

EXPLORING THE POTENTIAL BENEFITS OF NATURE BASED EXPERIENCE ON ANXIETY

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Abstract

This study extends the previous research regarding the beneficial impacts of nature experiences on mental and physical health. A provocative exercise was designed to facilitate the sensory contact with natural objects on a group of 30 persons. The level of anxiety was assessed before and after participating in this exercise.

We used an experimental design, observation, psychodiagnostic instruments (State – Trait Anxiety Inventory), and statistical methods (Paired-Samples T Test).

After the participation in this type of provocative exercise the participants experienced a lower level of state anxiety, decreased levels of irritability, worry and fear.

Keywords: anxiety, natural objects, sensory experience

1. INTRODUCTION

In 1984, Wilson described the notion of biophilia, as the subconscious urge to affiliate with the rest of life and the environment, including plants, animals and the weather or as an instinctive need to connect “with all that is alive and vital” (Greenleaf et al., 2014).

From this point, a large amount of studies (Dopko et al., 2011; Bratman et al, 2015; Mantler, Logan, 2015; Howell et al., 2016; Triguero-Mas et al., 2015; Sandifer et al., 2015; Douglas et al., 2017;) have been demonstrated the beneficial impacts of natural experiences on mental and physical health.

Briefly, some of these restorative effects of nature that have been widely studied and replicated in research laboratories across the world, were: Positive effects on mental processes and behavior; Decreased depression, dejection, anger, aggression, frustration, hostility, stress; Increased self-esteem; Positive/improved mood; Reduced anxiety and tension; Increased prosocial behavior/improved behavior; Increased vitality and vigor/decreased fatigue; Increased creativity; Increased happiness; Increased calmness, comfort and refreshment; Reduced ADHD in children; Improved emotional, social health of children; Self-worth; Improved quality of life; Better general health. Moreover, nature has been proved to have beneficial and restorative effects on general quality of life, considering profession (work satisfaction), academic, social, estetical, cultural, recreational and spiritual aspects.

Valtchanov and Ellard (2015) categorized the restorative effects of nature into the three broad categories of improved cognitive function, improved affect, and reduction of physiological and cognitive stress.

The results of several recent Romanian studies extended this research by demonstrating additional benefits of nature experience such as: improved mood and self-esteem, decreased depression, higher functional emotions, less intense automatic thoughts, higher self-efficacy (Răban-Motounu, 2014, 2015, 2016; Vitalia, 2014, 2016).

To build on these findings, we explored the potential benefits of nature based experience on anxiety.

General objective: to evaluate the efficiency of a provocative group exercise designed to facilitate the sensory contact with natural objects.

Practical objective: to reduce the level of state anxiety.

Hypotheses: We suppose that a group provocative exercise designed to facilitate the sensory contact with natural objects would reduce the level of anxiety (state anxiety).

2. MATERIALS AND METHODS

Method: In this study we used an experimental design. The variables of this research were: the level of state anxiety (dependent variables), and participation in a group provocative exercise designed to facilitate the sensory contact with natural objects (independent variable). A single group was involved in this research. The participants were randomly selected. Assessments of the mentioned variable were conducted before and after the participation in the group provocative exercise.

Psychometrical methods: STAI – State and Trait Anxiety Inventory and Statistical methods.

Instruments: STAI – The State-Trait Anxiety Inventory consists of 40 questions that measure two types of anxiety - state anxiety, or anxiety about an event, and trait anxiety, or anxiety level as a personal characteristic. Higher scores are positively correlated with higher levels of anxiety.

We also used natural elements (rocks, seeds, dried flowers, different colored flowers, green branches, green leaves, green grass, small scallops, stones).

Participants: The experiment was conducted in the laboratory of psychotherapy, in a comfortable environment, with adequate conditions of light and temperature. The laboratory had enough space to allow movement and chairs to sit on. 30 first grade students (20 females and 10 males) participated in this study.

Procedure:

In the week before the experiment, all the students were asked to undertake a nature-based homework exercise. This exercise simply required the students to spend more time in nature (to find a day to take a walk in nature). During this walk, they had to pay attention to their emotions, thoughts and needs as they experienced the contact with nature around them. As a final challenge, they had to choose an object from the natural context to symbolise this subjective experience.

First, the students completed State-Trait Anxiety Inventory.

Then, they were invited to say a few words about their experience in nature and to motivate the choice of their object. All these objects (rocks, seeds, dried flowers, different colored flowers, green branches, green leaves, green grass, small scallops, stones) were arranged on a large table.

After this, each student was asked to select another person from the group to work with. One of the member of each couple was provoked to keep the eyes closed (some of the students used scarfs to blindfold their partner). Silantly, the other person had to help the partner first to explore the room and then to explore the natural elements from the table. They were invited to involve all of their senses in this exploration (to touch, to smell, to hear the sound the objects made). During this process, they were asked to be aware of their sensations, feelings and thoughts. After a while, they changed the roles.

At the end of this exercise they were invited to speak about their experience working in this group.

After all the participants shared their personal and group experience, they were invited to complete State-Trait Anxiety Inventory again.

3. RESULTS AND DISCUSSIONS

Statistical analysis was used to confirm the hypothesis of this study. Student t test (SPSS 17.00) was computed to compare test results. Paired-Samples t Test was used to test the significance of the differences before and after the provocative experience. Descriptive Statistics were also performed.

Table 1. Group Statistics

<i>State anxiety level</i>	N	Mean	Std. deviation
Before	30	38,81	12,74
After	30	31,74	7,84

There were significant differences regarding the level of state anxiety after the provocative experience when compared with the initial situation ($t=4,029$, $p<.001$).

Discussions

Statistical analysis has confirmed the hypothesis of this study and it has demonstrated that using a group provocative exercise designed to facilitate the sensory contact with natural objects was an efficient method to reduce the level of anxiety (state anxiety).

After the participation in this type of provocative exercise the participants experienced a lower level of state anxiety, decreased levels of irritability, worry and fear. The active sensorial exploration of the natural elements facilitated a gentle connexion between sensorial and emotional experience. This connexion lowered the defense mechanisms activated by the provocative situation of exploring the room with the eyes closed, guided by another person. The entire experience opened the access to a different, non-traumatic way of knowledge associated with relaxation and a sense of calm and inner-comfort. They felt more secure to explore different emotions and to better interact with their colleagues.

4. CONCLUSIONS

A group provocative exercise designed to facilitate the sensory contact with natural objects is an efficient method to reduce the level of anxiety (state anxiety) because it is associated with relaxation, decreased irritability, worry and fear. This could be an effective way to help people address issues and emotional experiences that might otherwise be too difficult to talk about (Kamitsis, Simmonds, 2017).

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