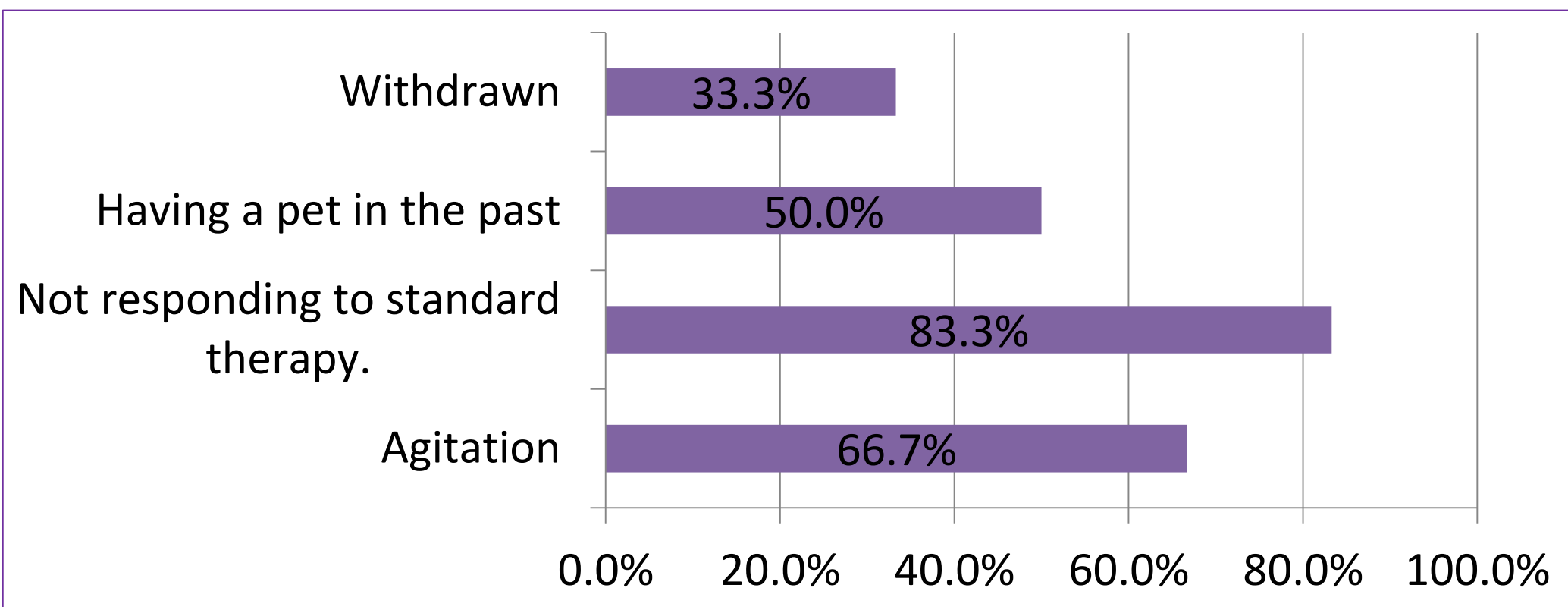


Figure 6

The observed responses during robotic pet therapy session include cognitive skill, daily motor skills, motor skills and social skills. 91.7% of the patients demonstrated significant improvements in their social skills and motor skills during engagement (Figure 7).

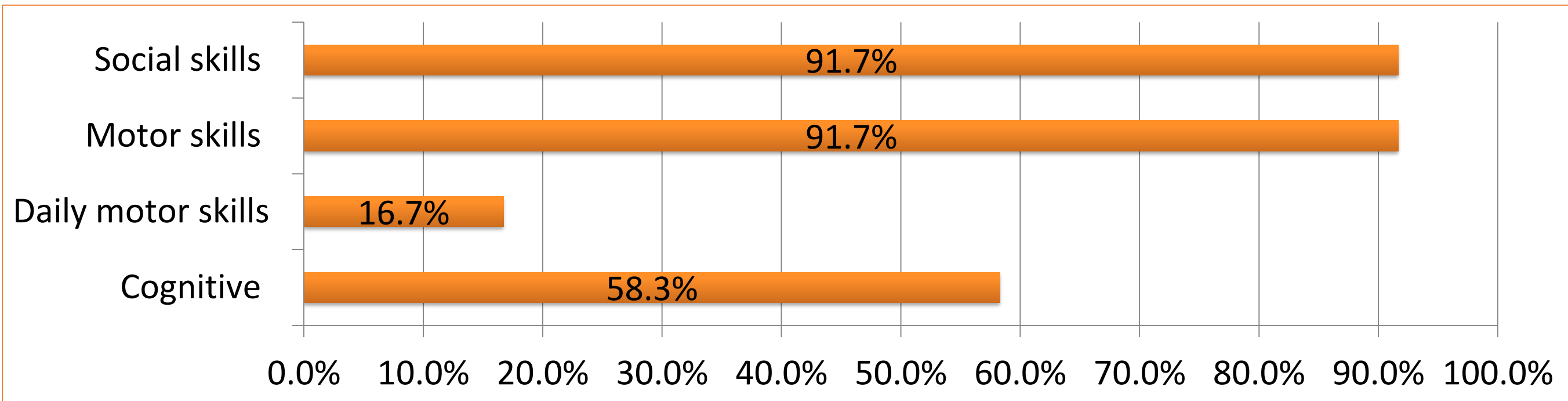


Figure 7

33% of the patients showed improvement in behavior and reduced agitation, while 41.6% of patients were more engaged socially and their mood improved (Figure 8). In terms of caregiver's satisfaction, it showed high level of satisfaction in 75% of the patients (Figure 9).

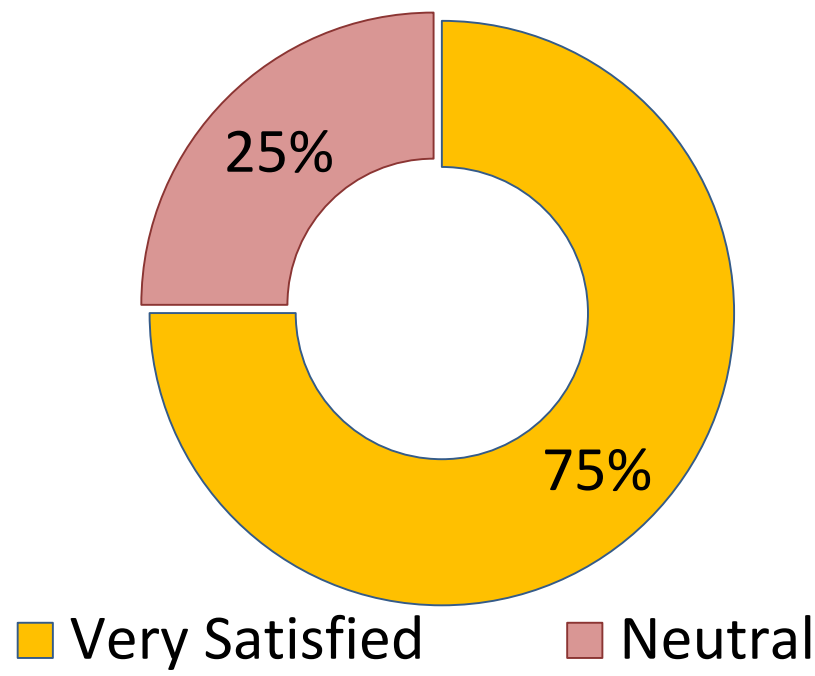


Figure 9

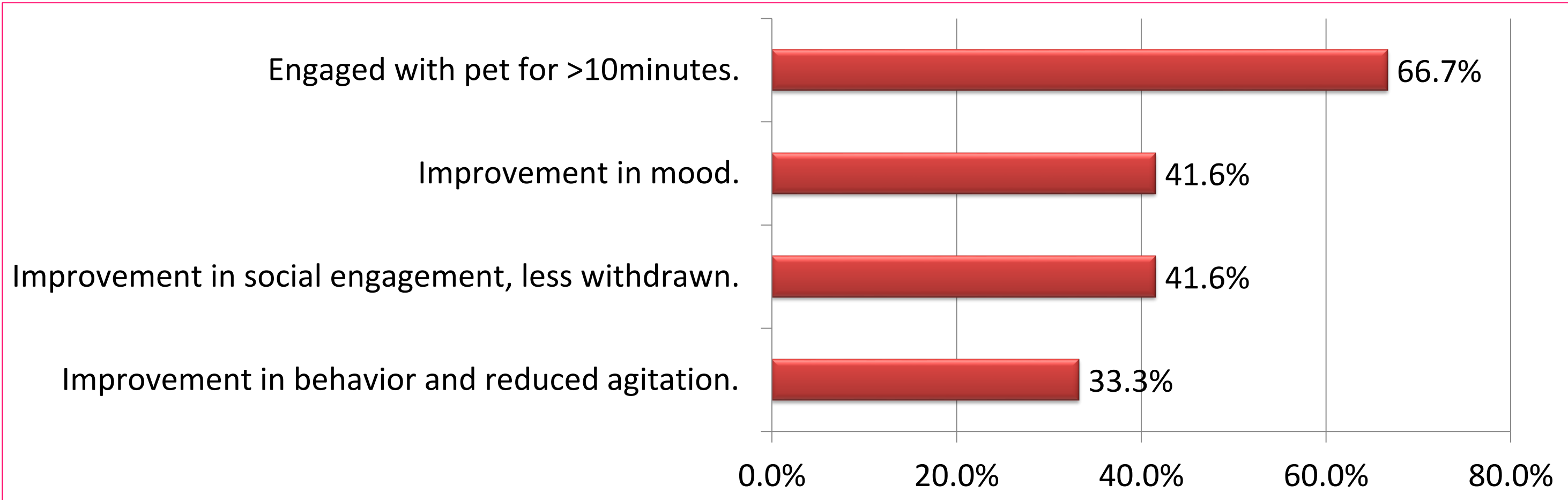


Figure 8

## Conclusion

Through the robotic pet therapy programme, Changi General Hospital succeeded in improving the patient experience where patients were less agitated and restless.

The robotic pets were able to bring forth the caregiver instinct of the patients. During the short therapy session, the patients were actively engaged and regained their empowered role. With the patients being comfortably engaged with the pets, the caregivers were able to get a short well-deserved respite.



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