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発表題目 (※学会発表の場合のみ記載)	How to measure the effect of reminiscence group therapy on mute people with dementia?: A trial using a facial emotion recognition method
発表の概要と成果 (抄録を公開している URL がある場合、「概要・成果」を記載した上で、URL を末尾に記してください。また、抄録 PDF は別途ご提出ください。なお、抄録 PDF は Web 上には公開されません。)	
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<p><b>Purpose:</b> Reminiscence group therapy (RGT) is widely used for non-pharmacological dementia treatment. In previous studies, questionnaires and laboratory tests have been used to verify the effects of the therapy. With the application of facial expression recognition tools, it is possible to perform analysis in a noncontact, objective, and efficient way. In our study, we used this approach by substituting linguistic analysis for additional validation in one tracheotomized participant among eight RGT people with dementia (PWDs). This study investigated whether RGT positively affected mute PWD based on non-verbal information and evaluated the role of facial expression recognition tools for human-human or human-robot groups in RGT.</p> <p><b>Method:</b> The RGT interventional experiment was conducted in a nursing home in Tokyo. With the help of staff, we set up the experiment with eight participants split into two groups (human-human RGT group (G1): N = 4, human-robot RGT group (G2): N = 4). From December 4th, 2020, to January 12th, 2021, both G1 (age M = 85.75, SD ± 3.7) for the face-to-face RGT — where the mute PWD (MMSE = 18) was included — and G2 (age M = 89, SD ± 2.73) for Pepper RGT participated in six RGT sessions (20 minutes for each session). Every session started with greetings and a self-introduction, allowing participants to remember each other's names. Participants were required to interact with pictures on the Pepper robot's screen.</p> <p><b>Results and discussion:</b> The results show that there was a steady decrease in the Emo-Rec Point of the two groups during RGT. The Emo-Rec score of the mute PWD ranged from 11.76 to 8.20 (Fig 2). During the RGT process, the robot group had a sharper trend than the human group, and the mute PWD also showed a definite downward trend at the Emo-Rec point. Both groups of participants showed noticeable emotional improvement, and the improvement in the mute PWD and robot group was more prominent. It is hoped that future research can help PWDs using humanoid robots to automatically evaluate RGT participants, including those who cannot speak.</p>	

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