

Chapter 11

The Biophilia Hypothesis and Mental Health: A Call for Biophilic Design

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ABSTRACT

The purpose of this chapter is to highlight literature related to the benefits of spending time in nature and the usefulness of biophilic design to boost mental health. Biophilic design can increase feelings of well-being of workers or inhabitants, increase connection to purpose and meaning-making, and inspire creativity. This chapter will outline (1) research connected to the mental health benefits of spending time in nature for both children and adults; (2) a description of the biophilia hypothesis; (3) an exploration of nature, spirituality, and meaning-making through the lens of the biophilia hypothesis; (4) biophilic design and equity regarding nature access in urban areas for underserved populations; and (5) a call for increased integration of biophilic design into architecture and urban planning.

INTRODUCTION

Yet I experienced sometimes that the sweetest and tender, the most innocent and encouraging society may be found in any natural object, even for the poor misanthrope and most melancholy man. There can be no very black melancholy to him who lives in the midst of Nature and has his senses still. (Thoreau, 1908, p. 101)

As Henry David Thoreau suggests in the above quote, there are tangible, emotional, and psychological benefits for humans that embrace their inherent urge to engage in a relationship with nature. Recent research connects the biophilia hypothesis or the assertion that humans have an innate attraction to “that which is life-giving,” or the natural world to psychological health and increased health of communities (Kellert, 1993; Wilson, 1984). This chapter will outline research on how nature supports mental health and well-

DOI: 10.4018/978-1-7998-6725-8.ch011

being, provide a definition of the biophilia hypothesis, introduced by Erich Fromm, and hypothesized by Harvard zoologist, E.O. Wilson (Fromm, 1964; Wilson, 1984). Nature connection, meaning-making, and spirituality will be explored, as well as the need for access to green space in communities, particularly in underserved communities, which typically have less access to green space than neighborhoods with more financial resources dedicated to green spaces (Schalkwijk et al., 2018). Finally, a call for more biophilic design in cities, workplaces and residential neighborhoods will be explored, with suggestions provided through the lens of mental health, and the research outlined in this chapter.

RESEARCH ON NATURE AND MENTAL HEALTH

Human beings depend on the health of the natural environment in order to survive. Recently, researchers have focused on understanding the link between nature and mental health, and the ways in which humans may be dependent on nature for spiritual and emotional needs as well as survival (Friedmann & Thomas, 1995; Frumkin, 2001; Katcher & Beck, 1987; Maller, et al., 2006; Roszak et al., 1995; Softas-Nall & Woody, 2017; Wilson, 1984). While Erich Fromm first explored the concept of biophilia or (love of life), Edward Owen Wilson, a socio-biologist and Harvard zoologist expanded on the idea, and the biophilia hypothesis emerged (Barbiero & Berto, 2021). The Biophilia hypothesis asserts that humans have an inherent attraction or emotional connection toward living things. The biophilia hypothesis is defined as “the innate tendency to focus on life and life-like processes (Wilson, 1984, p. 1). Further, Wilson emphasized that human development and learning are linked to the evolution of humanity. The adaptive survival strategies humans learn based on the natural world are important for human survival and genetic fitness. Wilson also argued that personal fulfillment can be attained through a relationship with nature through care and conservation of nature and biodiversity (Kellert, 1993).

Greater psychological health for humans can be gained by spending time in nature, or outdoor green spaces Berman et al., 2012; Bowler et al., 2010; Bratman et al., 2012). These benefits include decreased stress levels and improved emotional well-being (Hartig, et al., 1991; Leather et al., 1998), increased self-esteem (Barton et al., 2012; Schreyer et al., 1990), and greater connection to meaning-making, purpose, and spirituality (Roscoe, 2009; Softas-Nall & Woody, 2017). People exhibit fewer symptoms of depression and anxiety when they have access to green space (Maas et al., 2009), and increased focus and relaxation when spending time in nature (Kaplan, 1995). Children also benefit from spending time in green (parks, woods) and blue (beach) spaces. These benefits manifest in decreased symptoms of Attention Deficit Hyperactivity Disorder (ADHD) through increased focus, and improved behavior based on parent reports (Amloly et al., 2014; Faber et al., 2009; Faber et. al., 2011). Children spending more time in nature also had healthier body mass index (BMI) measures, and therefore, greater physical health (Manandhar et al., 2019).

Due to the psychological benefits humans experience in relation to nature, the fields of ecopsychology and ecotherapy have emerged. These disciplines recognize the relationship that humans have with nature as the key to living a meaningful life, fulfilled and connected to a human self-that is not separate from nature, but rather a part of nature. Ecotherapy is defined as a form of psychotherapy that recognizes the relationship between humans and nature (Hasbach, 2012); it involves green prescriptions, or the integration of nature and mental health (Robinson & Breed, 2019). As there is an entire discipline of psychology focused on increasing humans' nature connection, there are also urban design movements focusing on sustainable ecological design to both conserve and increase human-nature connection in

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