

DANCE AND ROBOT THERAPY FOR COGNITIVE ABILITY

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Introduction: Our preliminary trial revealed the correlation between cognitive ability and active ability, blood vessel age, and stress. From this result, a method to eliminate stress and favorably influence blood vessels and activity capacity was examined. We developed a method where elderly participants danced to familiar music while executing brain training tasks. Furthermore, we considered how this brain training dance could be done alongside a robot for a healing effect.

Methods: For comparison before and after the intervention, a cognitive ability test was used. A ten-word memory test measured immediate reproduction and delayed reproduction. A code conversion test and word recall test were also used. Then, impressions and the demand for robot therapy were investigated.

Results: The brain training dance continued once a month for three months, and cognitive tests were conducted before and after. Data of 102 people were analyzed. The score of the cognitive test items (immediate memory, delay of memory, recurrence of transcoding) was analyzed by a paired t-test and showed significant improvement after therapy ($p < 0.05$). Responses were received from 62 people for the free description of the robot therapy. 24 of the largest people wanted robots as partners, 15 people healed through heart-to-heart interaction, eight people healed through dancing and singing, four people trained their brains, and four people wanted body care.

Discussion & Conclusion: The brain training dance to familiar music improved cognitive abilities. This activity can relieve stress. Following this study, we want to evolve the brain training dance that the robot can do and increase the volume of fun activities available to the elderly.

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.

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