

Advantages of robot therapy in preventing dementia

Kazue Sawami¹, Mitsuo Kimura¹, Tetsuro Kitamura¹, Masahiko Kawaguchi¹, Chizuko Suishu², Naoko Morisaki³ and Sonomi Hattori⁴

1 Nara Medical University, 2 Shubun University, 3 Himeji University, 4 Wakayama Medical University, Japan.

Introduction: The pretest in this study verified the correlation between psychological stress and cognitive ability ($p < 0.05$). Robots can perform medical functions typically performed by people, resolving the shortage of manpower. In addition, if functional medical evaluation by robots is possible, collaborative work with people can be promoted. HDS-R, the most widely used cognitive evaluation scale in Japan, has therefore been added to the repertoire of functions that robots can perform. We therefore also conducted a survey about awareness of robot therapy among elderly people.

Method: A questionnaire concerning the uses of robot therapy was given to a group of elderly participants in a health promotion program.

Results: The responses of 62 participants (28 male, 34 female) were analyzed. The average age of the subjects was 67.7 ± 5.3 years. Asked how they thought robots might be used, 24 respondents indicated that robots could be used as partners in conversation, 15 indicated that they could be used for heart-to-heart exchanges and healing, eight indicated singing and dancing together, four indicated brain training, and four indicated helping with body care.

Discussion and conclusion: Elderly people are open to the use of intelligent robots as partners in conversation, singing, and healing. The next challenge is to confirm the positive influence of robot therapy on cognitive functions. We found that it was possible for robots to conduct cognitive evaluations in collaboration with people. Moreover, since communication with robots has also been found effective at relieving people's stress, robot-performed cognitive tests present a great advantage in potentially reducing the stress of cognitive testing.

This research funding is scientific research expenses of the Japanese Ministry of Health, Labor and Welfare. We are grateful to NTT East for their contributions to the study.

Biography

Kazue Sawami is a professor at Nara Medical University and completed her PhD at health science. Her research is about the cognitive abilities of elderly people, please view current clinical trials below. <http://www.g-nursing.com/katsudou.php>
https://upload.umin.ac.jp/cgi-open-bin/ctr/ctr_view.cgi?recptno=R000028956
https://upload.umin.ac.jp/cgi-open-bin/ctr/ctr_view.cgi?recptno=R000033988