

UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

**Nature's Prescription: Chalk Drawing**

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**SEEDS Project Phase one**

**Group #1:**

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*Exposure to Nature and its Benefits on Health Outcomes*

## **SEEDS Project Phase #1 Report:**

### **Introduction**

Within the healthcare system, professionals spend a vast amount of time focusing on aspects of healing and treatment for those who have been affected by illness. However, new approaches have come forth in the past few years where medical professionals have now put an emphasis on preventative methods through integrating and stressing the importance of the environment around us. For this reason, medical professionals now prescribe new "nature prescriptions" in order to help patients reap the benefits of the restorative and stress-reducing qualities of nature. Thus, there are three different types of nature prescriptions that one may use including: viewing nature, being in the presence of nature, and as well as having an active participation and involvement with nature (Pretty, 2004). Studies in relation to this concept have therefore found that those who spend more time in contact with nature experience a reduction of risk from social isolation, and as well as loneliness (Razani et. Al, 2019). This new structured therapeutic-based intervention can hence enable the overall increase of one's emotional, physical, and social well-being.

### **What human health outcomes have been examined?**

Studies have found that nature prescriptions have led to major improvements in people's moods. For example, Ulrich et al. (1991), examine the health outcomes of stress recovery and "restoration" after exposure to pictures and videos of the environment. This study displays a positive relationship between exposure to nature and stress recovery. The data was collected from self-ratings of heart rate, muscle tension and pulse transit time, which are related to blood pressure (Ulrich et al, 1991). The result of improved behaviour, interpersonal relationships and mental states (such as stress, depression or anxiety) are clear positive human health outcomes. Being outside or observing nature allows people to both mentally and physically feel better, while also being more attentive. Going outside in nature allows for the mind to wander and be more at peace with oneself and their surroundings (Pretty, J. 2004) .

Social prescribing is another measure that is used to help connect vulnerable populations with the broader community. The main idea is to increase their sense of connectedness and belonging within the community, which positively boosts mental well-being. Razani et al. (2019), reveal that through social prescribing, there are clear increases in emotional wellbeing and social support among patients as a result from intrapersonal, interpersonal, and environmental pathways. Not only does social prescribing have clear benefits for long-term mental health; through intrapersonal and interpersonal processes such as participating in outdoor activities with others, there are also physical health benefits. Engaging in physical activities in outdoor spaces also plays a role in reducing social isolation. A key in promoting mental health positivity is the ability to establish close relationships based on trust. Trusting relationships can

help change one's attitude or behaviour as well as having a positive effect on their health. While being isolated and having negative feelings will likely make change more difficult and also negatively affect health (Barton et al. 2011).

### **What does the evidence suggest are the effects of nature prescriptions on these outcomes?**

Nature prescriptions have been found to help people recover from pre-existing stressors or problems through the boosting of one's immune system from an overall increase of one's emotional, physical, and social well-being; Through this, an individual may then concentrate and think more clearly on a task at hand in which will allow one to cope when encountering future stressors (Pretty, J. 2004). Social support and one's emotional well-being among patients is then due to certain intrapersonal, interpersonal, and environmental pathways that are built through these nature-based interventions. Intrapersonal processes such as participating in outdoor activities can influence one's "autonomy, competence, sense of belonging, sense of purpose, and a sense of awe" (Razani et. Al, 2019). While interpersonal processes like outdoor experiences can allow for the increase of dynamic processes during social or interpersonal interactions which will help increase one's social well-being. Lastly, the perceived environment is the idea that our built environment and the areas where people live, work, and play are directly correlated to the amount of time people spend outdoors. As a result, the layout of our communities, transportation infrastructure, and access to parks generate either hardships or opportunities for people to interact with nature (Razani et al. 2019).

### **What mechanisms explain these outcomes?**

Ulrich et al. (1991) reveal that stress recovery and restoration are positively associated with being exposed to a natural environment. For this reason, some professionals are now focusing on the concept of social prescribing which is described as a variety of activities put together by voluntary and community sector organizations (ex. walking and park prescriptions, etc). This promotes one's contact with nature, which strengthens social ties, while also improving one's longer term mental and physical health through the activation of intrapersonal, interpersonal, and environmental processes. Additionally, studies have also found that urban nature has the ability to impact three social health determinants in our daily lives which include housing, social cohesion, and psychosocial stress. Results have hence found that "unexpected and planned nature encounters [had the ability to] impact them emotionally, [in which helped] provide [them]

sudden 'aha!' moments of pleasure, offering respite from mental preoccupations, or facilitating states of relaxation (Hordyk et. Al, 2015)

Furthermore, emotion is also a mechanism that may be greatly improved through frequent exposure to nature. Anderson et al, (2018) introduces emotion as a critical aspect of wellbeing that has been unexamined when drawing correlations between human health and exposure to nature. It is argued that observing nature creates a feeling of awe within people that leads to higher life satisfaction (Anderson et al, 2018). This study involved observing at-risk youth and war veterans and their emotions when exposed to nature. Findings hence reported high emotions of contentment and gratitude when exposed to nature which also indicated higher life satisfaction (Anderson et al, 2018). Thus, resulting in the implication that nature allows for the reduction of stress in one's well-being and therefore indicates that nature is a promising mechanism for better human health outcomes.

## **Conclusion**

In conclusion, being exposed to nature is positively correlated with better health outcomes and has ultimately become a new healing method suggested by practitioners. Studies therefore suggest that nature can improve one's overall physical, mental, and social well being. These effects are caused by the mediating and calming impact of being surrounded by the environment. Psycho- Evolutionary theories explain that people are more conditioned to living in natural environments which is why being in the environment decreases stress levels. Nature prescriptions are thus beneficial because they can influence one's autonomy, competence, sense of belonging, and sense of purpose. Not only this, but nature prescriptions are also connected to social determinants of health such as social cohesion, and as well as psychosocial stress. These factors all together allow for the increase of one's positive emotions such as contentment and gratitude, while also reducing one's stress by connecting to an outdoor environment. As a result, exposure to nature is therefore increasingly beneficial in improving human health and as well as decreasing negative health outcomes.

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