

UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

Nature's Prescription: Walks and Writing

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Research Question

How does the disconnection from social media and reintegration into nature affect an individual's mental well-being?

Phase 1

How effective are nature prescriptions for improving human health? What human health outcomes have been examined?

The implications regarding technology – namely social media, has on mental health are colloquially known to be predominantly negative. Susan Coyne et al. (2020) meta-analysis of other researchers within a similar field suggests that those born in 1995 or later, have experienced “greater degrees of depression, loneliness and sleep deprivation” (Coyne et al., 2020, pg. 2). However, over her eight-year longitudinal study, the research has proven to be inconclusive as her own findings have not found any correlation between social media and negative mental health outcomes such as depression and anxiety (Coyne et al., 2020). Another researcher who correlated social media use and mental well-being found that intersectionality played a key role in defining the three key aspects encompassing mental health; social well-being, positive mental health, and self-rated health. Additionally, Bekalu et al. (2019) concluded that negative correlations have been found in respect to all three aspects in relation to the emotional connection towards social media (Bekalu et al. 2019). The research suggests that due to this being a new phenomenon, beginning with the technological advances in cell phones that allowed a 24/7 connectedness to social media; researchers have not come to an indisputable conclusion to social media’s effects on mental health (Coyne et al., 2020). However, integrating nature to improve mental health has had profoundly positive correlation according to Rakow and Eells (2019) Maas, VanDillen, Verheij, & Groenewegen (2008) also found that the percentage of greenspace (eg. parks, trees, etc..) within a 3km radius of someone's house was not only positively correlated with physical, and mental health, but also with levels of social connectedness and even perceived health.

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

Jules Pretty (2004) proposed that it is not just those with mental illness, but everyone, who has mental needs that require attention, and connection to the natural environment is a good approach to meeting those needs. However, there is no traditionally medicinal prescription a doctor could offer to reflect that, ergo this led to the development of Nature Prescriptions. Rakow & Eells (2019) conducted a study of two focus groups of young adults where one spent time nature and the other in an urban environment. Their study demonstrated that those who participated in the nature prescription saw much lower levels of blood pressure and increased concentration (Rakow & Eells, 2019). Similarly, it has been found that when participants walked in or sat and viewed, a forest for 20 min there was reductions in both mental and physical (e.g., heart rate variation and cortisol) measures of stress, which were not seen when the participants did the same in city streets (Park et al., 2007). Bratman et al. (2015) also established that a significant reduction in rumination (a process linked to both anxiety and depression, in which a person has continuous repetitive thoughts) was the result of a 90 min walk in the forest. Nature RX itself can be challenging to empirically study, as there is no clear dose of nature, however, through the combined analysis of this research it can be concluded that the positive effects of prescribed nature on one's health are seen vastly in both physiological and psychological outcomes.

The extent to which nature prescriptions affect outcomes on mental health are highly dependent on the individual or individuals exposed to these social media platforms (Robinson et al. 2018) and thus it is difficult to measure. Robinson and others concluded that people who meet the criteria of major depressive disorder are more likely to have negative effects than those who don't. Consequently, individuals with major depressive disorder have a higher likelihood of social media addiction and social comparison issues than others (Robinson et al. 2018). To be more specific, Meulen and others highlight the finding that adolescent girls with lower self-esteem are more likely to develop more negative self body image issues than those who have higher

self-esteem (Meulen et al. 2017), demonstrating exposure to certain images can have on girls self worth for example. Following up this study it seems these images can cause higher or lower negative outcomes depending on the amount of “likes” or peer exposure images or videos get. A study by Sherman and others found that quantifiable social endorsement can and often does have greater likelihood to influence youth or users of social media than those who don’t (Sherman et al. 2016). Once again if we take teens with low self esteem and provide them with a nature prescription, we can hypothesize that their effects would be highly dependent and probably more positive to connection with nature than those with higher self-esteem. Given the current state of affairs and the information we already know, this information allows us to hypothesize why certain environment prescriptions could be more beneficial to some people rather than others.

Therefore as a consequence of our workshop we could potentially take three sets of groups of individuals one with depressive disorders, low personality issues and ones with not, have them become completely disassociated from social media beginning at an hour a day and in that time expose them to the environment whether it is to a particular activity they may enjoy or something that connects them back to the physical environment. To measure the outcomes, these individuals will rate their experience and their outcomes mentally through a set of questions and see what type of response we get where we will analyze qualitative data. Given the diverse mental health conditions and the activities in play a clear assessment of the potential benefits from a dissociation to social media as well as a reconnection to the environment can be made. Furthermore, we can demonstrate how certain nature prescriptions can be more beneficial for certain people than others as well as highlighting the potential massive implications a reconnection to the environment can have with certain people.

What mechanisms explain these outcomes?

Wilson et al (2008) describes the overall effects of ecotherapy at the micro and macro levels of human health. They emphasize that greenspace is a therapeutic tool (Wilson et al. 2008, p.23) that has decreased over the past decade along with reduced levels of social and physical activity which are attributed to higher life satisfaction. Increasing physical activity, natural environments, and the regeneration of open greenspaces aid in improvements of individual health and promote a more vital lifestyle and mindset. In the same way, Burls (2007) considers an eco therapeutic approach to be an important dimension in well-being and recovery from ill health or social exclusion (Burls 2007, p.24). To be more specific, frequent exercise has been known to be essential for physical well-being, Bailey et. al (2017) suggests that there is a positive correlation between spending time outdoors and improving mental health. The study conducted confirms that exercising in outdoor environments has cognitive benefits. His findings revealed significant cognitive improvement after repeated measures - using electroencephalography (EEG) headsets which proved a significantly higher level of meditative state during the outdoor session in comparison to the indoors. Bailey et. al concluded that natural environments host positive effects on both physical and mental health, including: “increased physical activity and caloric expenditure, fewer depressive symptoms, reductions in myopathy, reduced stress levels and increased feelings of accomplishment” (Bailey et. al, 2017)

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