

I feel so good here! The impact of the physical environment on health and well-being

How do the environments we create and maintain, such as our homes, offices or schools, affect our well-being? Which characteristics of places and spaces improve or impair human well-being?

The physical environment that surrounds us, whether it is man-made or natural, and which can be maintained or modified, has a real impact on our physical and psychological health, as well as on our social relations - dimensions that contemplate the definition of well-being according to the World Health Organization.

Much of the scientific research that relates psychology to the environment deals with issues such as climate change and environmental sustainability. The goal is usually to encourage pro-environmental behaviors, that is, behaviors that either damage as little as possible, or even that preserve, the environment. However, the approach in the current article is different. The environment is understood here as the "lever" for the outcome: personal health and well-being. Thus, the focus is on understanding how the environment around us influences our well-being.

Environmental aspects can be strategically modified to significantly improve the daily lives of people with specific health problems or difficulties. For example, more than half of the Portuguese adult population is overweight, according to the National Statistical Institute of Portugal. In addition, we are living in an increasingly aging society. The same trends are taking place worldwide. The challenges faced by elderly and overweight populations have attracted the attention of a growing number of environmental psychologists and designers, who have been working on creating environments that can alleviate some of the difficulties faced by these populations, for example by creating more accessible spaces suitable for the elderly or people with low mobility. Spaces can also be conceived in order to

increase people's opportunities to engage in physical activity, as part of their day-to-day activities (e.g., facilitating walking, cycling, or the use of public transportation).

However, environmental psychology has an even broader application for improving health and well-being. There are studies that indicate that strategic changes in the environment promote health. A well-known example is the study of the effects of nature on hospital environments. Since the mid-1970s, research has been carried out on the impact of nature on physical and psychological health. Roger Ulrich was one of the first researchers interested in the subject. He compared patients who saw a natural landscape (trees) from their bedroom window with patients who had no visual access to a natural landscape and who only saw brick walls through their windows. The results were surprising. Visual access to nature resulted in a shorter postoperative hospital stay and lower consumption of strong analgesics, compared to the results of the patients who saw only brick walls from their windows. Thus, a simple difference in the environment had a huge impact on the recovery and well-being of hospitalized patients. In addition, this impact was felt on an economic level - as the stronger analgesics are more expensive, there was a reduction in costs.

Since the environment that surrounds us has a direct effect on our health and well-being, an increasing number of facilities have been studied from this perspective, from hospitals, and centers specialized in the treatment of Alzheimer's and dementia, to nursing homes, among others.

The Impact of Everyday Environments

There are other spaces where people spend much of their time whose characteristics can have a huge effect (positive or negative) on their health and well-being, such as the workplace, home, and school.

Work. Given that most people spend at least one third of their life at work, it is relevant to study the relationship between health, well-being and the environment in organizational settings. Previous studies have found that when people are satisfied with their office view, their job satisfaction and productivity increase. The results demonstrate how a "green view" (i.e. where it is possible to see natural elements, such as the sky, trees, flowers, and parks) is associated with higher job satisfaction and better performance, when compared to a "construction view" (i.e. where the view is composed mainly of buildings). Another study has found that a workplace environment which allows each worker to adjust the lighting intensity is associated with an increase in job satisfaction and commitment, and with a decrease in job-related illness. On a related note, efforts have been made to understand how the workplace architecture can encourage cooperation and brainstorming, and on the other hand promote individual concentration.

Home. The environment at home is highly relevant to one's well-being. People spend most of their time at home. It is, indeed, the place where they can be close to their family and social network. For many, it also represents the biggest financial investment of their lives. Given the great importance of our homes in our lives, it is crucial to understand how their environment influences the health of the people living in it. Evidence has been found indicating that the house's environmental conditions can have an impact on mental health, for example, living in a house with a high level of humidity and mold is associated with an increased risk of depression. Other studies indicate that the excessive accumulation of unnecessary goods at home adversely affects health and hygiene, and even the quality of life of family members. These data indicate that the environmental home conditions are determinants for mental health.

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School. The school's physical environment has a significant impact on students' well-being. For example, one study has shown that ceiling height and wall color affect children's cooperative behavior. Children observed in a classroom with a lower ceiling and white-painted walls demonstrated a higher level of cooperation in producing a product together or solving a problem than those in a room with a higher ceiling and red walls. In a different study, having the walls painted in the students' favorite colors was related to a decrease in the number of mistakes made. Other variables that have been explored in the educational context are student density at school, noise, odor and air quality. These results demonstrate how the classroom environment can influence students' learning process and behavior, and highlight the necessity of further research on these matters.

The Impact of the Environment: Too Important to Neglect

The studies discussed in the present article are just a few examples on the intersection between Psychology, Design and Architecture. The physical environment is not something that should be taken lightly; it is something that affects us profoundly and has the potential for improving our lives, happiness and health. Seeking to achieve this goal, environmental nudges have been put into practice, grounded on Behavioral Economics and Psychological principles, which have been effective in encouraging people to engage in behaviors that promote one's well-being.

As highlighted by Roger Ulrich, the design of the facilities usually emphasizes their functionality and efficiency. However, this can lead to psychologically adverse effects, despite the functionally effective resources it might bring.

Neglecting Psychology's major role on the design of physical spaces means missing out on the opportunity to develop a therapeutic and social intervention. In the worst case scenario, this misuse of Psychology's know-how could lead to the construction of physical environments that are detrimental to people's health. Further research in this field could assist on creating, improving and maintaining efficient environments that help promote physical, psychological and social well-being.

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References and supplementary readings

- Devlin, A. S. (2018). *Environmental Psychology and Human Well-Being: Effects of Built and Natural Settings*. Academic Press.
- Evans, G. W., Wells, N. M., & Moch, A. (2003). Housing and mental health: a review of the evidence and a methodological and conceptual critique. *Journal of social issues*, 59(3), 475-500.
- Gifford, R. (2014). Environmental psychology matters. *Annual Review of Psychology*, 65, 541-579.
- Higgins, S., Hall, E., Wall, K., Woolner, P., & McCaughey, C. (2005). The impact of school environments: A literature review. London: Design Council.
- Lumber, R., Richardson, M., & Albertsen, J. A. (2018). HFE in Biophilic Design: Human Connections with Nature. In *Ergonomics and Human Factors for a Sustainable Future* (pp. 161-190). Palgrave Macmillan, Singapore.
- Velarde, M. D., Fry, G., & Tveit, M. (2007). Health effects of viewing landscapes – Landscape types in environmental psychology. *Urban Forestry & Urban Greening*, 6(4), 199-212.