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IN THE SYMPHONY OF GREEN SPACES, BRAIN AND ITS THOUGHTS FIND THE HEALING MELODY

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"Going green doesn't start with doing green acts, it starts with a shift in consciousness."

- Ian Somerhalder

This article critically examines the profound impact of green spaces on human neuropsychiatry, delving into the intricate mechanisms and outcomes of this significant relationship. The heightened awareness of this subject, triggered by the COVID-19 pandemic, has prompted communities globally to seek solace in green spaces as a coping mechanism during lockdowns and periods of socioeconomic disruption.

Green spaces, defined as open areas adorned with vegetation, serve multifaceted functions.[1,2] They possess ecological and environmental roles, such as reducing air pollution and moderating heat, alongside aesthetic functions that contribute to visual appeal.[3-7] These spaces exert a substantial influence on human neuropsychiatric manifestations, shaping mental health, cognitive function, and overall well-being. Beyond individual benefits, green spaces yield long-term financial advantages and contribute to social and environmental gains.

The EKLIPSE Expert Working Group on Biodiversity and Mental Health has conducted insightful systematic reviews on green and blue spaces.[8] These reviews, encompassing a broad spectrum of mental health aspects, consistently demonstrate a positive relationship between exposure to these spaces and mental well-being. Spending time in nature, whether in parks or forests, has been shown to reduce stress, improve mood, and enhance cognitive function. Moreover, green spaces may have neuroprotective benefits, potentially reducing the risk of neurological disorders. In urban settings, green spaces play a crucial role in decreasing pollution and regulating temperature, mitigating the urban heat island effect.

The 2018 Revision of World Urbanization Prospects, produced by the UN Department of Economic and Social Affairs (UN DESA), predicts that 68% of the world's population will reside in urban areas by 2050. This ongoing urbanization poses complex challenges for cities, including infrastructural issues and environmental degradation exacerbated by a reduction in green spaces. The WHO European Centre for Environment and Health closely monitors research on green spaces, recognizing their critical role in urban well-being.[9] The commitment made by the Member States of the WHO European Region at the Fifth Ministerial Conference on Environment and Health in Parma in 2010 underscores the importance of providing each child with access to healthy environments, including green spaces.[10] This commitment aligns with the United Nations Sustainable Development Goal 11.7, aiming to achieve universal access to safe, inclusive, and accessible green spaces by 2030, particularly for vulnerable groups.[11] Additionally, the WHO Action Plan for the implementation of the European Strategy for the Prevention and Control of Noncommunicable Diseases emphasizes the creation of health-supporting urban environments.[12]

One well-documented effect of green spaces on human neuropsychiatry is stress reduction.[8] Exposure to natural environments has been proven to lower cortisol levels, the hormone associated with stress. The calming effect of nature mitigates symptoms of anxiety and depression, significantly improving overall mental well-being. These findings underscore the pivotal role of green spaces as tools for stress management and mental health promotion.

Green spaces also contribute to cognitive enhancement through the support of physical activity, psychological restoration, and the reduction of exposure to air pollution.[13] According to the Attention Restoration Theory, natural environments facilitate cognitive recovery from mental fatigue. Individuals spending time in green spaces often experience improved attention, memory, and problem-solving skills. This cognitive revitalization extends its benefits to individuals with neuropsychiatric conditions such as attention-deficit/hyperactivity disorder (ADHD) and dementia.

The presence of greenery positively influences mood regulation.[8] Exposure to nature has been linked to increased feelings of happiness and reduced symptoms of depression. Nature-based therapies, including eco-therapy, leverage green spaces to assist individuals in managing mood disorders and improving emotional well-being.

Green spaces may also play a protective role in neurological health. Some studies suggest that living near green spaces is associated with a reduced risk of neurodegenerative diseases such as Alzheimer's and Parkinson's. Although the mechanisms behind this correlation are not fully understood, it highlights the potential long-term benefits of exposure to green spaces on neuropsychiatry.

Furthermore, green spaces foster social interaction, positively impacting neuropsychiatry. Engaging with others in natural settings reduces feelings of social isolation and loneliness, common contributors to psychiatric disorders. Group activities in green spaces, such as community gardening or outdoor fitness classes, promote social cohesion and support mental health.

Studying green space qualities carries practical implications for urban planning. Urban green areas serve as crucial indicators of a city's quality of life. The 3-30-300 rule proposed by Cecil Konijnendijk, emphasizing the visibility of trees, canopy cover, and proximity to parks, offers a guideline for creating greener, better, and more biophilic urban environments. This rule encourages the recreational use of green space, impacting both physical and mental health.[14]

In conclusion, green spaces yield a profound impact on human neuropsychiatry, serving as natural remedies for stress reduction, cognitive enhancement, mood regulation, and potential neuroprotection. Integrating green spaces into urban planning and healthcare strategies holds substantial promise for improving mental health and overall well-being. Recognizing the value of these natural environments in neuropsychiatry underscores the importance of preserving and enhancing access to green spaces in our communities.

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