

Horticultural Therapy as a Means of Psychological Support for Persons with Intellectual Disabilities Living in Disaster Areas

Yuka Kotozaki^{1*} and Taeko Shishido²

¹Smart Ageing International Research Center, Institute of Development, Aging and Cancer, Tohoku University, Sendai, Japan

²Miyagi University, Sendai, Japan

Three years have passed since the Great East Japan Earthquake. People in the disaster area are gradually recovering; however, some still suffer from earthquake-related stress. Previous studies have suggested that victims suffer various psychological problems that were caused by the experience of being involved in the earthquake [1-6]. The mental health of victims continues to be of concern, because problems can emerge long after a disaster occurs [7-10]. Three years after the earthquake, the general public is a belief that Japan should be engaged in psychological support for victims on a national level. Many people with intellectual disabilities also suffered severe psychological damage, and the provision of psychological support is important for these individuals. Various types of psychological support, including horticultural therapy, were provided immediately after the earthquake.

Horticultural therapy was developed in the United States to provide psychological care and social rehabilitation for disabled soldiers and war veterans diagnosed with Post-Traumatic Stress Disorder (PTSD) following World War II [11]. Previous studies have suggested that horticultural therapy has cognitive [12,13], psychological [14,15], social [16,17], and physical [18] effects. Further, our previous findings indicated that mild PTSD symptoms, depression, and salivary cortisol levels decreased and posttraumatic growth improved with horticultural therapy in women living in the disaster area [19-21]. Several previous studies have examined the use of horticultural therapy for adults and children with intellectual disabilities [22-27]. However, not many have focused on psychological support for earthquake-related problems in people with intellectual disabilities. In this study, we describe a psychological support method using horticultural therapy for people with intellectual disabilities living in the disaster area. We believe that horticultural therapy may reduce anxiety in people with intellectual disabilities. Previous studies reported that people with intellectual disabilities were more prone to anxiety, and the prevalence of anxiety disorders among people with intellectual disabilities was approximately 5–10% [28-31]. These findings suggest that experiencing disasters increased feelings of insecurity in people with intellectual disabilities. Some previous studies have suggested that horticultural therapy reduces anxiety [32-34]. In light of the above evidence, we conducted an exploratory analysis prior to providing full-scale psychological support for people with intellectual disabilities in future.

One facility that treats people with intellectual disabilities in the disaster area agreed to participate in the study and provided a location in which to conduct the intervention. The participants, five adults with intellectual disabilities, were undergoing treatment at this facility and attended horticultural therapy sessions. Horticultural therapy sessions were conducted by one Horticultural Therapist (TS) and seven support staff. The horticultural therapist presented a general lecture and seven support staff assisted the participants. Participants attended three 60 minute horticultural therapy sessions. The program was based on a procedure used in a previous study [19,20]. Specifically, the horticultural therapist described contents of a lecture during the first 20 minutes of the session. Participants spent the remaining time producing potted flower arrangements from flowers and herbs, with

the support of support staff. The horticultural therapist observed and evaluated the participants, as the participants found it difficult to reply to questionnaires.

Results showed that the participants were initially indifferent and quiet. However, once they began to pot the plants, all of the participants were smiling and appeared excited once they had completed the potted flower arrangements. They also appeared relaxed when touching the plants. Further, participants took the initiative with respect to the work and became involved in conversations with other participants.

The purpose of this study was to describe a psychological support method that involves the use of horticultural therapy for people with intellectual disabilities living in the Great East Japan Earthquake disaster area. Horticultural therapy was found to be effective and affected the participants positively. However, the study had some limitations, namely, the small sample size and evaluation method. Regarding the sample size, there was only one facility willing to participate in the study in the aftermath of the earthquake. In addition, people with severe disorders were unable to participate in horticultural therapy sessions for the purposes of the study. With respect to the evaluation method, we used observation because the participants found it difficult to reply to questionnaires. However, subjective evaluation may be necessary in future studies.

Based on these results, we plan to offer psychological support to people with intellectual disabilities in disaster areas. However, the provision of full-scale psychological support in disaster areas is a future goal. We will continue to support individuals with and without disabilities with respect to assisting them in achieving psychological health.

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*Corresponding author: Yuka Kotozaki, Smart Ageing International Research Center, Institute of Development Aging and Cancer, Tohoku University, 4-1 Seiryomachi, Aoba-ku, Sendai 980-8575, Japan, Tel: 81 (0) 22 717 7988; E-mail: kotoyuka@idac.tohoku.ac.jp

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