Picking a hospital companion - Preferences of Dutch primary school children and medical professionals

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Abstract. We studied the preference for a pet robot to be taken to hospital by interviewing Dutch primary school children and medical professionals. Although boys and girls show a variation in their answers a clear preference for the dog is found, closely followed by cat. Dinosaur Pleo, which is at this moment the most widely used because it can be kept very hygienic due to its skin, is strongly disliked by girls and about a third of the boys. Although the choice was made based on pictures, these results indicate that it might be worthwhile to develop a dog pet, seal or cat robot which adheres to high hygienic standards.

Keywords: social robots, robotic pets, multidisciplinary research

INTRODUCTION

Robots have found their way into schools and hospitals as support materials for the medical staff (1,2). They are being utilized to encourage collaboration and increase technical insight but also to reduce stress and distress during medical procedures and periods in clinics and hospitals.

Since lots of children have a favourite cuddly toy or safety blanket in their everyday life which seems to enhance their general well being the question we want to adress here is: "Which pet robot would children choose? ", the underlying assumption being that their chosen pet robot would increase the positive effects of stress reduction and distraction. At this moment the robot of choice is the Pleo (3), a dinosaur, due to hygiene considerations (4).

In this study we asked school children for their choices from pictures of 8 different pet robots including Pleo to see how these compare and whether we find any clear preferences and dislikes.

METHOD

We interviewed 42 children, aged 6 to 8 years, 19 girls and 23 boys, attending groups 3 to 5 of two primary schools in Almere, The Netherlands.

All children were handed a sheet with photographs of 8 different pet robots, see Fig. 1. They indicated their primary and secondary choice for favored pets and their least favorite by marking them on the sheet. Some needed assistance from the teacher but most children did this without help on an individual basis.

For comparison we interviewed medical professionals at a symposium using the same photo sheet. They were asked which choices they expected from girls and boys, and whether they came into contact with children in such a situation on a regular basis in their work. We got responses from 13 people, 8 women and 5 men; 8 GPs, 4 consultants and 1 assistant. All but 2 respondents had regular contact with children in the applicable situation.

Figure 1. Picture sheet handed to the children and medical professionals for indicating their choice.

RESULTS AND DISCUSSION

The results are depicted in figs 2, 3 and 4 for girls, boys and the entire group, respectively. Note that positive is the accumulated value from first and second choice. Negative means "I would rather not have this animal with me". The upper diagrams show the answers by children themselves and the lower by the medical professionals. The results for girls and boys are very different: whereas girls like cat, dog and seal – in this order – and strongly dislike the dinosaur Pleo, the boys like the dog, Pleo and the seal best. But Pleo also invokes the strongest dislike for one pet among boys. The expectations from the medical professional for Pleo correspond somewhat with the answers by the children, but they do not predict a dislike in boys. If we look at the greatest net positive attitude towards a pet we find dog and seal in shared first place.

CONCLUSION AND FURTHER RESEARCH

From the answers by the children we find that only cat, dog and seal evoke a strong positive response. The dog is the only pet no child rejected and it had the most positive votes (22). For the runner up, the cat, this is also true for girls, but for boys it scores much weaker than the dog. Pleo is the least liked by most girls whereas more boys favored than rejected it. Still, Pleo gets the most dislike votes among boys too. Overall, the dog is the frontrunner, closely followed by the cat, Pleo is strongly disliked.

The medical professionals have a slightly less negative expectation for Pleo, but they also mark dog
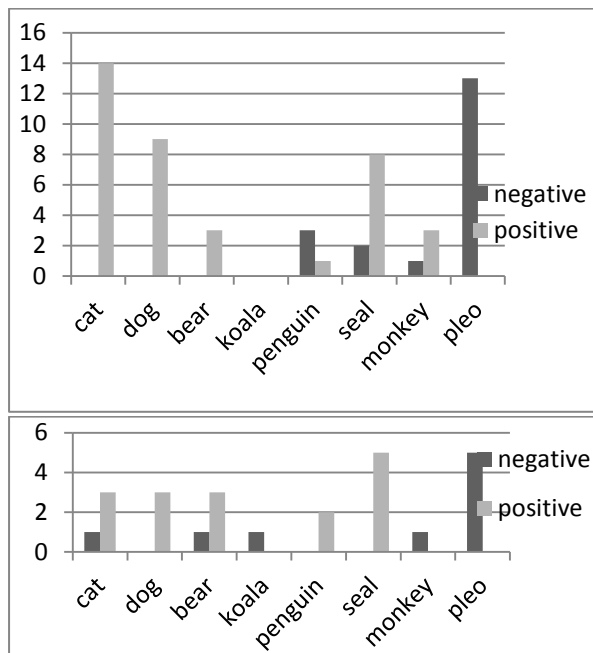
and seal as more positive.

Figure 2. Girls' preferences. Note that positive is the accumulated value from first and second choice. Negative means "I would rather not have this animal with me".
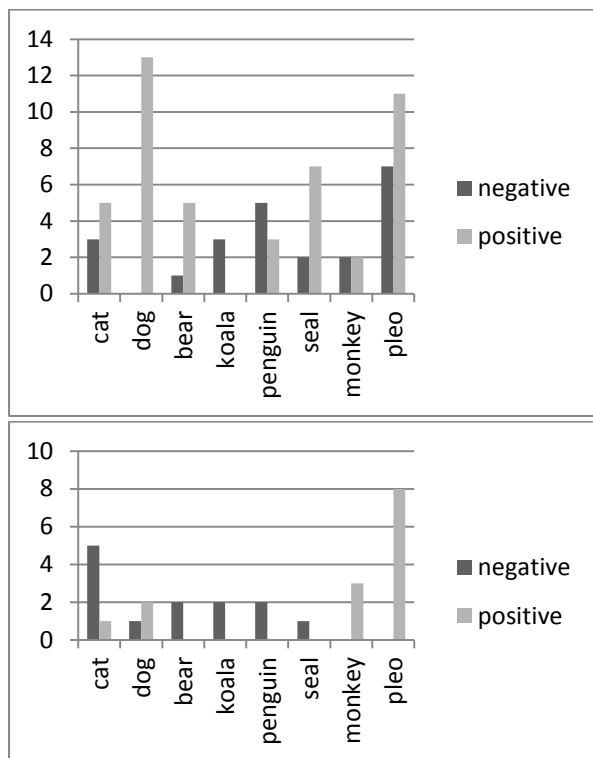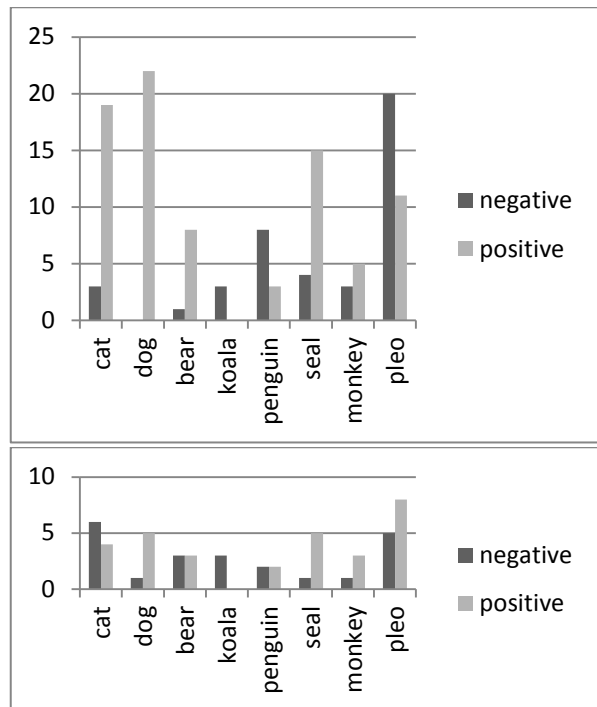

Figure 4. Girls' and boys' added preferences.

These results suggest it might be worthwhile to develop a dog pet, cat or seal robot which adheres to high hygienic standards. However, the specific design of each animal should also needs to be considered, especially the fact that all animals where pictured as furry except for Pleo. Moreover, a presentation of 'live' animals that move, make sounds and can be touched would be necessary to reach stronger indications of preferences.

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Figure 3. Boys' preferences.