The Necessity of Green Spaces in a World Isolated by COVID-19

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Abstract

There has been extensive research on the benefits of nature for people's mental health. Many studies have found a link between exposure to non-threatening nature and greater positive wellbeing assessments. The inverse has also been observed with a lack of nature exposure resulting in higher negative wellness assessments. Exposure to nature has also been shown to decrease individuals' risk of developing mood disorders, neuroticism, depression, and anxiety. Because of the COVID-19 pandemic the topic of mental health has become increasingly more relevant. Due to the rapid transmission of the COVID-19 virus there has been pressure for people to social distance to avoid spreading the disease. This means that more people are experiencing loneliness. Although loneliness is not defined as a mental health disorder it is linked with psychiatric disorders such as depression and anxiety as well as negative health risks such as dementia. This along with stress about health and economic stability has had a noticeable effect on people's mental health. This is displayed with an increased number of patients seeking psychiatric treatment. People living in cities are disrupted the most because the increased density of people in these areas makes social distancing even more difficult. The research into the long-term effects of COVID-19 is limited because of how recent the virus is; however, this poster will attempt to make the case that an increase in green spaces in cities would not only be beneficial to its residents' mental health but also increase the resilience of people to highly stressful events such as the COVID-19 pandemic.

Figure 1: Shows a green space located in Montréal, Québec, Canada.

Photo by Caribb via Flickr/Creative Commons

Research Objectives

- Determine the correlation between mental health outcomes and exposure or lack of exposure to nature.
- Determine the mental health affects of COVID-19.
- Determine a correlation between exposure to nature and resilience to stressors.
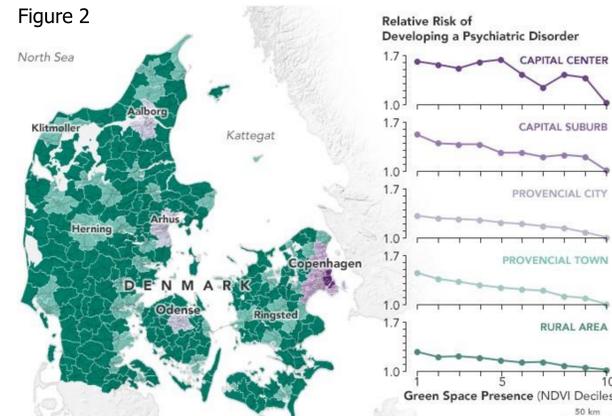
Materials and Methods

The research for this poster was conducted using peer reviewed papers found through the Salem State Library as well as additional resources from online articles.

Overview of Research

The Affects of Exposure to Nature on Mental Health

- Individuals who perceived themselves lacking exposure to nature (nature deprivation) gave themselves lower wellbeing assessments then those who did not feel nature deprived (Tomasso, 2021).
- Individuals that were shown images of nature prior to being exposed to a stressor recovered faster (Brown, 2013).
- Exposure to green spaces led to decreased risk of mood disorders, neuroticism, depression and anxiety with higher exposure to green spaces linking with greater mental health benefits (Engemann, 2018).
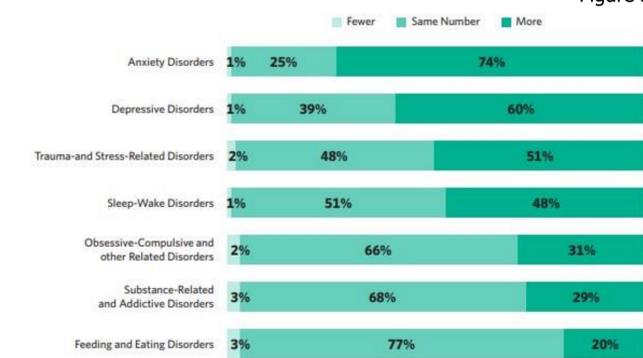
Figure 2

The map and line plots in Figure 2 show the relationship between green space and relative mental health. The dark purple areas show the most developed areas in Denmark while the dark green areas show the least developed. The line plots on the map show the risk of developing a psychiatric disorder on the vertical axes and the proximity to green spaces on the horizontal axes. The map shows that people who grew up in areas with the least green spaces in Denmark had as much as a 55% increased risk of developing psychiatric disorders. (Engemann, 2018)

1985 - 2013

(National Aeronautics and Space Administration, n.d.)

COVID-19 and Mental Health

- Figure 3 shows the results of a survey taken in September of 2020. In the survey mental health experts reported a rise in people seeking consulting for anxiety and depression since the beginning of the COVID-19 pandemic.
- During the first wave if COVID-19 greater lockdown severity was associated with a greater likelihood of exhibiting symptoms of mental health disorders (Pouso et al, 2021).
- Loneliness is not defined as a mental health disorder, but it is linked with disorders such as depression, anxiety, and dementia (Ducharme, 2020).
- Perceived social isolation is associated with poor life satisfaction and higher levels of substance use (Ruta et al, 2021).
- Research has found that lacking social connection increased risk for premature mortality, while social connection significantly decreases risk (Holt-Lunstad, 2017)

Figure 3

CHANGES IN DEMAND BY TREATMENT AREA SINCE THE CORONAVIRUS PANDEMIC

	Fewer	Same Number	More
Anxiety Disorders	1%	25%	74%
Depressive Disorders	1%	39%	60%
Trauma- and Stress-Related Disorders	2%	48%	51%
Sleep-Wake Disorders	1%	51%	48%
Obsessive-Compulsive and other Related Disorders	2%	66%	31%
Substance-Related and Addictive Disorders	3%	68%	29%
Feeding and Eating Disorders	3%	77%	20%

More than a third (37%) of psychologists reported having more patient referrals, and 44% were having fewer no-shows or cancellations. Compared with before the pandemic, 29% of psychologists were seeing more patients overall, 43% were seeing the same number of patients, and 28% were seeing fewer patients.

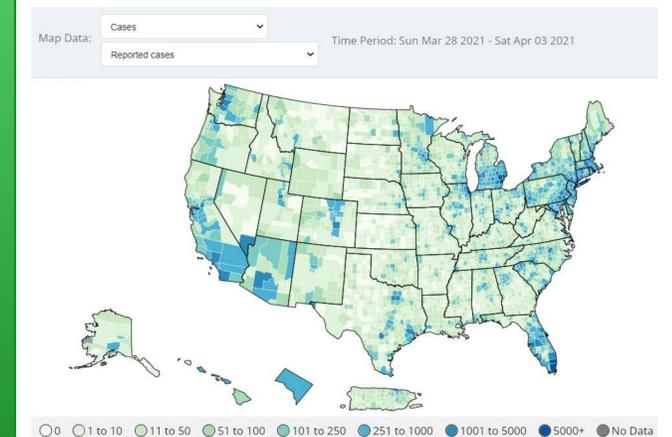(American Psychological Association, 2020)

Green Spaces, Cities and Mental Health

- Green spaces refer to areas of vegetation and natural elements inside urban areas (Taylor, 2017).
- 90% of reported cases of COVID-19 occurred in cities in the European Union (Guterres, 2021).
- During the COVID-19 pandemic those in lock down in 9 different countries when polled said that they perceived nature as helping them cope with lockdown (Pouso et al, 2021).
- Green spaces have been shown to increase individuals' resilience to negative mental health disorders such as depression and anxiety (Wood, 2017).
- Just having a view from a window of a green space has been shown to have positive mental health affects (Pouso et al, 2021).
- People who had restricted access to outdoor public spaces were at greater risk of showing symptoms of mental health disorders when compared to people who had partial or no restriction to access to outdoor spaces (Pouso et al, 2021).
- Green spaces also improve air and water quality, buffer noise pollution and support health by alleviating stress and promoting social interaction and physical activity (World Health Organization, 2017).

Conclusions

- Exposure to nature is shown to have positive mental health affects while lack of exposure to nature is shown to have negative health impacts.
- COVID-19 has caused an increase in people seeking psychiatric help for anxiety and depression.
- Exposure to nature has been shown to help individuals recover from stressful stimuli.
- Green spaces in cities have been shown to have mental health benefits for those who utilize them and live near them.
- With these points in mind an increase in green spaces in cities may increase the mental health resilience of residents to stressful events such as future pandemics or economic turbulence.

Figure 4: Shows the distribution of reported COVID-19 across the United States from 03/28/2021 – 04/03/2021.

(Centers for Disease Control and Prevention, 2021)

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