Happiness in the urban built environment, people, and places

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Happiness in the urban built environment, people, and places

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Abstract. The built and urban environment have an impact on citizens' health and well-being. This impact could lead to long-term results on individuals' happiness and quality of life. The environment we interact with, including our living, working, and social spaces, can significantly affect our health and could be considered as part of the determinants of health. WHO now defines health as a state of complete physical, mental, and social well-being, incorporating the built environment as a factor in promoting individuals' happiness and well-being. This scoping review examines the impact of the built and urban environment on citizens' health and well-being. The study explores the factors of the built environment that influence citizens' happiness and their impact on mental health. It suggests a more integrated, ecosystem-based approach between public, private, and citizens to create healthier and happier places.

1. Introduction

"Happy by Design: A Guide to Architecture and Mental well-being" and *"Happy City"* emphasize the effect that a tailored design, good planning, co-creation, and citizen participation can have on a person's well-being and health consequences of the use of natural light, views of green space and nature [1-4].

The research shows that people's health is influenced by factors that lie outside of the social and healthcare system. National Health Service in England (NHS) research and reports show that to create and keep people's health and well-being is needed to be taken in the consideration both the physical built environment and the social factors which shape neighborhoods and places where people live [5].

Happiness is one of the aspects measured in the quality of life (QoL) and the research on factors and aspects associated with happiness is expanding in various disciplines such as psychology, sociology, behavior, and city and urban planning [6–9]. For example, at the urban planning or neighborhood level, former studies have identified the determinants of happiness and provided recommendations for governmental strategies and city planning looking at various

aspects such as nature, health, social inclusion, and cohesion [10]. The literature suggests that built environment (BE) characteristics are important for proving an inclusive, happy, and well-being environment for citizens. When designing new areas, neighborhoods, or any built infrastructure planners, city developers, and architects must have the capacity to consider the health and well-being of people living in those areas.

As citizens, we are deeply influenced by our surroundings, even more than we understand and know. We have an automatic (non-conscious) response to shapes, patterns, and colors and we are only aware of less than 5 percent of our responses to our environment [11]. Another important aspect of the built environment and well-being in perceived evaluations of built environment characteristics by people is that the built environment characteristics were more often associated with subjective well-being, with perceptions of aesthetics and community cohesion particularly important [12].

The UNSDGs and the European Health Policy Framework [13] put the health and well-being of citizens of all ages at the center, ensuring that present and future generations have the opportunity to have equal access to healthy living spaces and social care. A key component and outcome of all the Sustainable Development Goals is health and implicit happiness and well-being. In SDG 3 Good Health and Well-Being, health has a central role, and almost all of the other 16 goals are directly or indirectly related to health [14].

The diagram below (Fig. 1) is based on two interlocking sets of theories: about urban ecosystems and the determinants of health. Each of the layers of the model impacts health and well-being. Equivalently each layer is influenced by land use change. The built environment layer is the sphere where land use planning has a direct impact. A change in the structure of the built environment alters the natural environment and the social and economic environment [15].
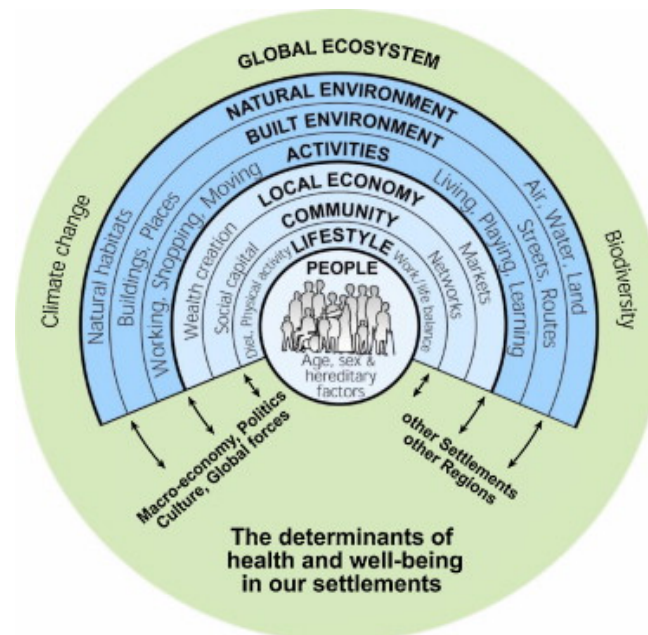

Figure 1. The settlement health map [15]

Looking at the determinant of health, well-being, and happiness we can see a direct link with the built environment, and we can see that any change in one of the layers will influence the others. The built environment is one of the key determinants of health, alongside inherited characteristics, lifestyles, and social and economic variables.

For the theoretical framework of this article, we have used the following definitions: i) build environment: the built environment can be broadly defined as the "*physical environment, surroundings and conditions that are constructed by human activity (e.g. buildings, streets, and parks)*",[16] ii) happiness: we linked the measurement of happiness with the self-reported Subjective well-being (SWB) - referring to how people *experience* and *evaluate* their lives and specific domains and activities in their lives [17].

For this article research we had the following research questions:
  i)   *what factors of the built environment affect citizens´ happiness?*
  ii)   *what is the impact of the built environment on citizens´ happiness?*

2. Methods

To find different factors of the built environment affecting the happiness of citizens, we decided to use scoping literature review method. A scoping literature review provides the opportunity to define the broad research question. The holistic approach of scoping review is suitable to cover a topic that contains a variety [18,19]. Considering our research question that covers a variety of factors affecting people's happiness through the built environment, this method seems to be the proper method for this research.

2.1. Procedural description

As the first step of the literature review, we chose the keywords based on the research question that we had. To shape the initial search, the following keyword was used (subjective happiness OR happiness) AND (built environment). After this, we chose three databases PubMed, Scopus, and Web of Science, and collected the articles which were found based on the keywords searched. To describe the guideline for the search, there was no publication year limitation but after the last sampling, all of the sample articles seem to be published after 2011 (figure 2). Through the first sampling, 142 articles were collected. The case studies and editorial were excluded from the sample and the article language was limited to English articles.
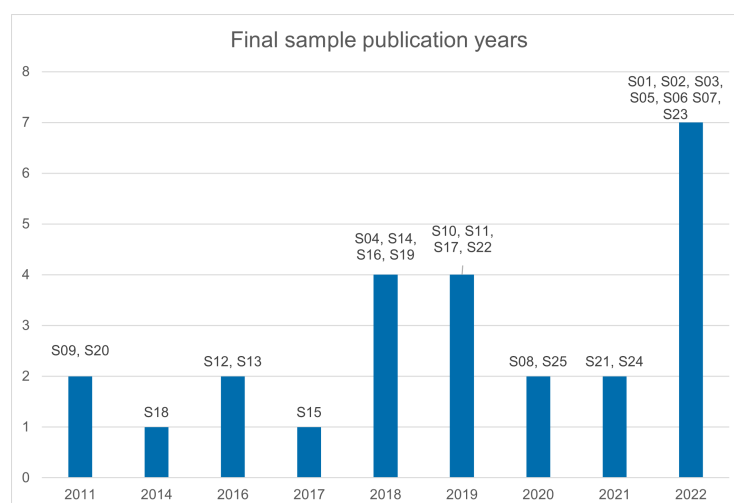

Figure 2. Publication year of the final sample

2.2. Sampling, Inclusion, and exclusion criteria

Through the second sampling, articles were filtered by the title to narrow the literature and adjust it with the aim of the scoping review. The articles were excluded when the topic of the article didn't contain the indicators of the search or when the topic was out of meaning defined to answer the research question. In the second sampling, the number of articles meant to include was 65 articles.

The third step was done based on removing the duplicate from the results of databases and it resulted in 50 papers. The fourth sampling was based on reading the abstracts and keywords. The articles were qualified if they at least had a connection with one of the parameters in the environment section (built environment, urban environment, neighborhood, indoor, outdoor) and had relations with one of the indicators of happiness determinants (mental health, psychological well-being, satisfaction, health, anxiety) and the impact on individuals. The articles were skimmed to see if the overall concept of the abstract is related to the main criteria and research questions. The fourth step resulted in 23 articles. The final sampling, which was snowballing through the article references resulted in 25 articles (figure 3).
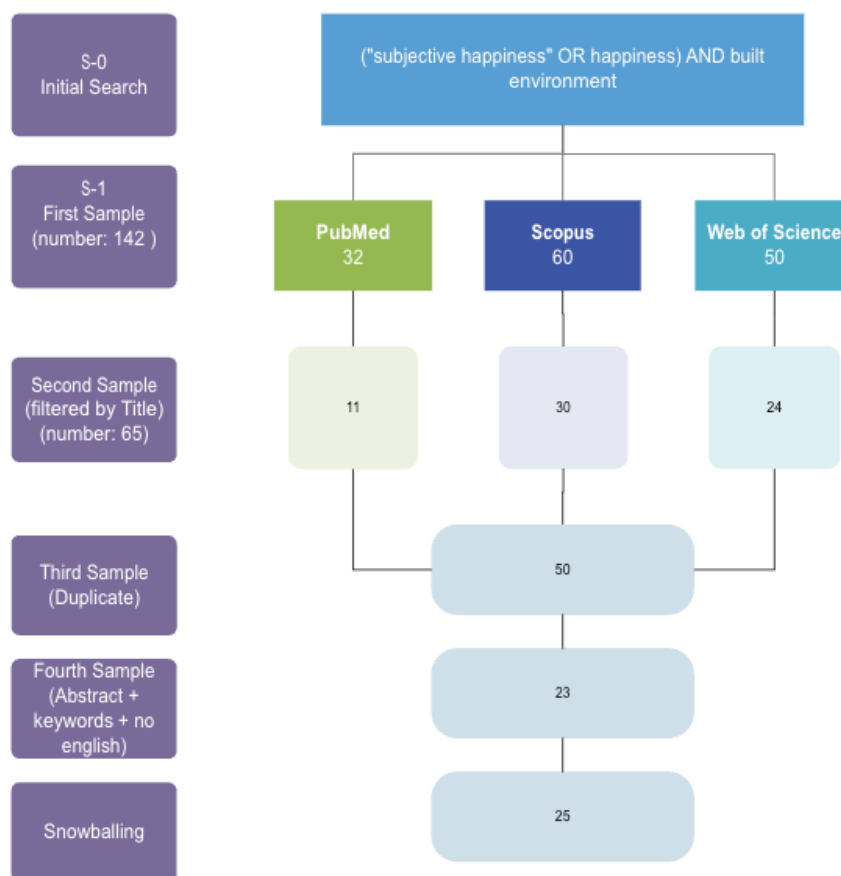

Figure 3. Chart of the scoping literature review steps

After defining the final sample, which could be found in the Appendix section starting with paper ID S01-S25, full texts were reviewed to ensure their relevance. All articles are categorized in an Excel file. The information is divided into different categories. The first part contains article information such as the database, article name, DOI, article writer information, the location of the study, and universities. The second part contains the type/method of the study, and also a brief description of the objective, method, and result. The last part of the Excel column was used to define all of the built environment factors that affected people's happiness.

2.3. Limitation

The scoping literature review has both advantages and disadvantages. The advantage of scoping review for the research question of this study was to cover the broad variety of studies related to the research question [20]. The disadvantage of the scoping review is that because of the nature of the question, which is broad, the answers may be found in a broad domain too. So, to organize the answer it needs authors to take a further step and synthesize the information.

3. Results

The following section of the article presents the findings from analyzing the 25 articles in the scoping review, out of which 20 articles incorporate a study or use-case with one or more countries and 5 articles are literature reviews. Our results showed a significant emphasis on the impact of outdoor, neighborhood, and social inclusion on the happiness and well-being of people. It also defines the green area and nature as a source of happiness and health for the citizens. The indoor environment has been also mentioned in 4 articles but in association with the outdoor environment.

3.1. Location of the studies

The location of the studies shows a majority of the study happened in Europe (figure 4). The Norway and United Kingdom with four studies each one of which has the highest number of publications. Studies from Greek with two publications, Ukraine, Italy, France, and Germany with one publication for each and the other publication from Europe.

The United States with five studies is the highest in the overall selected sample for this article. A few studies belong to China, Pakistan, Canada, and Malaysia.
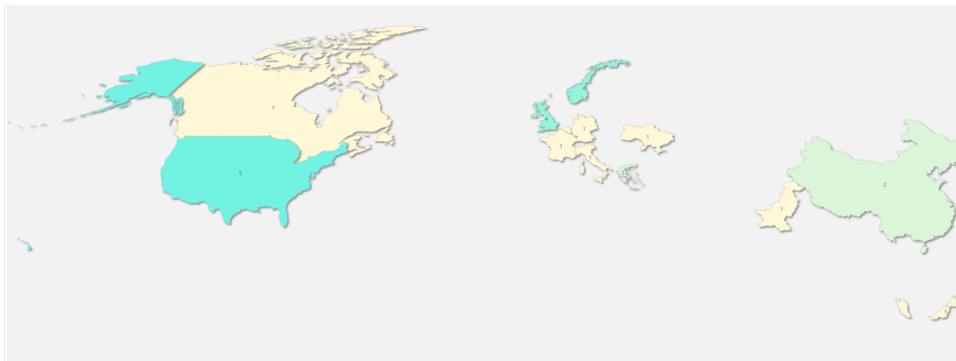

Figure 4. Location of the studies in different continents
reporting the effect of the built environment on happiness

3.2. The scientific article keywords

The following article keywords were found in the articles that were analyzed. The "urban", "environment" and "built" were keywords with high weight found in the article keywords section with the repetition of 10 to 14 times. The keywords "happiness", "city", "life", "well-being", "quality", "wellbeing", "health", "planning", and "subjective had the middleweight with the repetition of five to eight times. The rest of the keywords had a repetition of one to three times (figure 5).
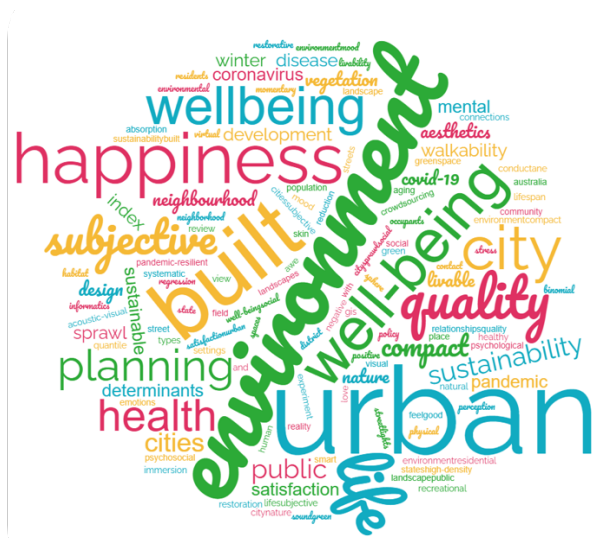
Figure 5. Analyse the repetition of the keyword in the article keywords section

3.3. The result keywords

After analysing the built environment factors affecting the happiness of the citizens, we came up with another word order with the neighborhood as the only word with a high weight of 21 repetitions (figure 6). The keywords of "city", "place", "green", "natural", "social", "happiness", "public", "satisfaction", "space" "access", "density", "building", "community", "environment", "nature", "park", "safety", "sense", "street" had the medium weight with the repetition of four to eight times. The words are written based on the order of repetition. The rest of the words were repeated one to three times in the result section.

Figure 6. Analyse the repetition of the keyword in the result section

3.4. The scientific article methods used for investigating happiness

The methods used in the studies were divided into five types. The majority of studies with 14 articles used quantitative methods to assess the impact of the environment on happiness and well-being (S03, S05, S06, S07, S10, S11, S13, S14, S15, S16, S18, S19, S20, S22). Except for two articles that used qualitative (S02) and case study methods (S01), the other articles were based on reviews and experiment methods. Five articles used experiment methods like a lab experiment to investigate happiness connection with different types of the built environment (S17, S21, S23, S24, S25).

3.5. The connection of the built environment's different layers with happiness

Our result showed a strong connection between the built environment and happiness. Happiness has a direct impact on well-being and both of them are connected to positive emotions. Positive emotions have a two-sided impact on cognitive control and social relationships [21]. Through our results, we come up with different studies emphasizing the impact of social inclusion, neighborhood, and green areas on the happiness of citizens. Most of the articles define the outdoors as the source of happiness for the citizens and four of the articles look at both indoor and outdoor areas and their combination (figure 7).
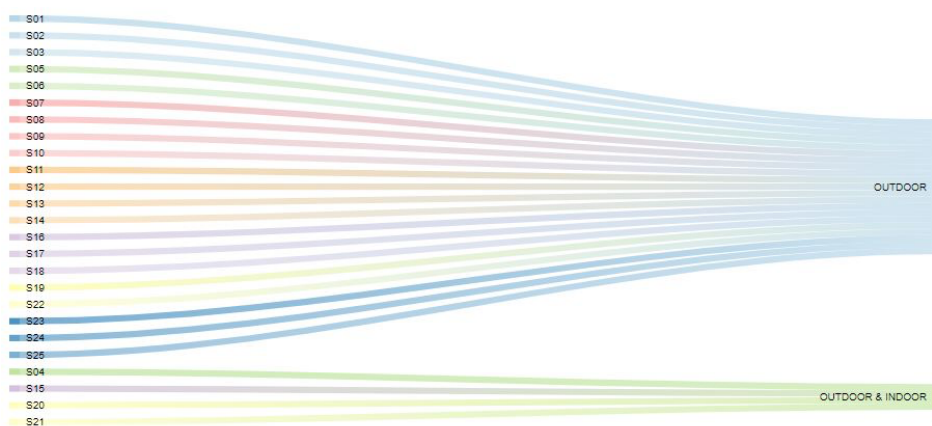

Figure 7. Article studies investigating the outdoor and indoor environment

Neighborhoods are identified as having one of the highest impacts on the citizens' happiness. The physical and functional aspects of the neighborhood and the possibility for connection and access to facilities (S03) will enhance people's happiness and well-being. the aesthetic quality of the neighborhood and the opportunity to have different experiences for leisure, liveliness, and activities such as shops, restaurants, and places for gathering are considered to have a direct impact on happiness (S04, S09, S12).

The amount of greenery in the neighborhood is another factor that is considered significant to increase happiness and mental health. From the macro level of the urban landscapes, city greening, parks, and squares to the micro level of flower beds, installations, landscaping terraces, and roofs, it impacts the happiness of individuals. The view from the living room to the green neighborhood will increase the impact of well-being. Also, the combination of the visual environment with natural acoustic exposure will have a higher impact on mental health. One article emphasized the impact of winter vegetation on recovering faster from mental fatigue (S01, S02, S03, S04, S06, S08, S09, S11, S12, S14, S17, S20, S21, S23, S24, S25).

Social inclusions were identified as the other factor that enhances happiness. The neighborhood which facilitates safety, trust, networks, and diversity and has a good reputation

and sense of belonging and identity provide an environment for citizens to feel and want to be included. Neighborhood attractiveness and possibilities for social interaction and activities for citizens will strengthen the sense of belonging and enhance communication (S03, S04, S07, S09, S12, S13).

4. Discussion and Limitations

4.1. Neighborhood and happiness

According to our investigation, the environment has a major effect on increasing citizen satisfaction and health. The happiness, mental health physical health, and safety of the people living and working in the city are under the pressure of what environment they are living and interacting with [22–25]. These environmental differences could result in inequalities in the mental health of citizens [26]. Neighborhoods as a scale of the city's environmental design had a major impact on citizens. While some articles emphasized the impact of the neighborhood with high density which provide the opportunity to engage more, some other article considered the higher density of the neighborhood as a negative point for happiness and mental health (S04, S05, S06, S07). Also, some articles investigated the structure of the neighborhood during COVID-19 and its structure impact on safety, health, and well-being (S05, S06). It seems all of these parameters such as happiness, mental fatigue, health, and safety are affected by the pandemic and unexpected situations. So, the structure of the neighborhood, outdoor and indoor environment which is designed to adapt to changes in people's lifestyles will help to keep citizens' health and well-being.

4.2. Greenery and happiness

The impact of nature and different types of green areas is defined as significant on the happiness of citizens (S01, S02, S03, S04, S06, S08, S09, S11, S12, S14, S17, S20, S21, S23, S24, S25) [27]. One study emphasized the different types of nature such as a courtyard with grass, a courtyard with trees, and a courtyard without vegetation, the grass one had the most impact on people's happiness. It could be assumed that the different type of nature has not the same impact on people's happiness (S25). Another study emphasized the different types of nature and said that natural green spaces were more efficient than parks and sports fields, while another study mentions the environment being scenic locations is important whether it is the natural or built environment (S11, S22) It seems important to choose a proper greenery type for the neighborhood space to have the highest impact for citizens health and wellbeing.

4.3. Social inclusion and happiness

Studies emphasize the positive effect of social inclusion and happiness. The variety of activities and possibilities of having spaces with multi-usage functionality to use for both young residents and older residents allows for interacting more in the environment [28,29]. Also, the quality of the neighborhood which provides a good reputation, sense of belonging, and identity will help in citizens' encouragement and empowerment to want to be more social and increase happiness (S03, S04, S07, S09, S12, S13). Societies are affected by the sense of belonging both to their environment and social connections which could be considered by different stakeholders in city development [30–32]. Providing an environment that could strengthen the sense of belonging and the identity of people will lead to encouraging social activity and social inclusivity.

5. Conclusion and recommendations

The built environment has a significant impact on people´s lifestyles, behavior, and health. this impact is affected by different layers of built/Urban environments from different scales. Urban areas, public spaces, urban social areas, neighborhoods, green spaces, housing design, and interiors are some examples of environments that have an impact on city health.

People spend two-thirds of their lives in the urban environment and research has shown that they spend 90 percent of their time in the indoor environment [33,34]. The built environment has a direct correlation and shapes the central importance of upgrading public health and well-being.

The built environment plays an important role in improving the health, well-being, and happiness of individuals and society. The built environment sector is rising toward taking a holistic perspective of well-being and emerging the implication of it in a practical approach. Research areas and studies are rising on these topics showing the clear link and need, but not yet mainstream in the development of future cities.

Planners, designers, and public health systems should use a more integrated approach and move away from silo systems. The abundance of evidence that supports the connection between the environment and health outcomes creates the opportunity for fostering collaborative working between various actors in an ecosystem way: the public sector, private sector, and citizens. The importance of community participation and 'bottom-up' approaches to developing happy neighborhoods and urban interventions should be embraced as a strategy for creating better places to live.

We recommend considering the factors of the environment which could have the highest impact on happiness and health in the neighborhoods for future development of cities to have healthier cities and happy citizens in the future.

6. Acknowledgment

Appendix

ID paper	Ref. no	Title
S01	[35]	Systematization of Sustainable Urbanized Landscapes for Happiness and Quality of Life
S02	[36]	Psychosocial Well-Being Determinants and Occupants' Happiness in a Green Neighbourhood/Community
S03	[37]	City love and place quality assessment of liveable and loveable neighbourhoods in Rotterdam
S04	[38]	Rethinking how built environments influence subjective well-being: a new conceptual framework
S05	[39]	COVID-19 and the compact city: Implications for well-being and sustainable urban planning
S06	[40]	COVID-19 and urban planning: Built environment, health, and well-being in Greek cities before and during the pandemic
S07	[41]	What makes cities livable? Determinants of neighborhood satisfaction and neighborhood happiness in different contexts
S08	[42]	Environmental determinants of population health in urban settings. A systematic review
S09	[43]	Understanding the pursuit of happiness in ten major cities
S10	[44]	Compact city, urban sprawl, and subjective well-being
S11	[45]	Does nature make us happier? A spatial error model of greenspace types and mental wellbeing
S12	[46]	Planning for Happy Neighborhoods
S13	[47]	Happiness and health across the lifespan in five major cities: The impact of place and government performance
S14	[48]	Absorption: How nature experiences promote awe and other positive emotions

S15	[12]	The objective and perceived built environment: What matters for happiness?
S16	[49]	Built environment and social well-being: How does urban form affect social life and personal relationships?
S17	[50]	Public spaces and happiness: Evidence from a large-scale field experiment
S18	[51]	Aesthetic capital: What makes London look beautiful, quiet, and happy?
S19	[52]	Neighborhood Physical Environments, Recreational Wellbeing, and Psychological Health
S20	[53]	Linking green space to health: a comparative study of two urban neighbourhoods in Ghent, Belgium
S21	[54]	Impacts of nature and built acoustic-visual environments on human's multidimensional mood states: A cross-continent experiment
S22	[55]	Happiness is Greater in More Scenic Locations
S23	[56]	Predicting the effect of street environment on residents' mood states in large urban areas using machine learning and street view images
S24	[57]	Mental health in winter cities: The effect of vegetation on streets
S25	[58]	Trees, grass, or concrete? The effects of different types of environments on stress reduction

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