

Methods: We conducted a comprehensive review of the scientific literature using PubMed database with the following keywords: DNA methylation, brain and urbanity.

Results: Our search revealed a scarcity of scientific articles reporting methylome studies with assessment of correlations between methylome, cognitive status and urban environment. Among these papers, a Chinese study (2021) found a significant correlation between childhood urbanicity and better cognitive performance by measuring genome-wide methylation profile using more than 850,000 genome-wide CpG sites. In this study, the authors suggested that the impact of childhood urbanicity on cognition is partially mediated by the methylome and brain structure/function in humans whose childhood urbanicity differed. Other studies using other research approaches, suggested that the impact of living in an urban area is linked to better performance in terms of working memory, processing speed and verbal learning. We also found that the vast majority of studies investigating DNA methylation involved in rapid adaptation to new environments, including urban environments, focused on plant and animal species.

Conclusions: The effects of urbanization on human beings are a topic of ongoing debate. Some studies suggest that urbanization can have beneficial effects on cognition, while others find that it can have harmful effects. Quantitative studies of methylation and the correlations between methylome, cognition, and urbanicity offer new opportunities to measure these effects and gain a better understanding of their mechanisms.

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Natural soundscapes, urban design and psychological well-being

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Introduction: While the acoustic environment in the cities correlates with various health-related problems, health benefits of natural sounds are proven. These positive effects of the sounds of nature should probably be taken seriously in urban design and urban renewal projects.

Objectives: The aim of this study was to review the paradigm of natural soundscapes in the cities, psychological effects of natural soundscapes and the potential urban recommendations for such architecture design.

Methods: We conducted a comprehensive review of the scientific literature using Web databases with the following keywords: natural soundscapes, natural sound, urban design, and mental health.

Results: Our research found that improving the urban environment soundscape for the well-being of city dwellers has become one of the most pressing challenges of modern times. In a growing number of published studies, positive psychological effects of natural soundscapes are explored using various methods such as questionnaires, biofeedback sensors coupled with virtual reality

experiences in laboratories, and quantification of the prevalence of restorative acoustic environments in parks. In a recent study (2023), Jian Kang from the United Kingdom, reported that “by taking psycho-acoustical, neural and physiological, and contextual factors into account, the European Research Council Soundscape Indices project will adequately reflect levels of human comfort, to integrate side-by-side with (and eventually replace) decibel-based metrics into existing (international) regulations”. The same paper highlighted how the transition from fighting noise pollution to creating soundscapes is key.

Conclusions: Architects should develop mandatory guidelines regarding the spatial planning focusing on managing natural soundscapes in cities. Various sites such as green urban public spaces that offers exposure to natural sounds should be an integral part of the urban environment. These areas must be with a high abundance of natural sound (geophony and bio phony) and a low anthropogenic sound to enhance human physical and psychological health.

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The Impact of Climate Change on Mental Health: A General Population Study

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Introduction: Climate change and its impact on mental health is a growing area of research. Several studies have explored the relationship between climate change and mental health, highlighting the various ways in which climate change can affect individuals' psychological well-being. Incorporating mental health indicators into climate change and health vulnerability and adaptation assessments is another important aspect of research in this area (Hayes & Poland, 2018). The study suggests that standardized methods to measure and predict the psychosocial outcomes of climate change should be implemented to better understand the mental health impacts. While the physical health consequences of climate change have received more attention, the mental health impacts are often overlooked (Nicholas et al., 2020).

Objectives: This study was planned to examine the impact of climate change the impact of climate change on mental health

Methods: This descriptive and cross-sectional study was conducted with individuals who willing to participate the study and above 18 years age. Individuals who saw the online advertisement and click on the study's link were brought to the study's home page on Online Surveys. Should they wish to proceed, they will be brought to an information page detailing the purpose of the study, how their confidentiality and anonymity will be preserved and how their data will be treated.

Socio-Demographic Data Form, Climate Change Worry Scale, Eysenck Personality Questionnaire Revised- Abbreviated, general health questioner and Depression, Anxiety, Stress scale were used