

GLOBAL VILLAGE 2



Conference proceedings
GLOBAL VILLAGE - SHELTER FOR RESILIENT LIVING 2

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IMPACT OF NATURAL ELEMENTS IN URBAN PUBLIC SPACES ON MENTAL HEALTH

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ABSTRACT

The subject of the paper is the analysis of the impact of natural elements in urban public spaces on the mental health of city residents. The problem that triggered the research is the fact that the majority of the world's population now live in metropolitan areas and the link between well-being and healthy public spaces has never been more clear. The analysis began with the hypothesis that exposure to green/blue spaces positively affects stress, changing moods, mental health, and overall well-being. Therefore, this paper aims to examine the subjective feeling, experience, and understanding of space related to the impact of being and using green and blue spaces in urban areas. Research objectives are to assess the relationship between mental health and existing nature in urban spaces, and to determine the effect natural elements in urban public spaces could have on mental well-being of citizens as a reminder for future projects. The focus was on field research, collecting, analyzing, and evaluating information and evidence of the impact of natural elements on mental health, as well as, presenting them in a systematic way. The results of this research pointed out the importance of natural elements in urban environments for citizens and established the complex relations between urban nature and mental health. These findings should help inform future research and practice on the impact of natural elements in urban spaces on public health, as well as make a contribution to the field of mental health, urban design, landscape architecture, urban planning, and management.

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Key words: natural elements, urban public space, public health, mental health

I. INTRODUCTION

The World Health Organization has pointed out that the Healthy Cities movement has become a pioneer in urban development and transformation, providing momentum for the creation of a healthier and friendlier urban environment as well as maintaining human mental health and well-being. A report by the World Health Organization (WHO) has enumerated that mental disorders account for nearly 12% of the global burden of disease (WHO Mental Health Context 2003).

Exposure to the natural environment has long been associated with a variety of positive physiological and psychological health outcomes. Given the increasing growth in urbanization and the estimation that 68% of the world population will be living in cities by 2050 (Nations, 2017), the contribution of cities to

psychological disorders has received more attention. As previous research has indicated mental health is a major need of citizens (Riyahi et al., 2010, as cited in Myers 2020), rapid urbanization, causes concern for the reduction of health benefits from nature exposure. While attention has been paid to nature in the design of hospitals, and other care facilities (Abdelaal and Soebarto 2019; Paraskevopoulou and Kamperi 2018; Ziegler 2015; Maric 2020) a gap has emerged in how to foster mental health enhancing nature connections in public space (Myers 2020).

This paper will further discuss the typology of natural elements in urban spaces, the effects of green and blue elements in cities, and human-nature relationships, including design as a tool that could better this interaction.

2. URBAN NATURE AND DESIGNING FOR MENTAL HEALTH

“A city, as a built place, is often seen as the antithesis of nature, since buildings and pavements displace forest and fields. Yet in most cities, the artificial human landscape includes elements of living nature selectively woven into its hard fabric” (Lawrence, 1993, p. 90).

Several studies which explored the active and passive experiences of trees and nature on mental health, combining physiological and validated self-report measures, found depression decreased and liveliness increased with forest immersion (Morita et al. 2007; Park B.-J. 2011; as cited in Wolf et al. 2020). A small number of studies, within the existing literature on the mental health benefits of nature, have focused on blue spaces. However, living in proximity to blue spaces has been associated with better mental health, including a lower prevalence of mood and anxiety disorders and schizophrenia (Wheeler et al., 2012; Dzhambov et al., 2018; de Vries et al., 2016; Engemann et al., 2020, as cited in Bergou et al. 2022).

Design principles and strategies that are currently being used in practice are not used for their direct impact on mental health. There is no design approach that explicitly incorporates an evidence-based framework to design for mental health, through nature, in urban open spaces. However, some of the measures in order to create a purposeful and integrated approach to designing for mental health and well-being through our nature interactions are: 1) (re)focusing on neighborhood streets as a primary site of engagement with the natural world (Thwaites et al. 2005, as cited in Myers, 2020). 2) Integrating smaller, natural areas along regular pathways between home and everyday community, offers a significant way to increase the incidental and incremental exposure to, and interaction with, nature (Flies et al. 2017, as cited in Myers, 2020). 3) designing for access and engagement with urban natural environments; making diverse mobilities and sensory perceptions the norm. Movement can be “an intensely embodied and emotional experience” (Andrews et al. 2012). 4) ‘temporal urban design’ (planting seasonal flowers,

vegetation, and food), providing spaces for reflecting on the passage of time (Bell et al. 2018, p. 14), all of which can enable positive mental health and connection.

Nature in urban spaces is at its most accessible and equitable state when it is immediate and/or incidental (right outside our door or window; wherever we may be in the city). In terms of urban design, this could mean that to cultivate the connection to nature that contributes to mental well-being regulations around nature in cities should be relaxed.

3. DISCUSSION — RETHINKING HUMAN — NATURE INTERACTION

Human engagement with nature should be an interaction, dynamic, multisensory, accessible, and equitable interaction, which in turn can enable mental health and well-being. Attention to different elements of nature, water, light, sound, sun, and texture offers diverse and individual ways of interacting with nature. It is crucial that urban design draws on these studies to validate the need for nature interactions in our cities to accept the open-ended and fluid ways in which humans and nature influence each other (Myers, 2020).

It is important to say that currently there is no standardized approach to define the relationship between mental health and green/blue spaces. This is understandable considering differences in the heterogeneity of residents, green/blue space quality, and measures of mental health. The multitude of variables makes drawing generalizable conclusions from this interdisciplinary research almost impossible. Therefore, the restoration of mental health and well-being as an end goal of planning and design should recognize these complexities. However, future research could further investigate the psycho-social, socio-economic, and cultural aspects. Examining the ways to evoke dynamic engagement with space, creating a multisensory environment that could enhance neurological health and function.

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4. CONCLUSIONS

One of the most important challenges faced by modern cities is to maintain and improve the quality of life for citizens. As a global equity issue mental health and well-being is central to all lives, especially as health is not static in place or time, nor is it exclusive to certain people only (Patel et al. 2018). The impact of 'nature' in cities is undeniably present, however, it is important, not to overstate the current evidence of the effect on mental health. Many studies use non-objective or non-standard tools to assess both green/blue spaces and mental health conditions. The casual relationship between mental health, well-being, and green and blue spaces could be due to the inherent difficulties in quantifying non-physical health benefits.

The question of mental health is complex by itself, individually determined, therefore to appoint its connection to natural urban spaces requires the inclusion of lots of factors that influence the observed

associations. A particular challenge for urban planners and designers in addressing the multi-faceted confounding factors of the topic is that there is no standardized series of indicators or guidelines that would ensure mental health enhancement. However, that could be a sign that the approach should be less rigid, and more free in letting urban nature be what it is. Undesigning urban areas so that we can experience genuine and meaningful interaction, maybe even 'restoration' after all.

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