Medium- to Long-term Psychological Support for Women Living in Areas Affected by the Great East Japan Earthquake: Empirical Studies on the Impact of Horticultural Therapy

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In the near future, three years will have passed since the Great East Japan Earthquake. Despite the passage of time, several residents living off the Pacific coast of Tohoku continue to suffer from mental and physical repercussions of the event. In other words, numerous survivors of the Great East Japan Earthquake continue to live with emotional trauma and stress. Previous studies suggest that mental health problems among natural disaster survivors are most pronounced within a specified period after the event [1]. Although recovery among survivors is progressing incrementally in the disaster area of Tohoku, one may argue that availability of medium- to long-term psychological care for these people is important. Immediately following the earthquake, our research team provided horticultural therapy as a medium- to long-term psychological support to the survivors. The motivation behind this study is based on previous research suggesting that women are more susceptible to experiencing anxiety in post-disaster environments than men [2], that women are more likely to be diagnosed with Post-Traumatic Stress Disorder (PTSD) than men after experiencing natural disasters [3], and that weak social support is associated with a higher susceptibility to PTSD.

Horticultural Therapy (HT) is a psychological care method for treating PTSD that was developed in the United States for psychological care and social rehabilitation of disabled soldiers and war veterans diagnosed with PTSD following World War II [2]. Previous studies have suggested that HT and exposure to nature can have cognitive [4,5], psychological [6,7], social [8], and physical [9] benefits. Since the earthquake, our research group has reported psychological effects of horticultural therapy on women living in the disaster areas [10,11]. The psychology scores that measured PTSD, post-traumatic growth (PTGI), and intervention group mood improved after horticultural therapy intervention in both studies. Furthermore, the intervention group exhibited improved salivary cortisol levels, an indicator of stress in both studies. In addition, the intervention effect on the intervention group was sustained for a certain period in both groups. These findings suggest that horticultural therapy has an effect on earthquake-related stress symptoms among women living in the disaster area, and that this effect may endure for a prolonged period. However, these studies were not conducted in the disaster areas, but in an experimental format in which intervention participants were studied in research facilities.

Based on these results, we are currently conducting an empirical intervention study in the coastal regions of the disaster areas of Miyagi Prefecture, where earthquake damage was considerable. Currently, the disaster areas of Tohoku are undergoing a period of rebuilding. However, for practical reasons rebuilding has progressed slowly, and limited reproduction within the disaster areas will become a serious future issue as victims move away from the vicinity. The purpose of this study is to understand the effect of horticultural therapy as a means of rebuilding local communities in disaster areas, and to establish a system of horticultural therapy as a regional community support that is available to these communities. This study has recently begun and the results have not yet been obtained; however, in the near future, it will provide information to the current state of knowledge in this field. We believe that HT may prove to be an effective intervention strategy for earthquake-related stress. We hope to spread awareness about HT as a source of psychological support for medium- to long-term natural disaster-related stress.

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