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A Nature- Informed Expressive Arts Therapy Method and Group Participation in Youths

Capstone Thesis

Lesley University

May 5th, 2019

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Specialization: Expressive Arts Therapy

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Abstract

The purpose of this research study was to implement the elements of nature inside a group therapy room in an adolescent partial hospitalization program. This was a comparative study where two groups were led before environment was changed, and two groups were led after environment was changed. The group therapy room was redesigned after the first two groups were conducted. Added to the group therapy room was a 100 x 144 inch forest mural that covered one entire wall, a diffuser that released a forest scent, two large indoor plants, and playing in the background were birds chirping synchronous with sounds of a waterfall.

Participants engaged in mindfulness training with expressive arts therapy including a warm up, main directive, and a closing. Psychological well-being was measured by integrating an 'emotions list' that participants filled out at the beginning and closing of each group. The writer observed participants during the warm up activity, main directive, and closing activity by recording any behavior that mimicked; interest, engagement, participation, focus and/or lack thereof. Participants in groups led after the environment was changed had an 18% increase in psychological well-being as well as a considerable increase in participation, engagement, and focus.

Keywords: nature, adolescent, youth, environment, group therapy, mindfulness, expressive arts therapy, participation, engagement.

A Nature- Informed Expressive Arts Therapy Method and Group Participation in Youths

Introduction

Nature and the environment in which we reside play a paramount role in our mental and physical well being, as well as our health. Nature is defined as ‘the phenomena of the physical world collectively, including plants, animals, the landscape, and other features and products of the earth, as opposed to humans or human creations’ (“Nature”, n.d., para 1). Research in this area is finding that exposure to nature promotes longevity and human health while also acting as a mental-health tool. Research further reveals that humans who spend more time in the natural world are better off psychologically and physically than humans who spend more time in an urban setting.

There is a large body of evidence that supports specific outcomes related to exposure to nature. Those include, increase in social conscientiousness (Berger & Tiry, 2012), increased physiological relaxation (Ikei, Song, & Miyazaki, 2016), improved cognitive functioning and overall well-being (Berman, Jonides, & Kaplan, 2008), increase in health and cognitive capacity (Alawad, 2012), as well as, increased capacity for attention and ability to reflect on life’s problems (Mayer, Frantz, Bruehlman-Senecal, & Dolliver, 2009). Other studies reveal decreases in negative emotions (Berger, 2016), decreases in overall stress (Largo-Wight, Chen, Dodd, & Weiler, 2011), depression remission (Kim, Lim, Chung, & Woo, 2009), as well as decreases in anxiety, and disease.

The concept that humans have a biological need to connect with nature has been called biophilia, from the Greek, meaning ‘love of life and the living world’ (Li, 2018, p. 14). The Biophilia Hypothesis was a theory popularized by Harvard entomologist E.O. Wilson (Williams,

2017); in which he defines “the innate tendency to focus on life and lifelike processes” (Wilson, 1984, p. 1). Wilson’s (2017) idea that “human beings innately emotional affiliation to other living organisms” (p. 16) was not only a survival evolutionary adaptation, but also an aid for human fulfilment. Wilson believed that humans are hard-wired to engage with the natural world-’just as our health improves when we are in it, so our health suffers when we are divorced from it’ (Li, 2018). According to Wilson (1984), our existence depends on the need to associate and explore life.

Physical anthropologist, Yoshifumi Miyazaki actively promotes Wilson’s theory. Miyazaki believes that humans feel more comfortable in nature (even when we don’t realize it), because that is where humans evolved (Williams, 2017). As Miyazaki explained it, “throughout our evolution, we’ve spent 99.9 percent of our time in nature. Human physiology is still adapted to it. During everyday life, a feeling of comfort can be achieved if people’s rhythms are synchronized with those of the environment” (Williams, 2017, p. 15).

Viewing forest imagery propels the motivation required for positive behavior (Selhub & Logan, 2015), as well as restoring one’s attention as uncovered by a number of research environmentalists. In a hospital setting nature views have been recommended as a fundamental component of creating healing environments (Malkin, 2008). Researchers have suggested that the use of art that includes colour, nature, water and animals can be useful as a way of distracting and decreasing stress for children (Hathorn & Nanda, 2008). “Studies on the effect of colors on emotions have shown that we find the blues and greens of nature the most restful” (Li, 2018, p. 172).

According to Ulrich (1981), views of nature evoke more positive feelings than views of non-natural environments . Humans tend to be unhappier and more aggressive when looking at the greys of an urban scene (Li, 2018). Other studies on the physiological effects of visual stimulation with nature imagery reveal an increase in perceptions of feeling “comfortable,” “relaxed,” and “natural” (Song et al., 2017), while showing a significant decrease in oxy-Hb concentrations in the right prefrontal cortex. The human sense of sight is known to be the most important of our senses (Li, 2018).

Being in nature can be a multi-sensory experience. It’s not just the imagery that people attune to but the sound, touch, smell, and taste that impact how humans interact and participate in the natural environment (Li, 2018). Trees release phytoncides which are antibacterial. Studies reveal that they can reduce stress by fifty three percent and lower blood pressure by five to seven percent (Williams, 2017). Li (2018) suggests that tree phytoncides increase the hours of sleep while decreasing tension, anxiety, anger, hostility, fatigue, and confusion. According to Li (2018), humans bring our rhythms into step with nature by seeing, listening, smelling, tasting, and touching. By opening up our senses, it bridges the gap between us and the natural world.

Participants in one study revealed a sense of “calm” when touching natural plant material (Koga & Iwasaki, 2013), while another study reported that sensory stimuli from plants reduce stress (Jo et al., 2013). Walking barefoot on the ground has a way of grounding humans and connecting them to the earth. Birdsong has been seen to reduce stress levels in children and increase creativity (Alawad, 2012), as well as, improve mental alertness (Williams, 2017). Further studies reveal that natural sounds can improve mood (Panuszka & Panuszka, 2002), create a positive learning environment (Savage & Savage, 2009), increase the parasympathetic

system, increase mental clarity, and our sense of well being (Li, 2018). When you walk through a forest you can smell the assortment of fragrances that are being released from the forest trees, flowers, and plants. “Smells affect our mood and our behaviour; they are connected to our emotions and to our memories” (Li, 2018, p. 179).

According to Kuo and Taylor, (2009) Attention-deficit/hyperactivity disorder is the most common neurobehavioral disorder of childhood. They found a reduction of ADHD symptoms when youth was exposed to green outdoor settings (Kuo & Taylor, 2009). Nature-deficit disorder is a phenomenon introduced by Richard Louv. According to Louv (2005) this phenomenon is the consequences humans endure when disengaged from nature. Consequences such as; “diminished use of the senses, attention difficulties, and higher rates of physical and emotional illnesses” (Louv, 2005, p. 36). Other consequences from seclusion from nature can result in increased stress levels, obesity, and a decrease to function socially (Mainella, Agate, & Clark, 2011).

Foremost, the therapeutic environment has the potentiality to affect a client’s sense of psychological and physiological well being (Gross, Sasson, Zarhy & Zohar, 1998), influence meaningful self-disclosure (Chaikin, Derlega, & Miller, 1976), and influence affect and behaviour (Pressley & Heesacker, 2001). Therapy rooms without privacy may result in lower levels of self-disclosure, whereas offices with a “warm, intimate setting tend to produce greater self-disclosure” (Pressley & Heesacker, 2001, p. 153). Small room size has also been shown to have a negative impact on counsellor and client communication (Hasse & DiMattia, 1976).

Through embodied learning, children are encouraged to share their thoughts and values. In group therapy amongst adolescence the goal is to have them engage in group discussion, to

actively give/receive feedback to/from their peers, ask questions, and participate in group activities. Through observations and interactions with several families, today's adolescent spend more time indoors utilizing their phones and video games than spending time outdoors interacting with nature and applying their five senses. Further interactions and experience reveal that some adolescent do not have the freedom to explore the outdoors and are limited in their outdoor activities. I hypothesis if we as therapists bring the aspects and elements of nature into the therapy room, clients can harvest the positive benefits of nature's attributes such as; feel more at ease/relaxed, increase psychological well-being, experience reflective growth, strengthen emotional bonds, increase engagement/participation and focus, as well as decrease anxiety, depression, and anger.

Literature Review

When speaking of nature, its clear to see that the natural environment has a positive impact on our well-being. Environment plays a crucial part biologically as well as psychologically. Unfortunately in today's world, youth spend more time engaging with technical devices than the outdoors. According to Mainella, Agate, and Clark (2011) children's lack of association to nature is a result in the rise of modern technology and heightened media exposure. A recent study reports that youth between the ages of eight and eighteen spend an average of seven hours thirty-eight minutes each day with electronic media, totaling almost fifty-three hours each week (Mainella et al., 2011, p. 91).

We as a culture are gradually being numbed to death and most of us don't even realize it...over time, separated from any experience in nature, it appears that children will lose

the capacity to respond effectively to the natural world and eventually it will have little or no relevance to them. (Wilkinson, 1997, p. 61)

Nature

According to Li (2018), the term shinrin-yoku in Japanese means forest bathing. Li describes this phenomenon as “taking in the forest through our senses” (Li, 2018, p.12). It’s the act of connecting to nature through our sense of sight, taste, smell, hearing, and touch. In this study, Dr. Qing Li utilized the technique of forest bathing to find out why trees make us feel better. His participants were twelve healthy middle aged men from Tokyo (Li, 2018). For three days the participants simply connected to nature applying their five senses. The POMS test was used before and after participants set out on their three day journey into the forest. The POMS (Profile of Mood States) is a questionnaire used to measure psychological well-being (Li, 2018). The results from this study revealed an increase of energy. It also revealed a decrease in anxiety, depression, anger, stress and brought a state of relaxation to the participants (Li, 2018).

Dr. Qing Li then went on to use the same twelve men in another study to investigate whether forest bathing could improve sleep disturbances (Li, 2018). They went to Iiyama city where participants engaged in two hour walks in the morning and afternoon in different forests. Li (2018) used a sleep polygraph and accelerometer to measure their sleep patterns. Li (2018) reports the participant’s average sleep time was 383 minutes before the study and during the trip, sleep time increased to 452 minutes. Li measured sleep time again after the trip and reported an average sleep time of 410 minutes (Li, 2018). The results visibly indicated that you sleep better when you have spent time in the forest.

The concept of Nature Therapy defines nature therapy as a “set of practices aimed at achieving ‘preventive medical effects’ through exposure to natural stimuli that render a state of physiological relaxation and boost weakened immune functions to prevent diseases” (Hansen, Jones, & Tocchini, 2017, p. 2). (CNT) is a present day model of shinrin yoku developed by Song, Ikei and Miyazaki. Song et al. (2017) conducted a study utilizing forest bathing on middle-age hypertensive men. They wanted to see if exposure to forest bathing would affect their autonomic nervous system. Participants sat for ten minutes in both an urban and forest setting. Questionnaires were given to participants to collect data on emotional conditioning as well as a measurement of their heart rate. After viewing a forest landscape, participants reported to feel more comfortable, relaxed, and natural while heart rate decreased.

Shinrin yoku was applied in a study by Morita et al. (2007) on healthy adults as a possible stress reduction. The results indicated that hostility and depression considerably decreased, while liveliness increased on the forest day compared to the control day (Morita et al., 2007). According to Morita et al. (2007) the forest environment deems a preferable place for humans with chronic stress and the act of shinrin yoku is a prescribed technique to aid in stress reduction. They suggest the landscape of the forest generates therapeutic qualities (Morita et al., 2007).

Alawad (2012) conducted a study using an intermediate girls art classroom as the setting. This study considered the research question whether natural sound can foster creativity. For the purpose of the study, the art classroom had the natural sounds of birds singing and waves breaking in predetermined intervals (Alawad, 2012). The student’s art projects were evaluated to give a before and after comparison on project work by comparing student’s marks with previous

project marks for each student group (Alawad, 2012). The results indicated that the nature sounds increased the numbers of students engaged on task and delivered artwork that exceeded the expectation of the teacher and researcher (Alawad, 2012).

A quasi-experimental study conducted by Koga and Iwasaki (2013), measured the feeling generated by touching four different tangible items; aluminum, velveteen, leaf of natural *epipremnum aureum*, and an artificial resin-made leaf. Participants were male students instructed to touch each item for one hundred twenty seconds. Measures included pre and posttest psychological and physiological indices (Koga & Iwasaki, 2013). Participants reported feeling a measurable sense of ‘calm’ when touching natural plant material, as opposed to other materials.

A quantitative study conducted by Jo et al. (2013) aimed to illuminate whether human health could be impacted by floral fragrances. Participants were male graduate and undergraduate students. Changes in cerebral activity, pulse rate, heart rate, and arterial blood pressure were measured (Jo et al., 2013). Psychological Stress was tested by the use of the Profile of Mood States questionnaire (POMS). Results from this study indicate a reduction in stress and a general sense of well-being from sensory stimuli from plants (Jo et al., 2013).

Ikei, Song, and Miyazaki (2016) investigated the effects of olfactory stimulation by α -pinene on autonomic nervous activity based on the assessment of parasympathetic nervous activity and sympathetic nervous activity using HRV and heart rate in young adult females (Ikei et al., 2016, p. 568). According to Hansen, Jones, and Tocchini, (2017) α -pinene is a volatile compound in Japanese cedar wood. Measures were taken 30 seconds before smell was administered and 90 seconds during and after smell was administered. Ikei et al. (2016)

concluded that olfactory stimulation with α -pinene significantly increased parasympathetic nervous activity and significantly decreased heart rate, resulting in signs of increased physiologic relaxation.

A quantitative study with a cross-sectional design was developed by Largo-Wight, Chen, Dodd, and Weiler (2011) “to examine the effects of nature contact experienced at work on employee stress and health” (Largo-Wight et al., 2011, p. 124). Participants were full time secretaries and clerks at a southeastern university in Florida. Largo-Wight et al. (2011) used a 16-item workplace environment questionnaire, the Nature Contact Questionnaire, and the Perceived Stress Questionnaire. Thirteen health and behavioral items assessed the dependent variables, and stress-related health outcomes (Largo-Wight et al., 2011). The results indicated that general health complaints and stress decreased as nature contact during the workday increased (Largo-Wight et al., 2011).

According to Ulrich (1979), visual contact with the outdoor environment positively affected humans psychological well-being. This study compared views of nature with green vegetation to urban settings absent of green vegetation. Participants were stressed students who viewed images of nature and urban scenes. Ulrich (1979) concluded that the nature images evoked positive emotional states, while the urban images increased emotional states of sadness, anger, and aggression.

Song, Ikei, and Miyazaki (2018) used forest imagery to measure activity of the brain and autonomic nervous system as well as physiological effects. Participants included seventeen female university students. Participants had rest periods where they viewed a gray image for sixty seconds between viewing a forest or city image for ninety second intervals. Heart rate

variability and oxy-Hb concentration in the prefrontal cortex were continuously measured during rest and visual stimulation (Song et al., 2018). Results of physiological measurements showed that viewing forest imagery significantly decreased oxy- Hb concentrations in the right prefrontal cortex, compared with viewing city imagery (Song et al., 2018, p. 10). Participants filled out a modified SD questionnaire after viewing forest and city images indicating an increase in feelings of comfort and relaxation from the forest images (Song et al., 2018).

Berman, Jonides, and Kaplan (2008) were curious to see if there were any cognitive benefits to interacting with nature. They conducted two experiments to test cognitive functioning in their participants. In their first experiment 38 University of Michigan students participated by first assessing their mood using PANAS, then performed the backward digit span test (Berman et al., 2008). Following participants were given a directed-forgetting task that involved the suppression of information in short-term memory, which was used to fatigue participants further (Berman et al., 2008, p. 3). Participants were then randomly selected to take a fifty minute walk around Ann Arbor arboretum (a park) or downtown Ann Arbor wearing a GPS watch to ensure compliance (Berman et al., 2008). After their walks, participants completed the experiment by repeating the PANAS, backward digit span and answering questions about their walk (Berman et al., 2008).

Experiment 2 consisted of 12 University of Michigan students. Participants performed the PANAS, the backward digit span test, and then viewed pictures of nature and urban settings for ten minute intervals (Berman et al., 2008). After picture viewing, participants performed the backwards digit-span task, the Attention Network test (ANT), and the PANAS a second time (Berman et al., 2008, p. 4). At the end of these two experiments which included direct contact

with nature as well as imagery views of nature, Berman et al. (2008) concluded that the healthful value of nature improved cognitive functioning. It was also concluded that nature proved to restore direct attention abilities from both the Attention Network test and backward digit span test (Berman et al., 2008).

Therapeutic Environment

The importance of a positive alliance between counsellor and client could stem from a thoughtful design and decoration of a counselling room (Pearson & Wilson, 2012), as well as influence positive session outcomes (Lecomte, Bernstein & Dumont, 1981). Comfortable seating, carpet, colors, natural lighting, artworks, plants, large windows and views of nature are vital factors within the counselling environment (Phelps et al., 2008).

Chaikin, Derlega, and Miller (1976) conducted a study to find out if the physical factors of a therapy room dictated the counseling session and outcome. In this study, Chaikin et al., compared the effects of hard versus soft room environment and its effect on the sociability of self disclosure during a counseling interview. Sommer (1974) writes of "hard architecture" as architecture "designed to be strong and resistant to human imprint. To the inhabitants, it seems impervious, impersonal, and inorganic" (p. 2). Amongst the negative side effects of hard architecture, Sommer argues that "people will find that hard and unresponsive buildings will increase their isolation... [and the physical characteristics of] a building can make a good situation better or a bad situation worse" (pp. 143-145).

Chaikin et al. (1976) hypothesised that self-disclosure within a soft environment would be greater than self-disclosure within a hard environment. Participants were 52 students from an introductory psychology class. The experiment was conducted in a small windowless room, 10

feet by 10 feet (3m by 3m). In the "hard architecture" condition, the room was left in its original condition: brown asphalt tile floor; cement block walls, painted yellow; overhead fluorescent light; a rectangular table, pushed to one corner of the room; straight back chair for the subject; and an unobtrusive upholstered chair for the experimenter (Chaikin et al., 1976, p. 2).

The soft room was the same room as described above, but Chaikin et al. (1976) decorated the room to create a more warm and intimate setting. The objects used to "soften" the architecture were an oriental rug that covered most of the tile floor; indirect lighting through a floor lamp and small table lamp; six framed pictures hung on two walls; an upholstered, cushioned armchair for the subject; a deacon's bench alongside one wall with a small table in a corner; and various smaller objects such as magazines, ashtray, cigarette box, and a wicker wastebasket (Chaikin et al., 1976, p. 2). Post interview, participants filled out a 9 point scale questionnaire on the evaluation of the experimenter, warmth and intimacy of the room, and degree relaxation (Chaikin et al., 1976). The results supported Chaikin et al. (1976) hypothesis that self-disclosure within a soft environment would be greater than self-disclosure within a hard environment.

Water, Wrapson, Tokolahi, Payam and Reay (2017), used a participatory art based methodology study to find out what children perceive as important in the design of hospital environments. The results indicated the importance of color in all aspects of the environment, bringing the outside in (nature such as trees, plants, birds, flowers, etc), and having access to open spaces for movement was also very important to them (Water et al., 2017). In this study color was associated with feelings of happiness and making the environment less scary and clinical looking (Water et al., 2017).

The Expressive Arts

Intended in the scope of healthcare, expressive therapies is defined as the use of art, dance, play, drama, and creative writing according to Malchiodi (2005). All expressive therapies focus on encouraging clients to become active participants in the therapeutic process (Malchiodi, 2005, p. 10). Along with fostering active participation, expressive therapies utilize many or all of the senses when a person is engaging in any of the expressive art modalities; making expressive therapies sensory in nature (Malchiodi, 2005). Through our senses we are irremediably intertwined with the world around us (Levine & Levine, 1999, p. 54). When engaged in the activities of art making, music playing or listening, dancing or moving, enacting, or playing, awareness is redirected to visual, auditory, and tactile channels (Malchiodi, 2005).

Levine and Levine (1999) remind us that K.E. Logstrup determined that human senses are a way into the world that interconnect the senses with everything around them. The ‘tuned sensory’ experience is more than noticing the sweet fragrance of lavender or the vibrant green of a tree, it’s about connecting to a feeling (Levine & Levine, 1999). According to Levine and Levine (1999), Logstrup states this feeling can go unnoticed until articulated through art work. “The artistic work, Logstrup says, is always an attempt to articulate the experience of this sensed tuned-ness, to give it form and shape” (Levine & Levine, 1999, p. 56). Which in return, brings you closer to yourself and the world (Levine & Levine, 1999).

For this study, painting and sculpting were chosen as the art directives because they engage the sense of touch, sight, and to some aspect sound and smell (Malchiodi, 2005). Another benefit of painting according to Malchiodi (2005) is that it may increase one’s self-awareness whereas sculpting clay may increase relaxation and reduce stress, proposing that

art expression can increase a sense of well-being. Mindfulness-based programs are wellness rather than illness focused, oriented to each person's innate capacity for well-being (Antonovsky, 1996; as cited by (Rappaport, 2014, p. 64).

Mindfulness and the art therapies promote engagement in the present moment linked with mindful awareness as well as mindful practices to the art therapies (Rappaport, 2014). Within both experiences the inner witness is accessed while working in the present moment. According to Rappaport (2014) this engagement of being in the present moment as the inner witness can be experienced in all the expressive arts.

Method

Data collection procedures were done by integrating an 'emotions list' that participants filled out at the beginning and closing of each group. This was used to monitor psychological well-being. The writer observed participants in each group and took notes of any behavior that mimicked; interest, engagement, participation, focus and/or lack thereof. Additionally, in the four group interventions, participants were asked to share their processes so writer could implement that information into the data collection.

Proceeding mindfulness training with objects, participants were asked to answer the following questions; what was your response to your animal card? (groups two and four), what was your response to the object you chose? What was your response to your art piece? In the sharing process, writer was particularly looking for; in depth detailing, thoughtful reflections, meaningful discoveries, and considerate connection to their process. Notes were recorded during each group session and immediately afterwards to maintain accurate information for data collection.

Participants

Participants were adolescents ranging from 13 to 17 years of age from an adolescent partial hospitalization program located in an urban community. It was within this facility during the course of two weeks where four separate interventions took place for the purpose of collecting data. Group size ranged from four to eight members dependent upon attendance. Participants were male, female, and transgender with diverse racial backgrounds. Participants presented with a history of major depressive disorder, anxiety, attention deficit hyperactivity disorder, autism, conduct behavioral disorder, post traumatic stress-disorder, suicide ideation, and substance abuse. For the purpose of this capstone, the commonality of depressive disorders, anxiety and ADHD amongst participants were favored.

Materials

Group interventions were divided into four separate groups. Two group interventions were conducted before environment was changed and two groups after environment was changed. All four groups included an art activity during the last thirty minutes of group. Groups one and three did a painting activity while Groups two and four did a sculpture activity with clay. The first thirty minutes of all four groups utilized mindfulness training with objects. Groups one and three chose objects that were provided by the writer brought in from home.

Personal objects were thoughtfully chosen by writer thinking about gender, diversity, cultural backgrounds, and personalities. Writer brought in 75% more objects than participants in hopes to provide relevant options for members to choose from. Groups two and four chose nature objects that were previously hand picked by the writer from a local national forest. Writer thoughtfully selected an array of nature items. Each group utilized a music speaker during

warm-up activity. Groups three and four consisted of a 100 x 144 inch forest mural, a diffuser with forest oil, two large indoor plants and the sounds of birds and waterfalls.

Group One Materials- Objects chosen by participants

1 foot tall native Jamaican man statue
5 inch tall white metal heart with stand
Female black hat with green feathers
2 x 2 inch amethyst crystal
Black masquerade mask
4 x 6 Orange elephant piggy bank from India
2 x 1 rose quartz crystal
7.5 inch multi-colored wand with gemstones

Other materials provided were paintbrushes of various sizes, 18 x 24 art paper, paint pallets, plastic bowls with water, and paint colors; black, white, light blue, seafoam, dark blue, green, orange, pink, purple, yellow, brown, and red.

Group Two Materials- Nature objects chosen by participants

3 inch tall green fairy tree
3 x 1 inch piece of bark with green moss
7 inch tree branch
2 x 2 inch black lava rock
3 x 3 inch black lava rock

Other materials provided were 4 x 1.5 inch slab of marblex self-hardening clay, plastic bowl of water, sponge, clay sculpting tools, and 12 x 12 inch piece of cardboard.

Group Three Materials- Objects chosen by participants

2 x 2 inch amethyst crystal
7.5 inch multi-colored wand with gemstones
1.5 inch slipper shell
1 Pair of chinese zen balls

Other materials provided were paintbrushes of various sizes, 18 x 24 art paper, paint pallets, plastic bowls with water, and paint colors; black, white, light blue, dark blue, seafoam, green, orange, pink, purple, yellow, brown, and red.

Group Four Materials- Nature objects chosen by participants

3 inch tall green fairy tree
2 x 2 inch black lava rock
3 x 3 inch black lava rock
7 inch tree branch
3 x 2 inch grey rock with green moss
7 x 3.5 inch flat tree bark

Other materials provided were 4 x 1.5 inch slab of marblex self-hardening clay, plastic bowl of water, sponge, clay sculpting tools, and 12 x 12 inch piece of cardboard.

Design of Intervention

The group design process considered several factors; correlation to the literature review, inclusion of a warm up activity, introducing nature into the therapy room, a closing ritual for art sharing, and the emergence of the theoretical framework of mindfulness and art with adolescents. Four group interventions took place in the large group therapy room located inside the partial hospital program. Each group session took 75 minutes.

It's important to note that this was a comparison study. The group therapy room was redesigned for the purpose of this study. Groups one and two took place in the group therapy room before environment was changed. The group therapy room consisted of four walls painted sky blue, one large white-board hung on one wall, a filing cabinet, and black plastic chairs. Due to the art activities in all four groups, the black plastic chairs were not used and remained stacked up alongside one wall.

Groups three and four took place in the group therapy room after environment was changed. Environment change entailed a variety of items that were added to the group therapy room. Items that were added were a 100 x 144 inch forest mural to elicit nature imagery. The forest mural covered one entire wall and is shown in (figure 1. and 2.) Two large green indoor plants and a diffuser with essential forest oil were added to stimulate sensory processing. The sounds of birds chirping and waterfall sounds played in the background for the entire group session. Another goal of environment change was to promote the use of the five senses in a nature setting. Sight, touch, hearing, and smell were the senses utilized for the purpose of this study.

Figure 1. Forest mural in group room



Figure 2. Forest mural in group room



Interventions

The goal of this study was to bring nature into the group therapy room to promote positive psychological well-being, increase engagement/participation towards therapist and group discussion/activities, as well as give a sense of calm and ease within the perimeters of the group therapy room. All four interventions began with participants circling up to five emotions they were feeling in the present moment from a 'emotions list' worksheet. Writer defined the meaning of Mindfulness to participants as, "the ability to be aware of your thoughts, emotions,

physical sensations, and actions-in the present moment-without judging or criticizing yourself or your experience”(McKay, Wood, & Brantley, 2010, p. 64). Writer then discussed the benefits of mindfulness training and the benefits of mindfulness with art therapy, followed by a five minute warm-up utilizing mindfulness breathing with a singing bowl.

In groups one and three, participants were asked to select an object to engage with during mindfulness training. In groups two and four, participants chose a nature object. Without touching, participants were asked to look at their objects for three minutes while writer asked guided questions such as; what does the surface of the object look like? Is it shiny or dull? Does it look smooth or rough? Does it have multiple colors or just one color? What do you see that is unique about your object? (McKay, Wood, & Brantley, 2010, p. 68). Participants were then allowed to touch their objects for three minutes thinking about the following guided questions; how does your object feel? Is it heavy or light? Is it smooth or rough? Is it hard or soft?

After mindfulness training with objects, participants in groups one and three were asked to choose their paint colors (ten min) and participants in groups two and four chose an animal card (five min) and received their sculpting clay and clay supplies (five min). Participants were given 30 min to paint (groups one and three) and sculpt with clay (groups two and four) a feeling, felt sense, or image that came up for them during mindfulness training, All four groups closed with ten minutes of art sharing, and filling out the ‘emotions list’ worksheet.

Results

Participants psychological well-being (from all four groups) was measured by utilizing the ‘emotions list’ worksheet which consisted of 33 positive emotions and 29 negative emotions. Results from groups one and two were combined (before environment was changed). Thirteen

participants made up the combined groups with the possibility of selecting 65 emotions although only 51 emotions were selected and recorded before each group. Results revealed that 71% of participants presented as feeling positive in their emotions at the beginning of groups one and two. This percentage decreased by 29% by the end of each group.

Results from groups three and four (after the environment was changed) were combined. Ten participants made up the combined groups with the possibility of selecting 50 emotions although only 46 emotions were selected and recorded. Results revealed that 33% of participants presented as feeling positive in their emotions at the beginning of groups three and four. This percentage increased by 18% by the end of each group.

Participants willingness to engage/participate in group activities (from all four groups) was measured by observations from writer during group sessions, note taking, and quality of art reflection and sharing. Self-expression in an expressive therapies session involves verbal reflection in order to help individuals to make sense of their experiences, feelings, and perceptions (Malchiodi, 2005, p. 9).

Group One Before Environment was Changed

Warm-up and Mindfulness with Objects.

During the warm-up three out of the eight participants participated in the deep breathing directive. Three participants giggled and chatted with each other, while two participants just sat and remained quiet. During the mindfulness training when participants were asked to look at their objects, four participants participated and engaged with their objects and followed the instructions of the directive. The remaining four participants did not look at their objects at all and just giggled amongst each other.

Engagement, Painting and Color Use.

When participants were asked to hold their objects in their hands, all eight participants participated in the directive and followed instructions, while five of the eight participants engaged with their objects. During the thirty minutes of painting, three participants presented to be interested to paint, all eight participants participated in the painting directive, and four out of the eight participants engaged with their paintings. One participant laid down on the floor next to her painting five minutes into painting and returned back to painting five minutes later. This participant repeated this pattern for the duration of the thirty minutes. Although all eight participants chose a variety of colors which were reflected in their paintings, three participants covered their colored images with black paint by the end of the art directive. Two participants used black paint to splash small specks across their colored images.

Closing and Sharing.

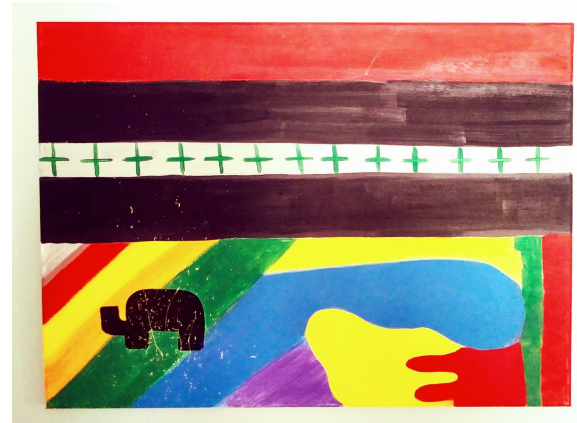
At closing when participants were asked to share their processes, four participants opted to share while the other four participants opted out of sharing. Participant One met all four categories the writer was looking for; in depth detailing, thoughtful reflections, meaningful discoveries, and considerate connection to their process. Participant Two met three categories; in depth detailing, thoughtful reflections, and considerate connection to their process. Participant Three and Four met two categories; in depth detailing and considerate connection to their process. Since there were eight participants in this group, the writer painted two paintings as an art response to participants paintings. (Figure 3.) is one painting done by the writer that reflects the four paintings done by participants who opted to share their process. (Figure 4.) is one

painting done by the writer that reflects the remaining four participants painting's who opted out of sharing.

Figure 3. Painting by writer



Figure 4. Painting by writer



Group Two Before Environment was Changed

Warm-up and Mindfulness with Objects.

During the warm-up all five participants participated in the deep breathing directive, while two participants presented to be interested and focused. During the mindfulness training when participants were asked to look at and hold their nature objects, three participants participated in the instructions of the directive, and engaged with their nature objects. Two of those participants presented to be interested in the directive. Two participants did not participate or engage with their nature objects.

Engagement and Sculpting with Clay.

All five participants participated in the sculpting clay art directive. Three participants engaged with their sculptures and presented to be interested in the art directive. During the thirty minutes to sculpt with their clay, two participants presented to be focused on their process. In the first ten minutes of sculpting with clay, three participants molded their clay into formations

while the fourth participant held the clay in her hand while appearing to be ‘staring off’ not connecting to the clay. The fifth participant molded the clay in her hands, but seemed to be struggling with creating something. Within fifteen minutes of sculpting, one participant stopped sculpting and laid down next to her clay. Three of the participants began creating pieces, while the fifth participant was still molding clay in her hands.

Within twenty five minutes of sculpting clay, three participants have created pieces and are doing final touches. One participant finished sculpting and just sat at her station, while the fifth participant created a small flower and then immediately destroyed it. By the end of the thirty minutes four participants had created a piece and the fifth participant had nothing created.

Closing and Sharing.

During closing when participants were asked to share their processes, all five participants opted to share. Participant one and two met all four categories the writer was looking for; in depth detailing, thoughtful reflections, meaningful discoveries, and considerate connection to their process. Participant three met two categories; in depth detailing and considerate connection to their process. Participant four met two categories; thoughtful reflections and meaningful discoveries. Participant five had a thoughtful reflection to why she was unable to create something, so she met one category. The writer sculpted a sculpture as an art response to the participants sculptures. (Figure 5. and 6.) is one sculpture done by the writer that reflects the four sculptures done by the participants. See figure below.

Figure 5. Clay sculpture by writer



Figure 6. Clay sculpture by writer



Group Three After Environment was Changed

Warm-up and Mindfulness with Objects.

During the warm-up all four participants participated in the deep breathing directive. Two participants presented to be engaged and focused in their breathing. During the mindfulness training when participants were asked to look at and hold their objects, all four participants focused on their objects and participated in the instructions of the directive. Although all four participants chose a variety of colors; blue, seafoam and black were chosen amongst all four participants. Blue and seafoam dominated the participants paintings, while black was hardly used (unlike group one where black paint dominated).

Engagement, Participation and Color Use.

Before the thirty minutes of painting began, one participant presented to show interest in painting. All four participants participated in the painting directive and presented to be engaged in their paintings. Two of the participants presented to be focused on their painting. One participant was especially focused and only used blue and seafoam paint. This participant spent

twenty minutes painting with blue. Another participant painted a black circle and then covered it up with the seafoam color. This was the opposite of what happened in group one where participants were painting over their colored images with black.

Closing and Sharing.

During closing when participants were asked to share their processes, all four participants opted to share. Participants one and two met all four categories the writer was looking for; in depth detailing, thoughtful reflections, meaningful discoveries, and considerate connection to their process. Participant three met three categories; in depth detailing, thoughtful reflections, and considerate connection to their process. Participant four met one category.

Even though participant four disclosed he was unsure of what he painted, it appeared as though participant had painted an aerial view of the amethyst crystal he chose as his object. This provoked the writer to believe that participant four had a subconscious connection to his object (considerate connection to their process). The writer painted one painting as an art response to the four participants paintings. Shown in Figure 7 below.

Figure 7. Painting by writer



Group Four After Environment was Changed

Warm-up and Mindfulness with Object.

During the warm-up all six participants focused and participated in the deep breathing directive. Four participants presented to be engaged. During the mindfulness training when participants were asked to look at and hold their nature objects, all six participants focused on their nature objects and followed the instructions of the directive. Four participants presented to engage and focus on their objects during the (look at) directive. All six participants presented to engage and focus on their objects during the (holding the object) directive.

Engagement and Sculpting with Clay.

Before the thirty minutes of sculpting with clay began, three participants presented to display interest in the art directive. All six participants participated and engaged in the sculpting art directive. Five participants presented to be focused on their sculptures throughout the directive. In the first five minutes of sculpting with clay, four participants started to mold their clay into formations while two participants continued to play with the clay in their hands. One of the two participants continued to play with the clay by making several little balls and then mashing them back into his big mound of clay. This pattern continued until he quit fifteen minutes into sculpting. The remaining five participants continued sculpting. Four of the remaining participants were focused and appeared to be methodical and elaborate in their sculpting and remained this way for the remaining fifteen minutes.

Closing and Sharing.

During closing when participants were asked to share their processes, five participants opted to share and one opted not to. Participant one, two and three met all four categories the writer was looking for; in depth detailing, thoughtful reflections, meaningful discoveries, and considerate connection to their process. Participant four met three categories; thoughtful

reflections, meaningful discoveries, and connection to their process. Participant five met two categories; thoughtful reflections and connection to their process. Participant six did not share, therefore did not meet any categories. The writer sculpted a clay sculpture as an art response to the participants sculptures. (Figure 8. and 9.) is one sculpture done by the writer that reflects the five sculptures done by the participants.

Figure 8. Clay sculpture by writer



Figure 9. Clay sculpture by writer



Results from Sharing Process.

Results from groups one and two (before environment was changed) were combined totaling thirteen participants. Results revealed that 46% of participants presented with thoughtful reflections, 54% presented with in depth detail, 54% presented with considerate connection to their process, 31% presented with meaningful discoveries, and 31% did not share their art process.

Results from groups three and four (after environment was changed) were combined totaling ten participants. Results revealed that 80% of participants presented with thoughtful

reflections, 60% presented with in depth detail, 90% presented with considerate connection to their process, 60% presented with meaningful discoveries, and 99% shared their art process.

Results from Observations.

During the warm up, intervention and closing directives, the writer observed participants in each group and took notes of any behavior or verbal comments that mimicked; interest, engagement, participation, focus and/or lack thereof. Results from groups one and two (before environment was changed) were combined totaling thirteen participants. Refer to table below. Percentages equal the amount of participants.

Table 1.

Observations from Groups One and Two Before Environment was Changed

Groups 1 & 2	Warm up	Look at object	Hold object	Painting/Clay
Interest	15 %	15 %	15 %	46 %
Engaged	15 %	54%	62 %	54%
Participated	62 %	54 %	85%	100 %
Focused	31 %	31 %	31 %	38 %
No Participation	38 %	46 %	15 %	0 %

Results from groups three and four (after environment was changed) were combined totaling ten participants. Refer to table below.

Table 2.

Observations of Groups Three and Four After Environment was Changed

Groups 3 & 4	Warm up	Look at object	Hold object	Painting/Clay
Interest	0 %	0 %	0 %	40 %
Engaged	60 %	70 %	100 %	80 %
Participated	100 %	100 %	100 %	100 %
Focused	80%	80 %	50 %	50 %
No Participation	0 %	0 %	0 %	0 %

Discussion

The results reflected in the two tables above verified the writers predictions that bringing the aspects and elements of nature into the therapy room will increase engagement/participation and focus. The therapeutic setting has been shown to have an influence on the emotional states of patients (Sklar, 1988 as cited by Pearson & Wilson, 2012). At the beginning of this study it was questioned whether bringing the elements of nature into the therapy room could positively enhance a client's emotional state. The two groups led after the environment was changed demonstrated the positive effects nature has on one's psychological well-being, sense of calm, ability to engage, focus and participate.

The results indicated an increase in psychological well-being verifying the writers predictions. This supports the research findings from Hansen et al. (2017) where participants reported a sense of calm and overall well-being from nature imagery and engagement with nature. The results also concur with Song et al. (2017) regarding the increase in feeling relaxed among participants when viewing a forest image. Even though writer was anticipating a higher

increase in psychological well-being after environment was changed, the 29% decrease in psychological well-being before environment was changed was unexpected. The mindfulness training and expressive art directive was projected to conduce somewhat of an increase in overall psychological well-being in the first two groups.

This research study paid particular attention to how nature can positively change the dynamic of a therapy room in a multitude of ways. One way is the client's ability to engage with the therapist and the art directives as well as the incitement of reflective growth. 26% more participants engaged with their art directives after environment was changed while 27% more participants displayed more meaningful reflective growth. Utilizing the positive qualities of nature in this type of environment plays a vital role. Other environmental facets within a therapy room were also recognized in contributing to the overall well-being of a client. Previous studies have indicated that a view to the outside world was a favourable factor in what clients deemed important in the environment of a counselling room (Pearson & Wilson, 2012; Phelps et al., 2008).

The following limitations were considered by the writer. The adolescence in a partial hospitalization program are in treatment for differing lengths of time which couldn't guarantee relying on the same participants for each of the four groups. The number of participants also fluctuated for each group dependent on adolescent attendance which is not consistent on a day to day basis. Being able to conduct a comparison study utilizing the same participants in all four groups with the same number of participants would strengthen internal validity.

The small number of participants who did attend both the painting and clay groups expressed their comfortability and favoritism in one art directive over the other. Each

participants level of enthusiasm of creative expression in each art directive was not congruent in each group. This too fluctuated and was not consistent. A participants level of comfortability with creative expression could've been fairly high during the painting directive but fairly low during the sculpting with clay directive. This limitation could affect the results in the categories of; engagement, participation and interest.

Conclusion

Generations born in the 70's and 80's spent their childhood outdoors; climbing trees, building forts in the woods, swimming in lakes, fishing, picking berries, smelling flowers, blowing dandelions, catching fireflies and searching for bugs. Mother nature just wasn't a term people heard or read in books. She was your best friend. She was the first one to greet you on a summer morning ready to awaken your spirits and expand your imagination to create worlds within her where you felt powerful and alive. She never disappointed. She was always available and ready to play. She provided you with limitless gifts for your every need and want.

As electronics have replaced tree houses, and you tube videos have replaced views of landscape, mother nature has been cast aside by today's youth. "For a new generation, nature is more abstraction than reality" (Louv, 2005, p. 2). The disengagement between youth and nature is a serious contributing factor to youths behavioural disorders, depression (Louv, 2005) and increased obesity (Mainella, Agate, & Clark, 2011). If the ongoing resistance to playing outdoors and engaging with nature continues from our youth, they will continue being at risk for mental and behavioural disorders. According to Li (2018) nature is good for children's mental and physical development, and in order to achieve meaningful youth development, reconnection to nature is crucial (Mainella, Agate, & Clark, 2011). As research continues to reveal the

significant benefits of nature to humans overall well-being, we can support this research by providing nature in our therapy rooms where today's youth can reap the critical effects.

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THESIS APPROVAL FORM

**Lesley University Graduate School of Arts & Social Sciences
Expressive Therapies Division Master of Arts in Clinical Mental
Health Counseling: Art Therapy, MA**

Student's Name: _____ **Ella Huzdovich** _____

Type of Project: Thesis

Title: A Nature- Informed Expressive Arts Therapy Method and Group Participation in Youths

Date of Graduation: _____ **May 18, 2019** _____

In the judgment of the following signatory this thesis meets the academic standards that have been established for the above degree.

Thesis Advisor: _____ **Dr. Rebecca Zarate**