

## Hort Therapy

# Study proves the real power of flowers

By Mel Holmes

The idea of using horticulture as a therapeutic intervention has been around since the first people stomped out of caves in a bit of a huff after a bad day's hunting but then they felt much better after getting a bit of gathering done to raise their spirits.

**M**y background is in Occupational Therapy and in this field we use everyday activities to enhance independence and wellbeing. This has always included the activity of gardening as it can be used in all sorts of settings. For example, I have sat in a greenhouse outside of an Aged Care ward in a busy general hospital in the UK and enjoyed the tall tales and gardening gems with the participants. I have also spent some memorable hours swapping tales of magnificent vegetables in a windswept hut overlooking the sea in Devon. I consider myself very fortunate to have witnessed the benefits for my clients when they interact with nature.

In more recent times I have taken a great deal of interest in horticulture as a therapy in Australia. While this field is still developing, a recent Australian study has found many horticultural therapy programs in Australia are of world standard. However they are not recognized in the same way

as many other countries. For example, garden related tasks have been used for decades to alleviate and reduce the stresses of modern life in Scandinavia. There, the participants are sent by their doctors to participate in regular sessions in a garden setting. This is often a course of 'treatments' in the garden. This they have found fitted in very positively with more conventional treatments like pills, potions and communication, counseling and therapies.

As a health provider I have a great deal of interest in how nature impacts on the body and mind. This is why I became interested in horticultural therapy. While this field is still developing in Australia there are many international studies that I have found fascinating. Recently I found a lovely study that was based in Japan\*. This study explored the impact on stress and anxiety when the subjects gazed at both real and artificial pansies. The participants in this study were all high school students who had agreed to have their physical



Hort Therapist Mel Holmes has witnessed the benefits her clients have had when interacting with nature



Pansy flower has a 'happy' face



**Japanese study had a positive impact on stress and anxiety when the subjects gazed at real pansies versus artificial forms**

responses and feelings measured and recorded for science. Having had the experiment explained to them, they first sat and had their baseline heart rate measured. Other measures were recorded such as pulse rate and the variability of the heart rate over a set period. These measures provided baseline indicators of 'fight or flight' and 'rest and digest' responses. This was then used as a comparative analysis of alertness or relaxation being experienced by individuals during the experiment.

Prior to the initial experiment, the students were also asked to rate their emotional status on a questionnaire. This assessment of relaxation was completed in a structured way to allow for a quantitative comparison. After the initial emotional benchmarks were set, the students were shown either artificial or real pansies for a period of three minutes. They were then asked to complete the feelings questionnaire again.

After all that, this study found that the sight of real flowers had a statistically significant impact on the state of relaxation in the students. The flight or fight system (the sympathetic nervous system) showed a reduction in activity, indicating a relaxed state. In comparison, the students who had looked at the artificial flowers were less relaxed than the real flower group.

So the next time you, a friend or colleague, are a bit stressed at work, it may be the perfect opportunity to think about bringing flowers to work. It might even be practical to bring living plants into your space, or at least line of sight. It is surely reassuring to know that even the act of intentionally looking at the plants in your care has an effect on your physiology; it reduces your heart rate, calms the effects of the vigilance systems of the sympathetic nervous system to make you, and probably those around you, feel more comfortable, relaxed and re connected to the natural world in a small way.

*\*Physiological and Psychological Effects on High School Students of viewing Real and Artificial Pansies  
Miho Igarashi, Mariko Aga, Takafumi Namekawa and Yoshifumi Miyazaki. International Journal of Environmental Research and Public Health 2015,12,2521-2531*

Mel Holmes is a Horticultural Therapist at Kevin Heinze GROW



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