

Nature as a Human Health Asset: An Extensive Review

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Abstract : Introduction: Nature could act as an asset for human health protecting against possible diseases and promoting the state of both physical and mental health. Goals: This paper aims to determine which natural elements present evidence that show positive influence on human health, on which particular aspects and how. It also aims to determine the best biomarkers to measure such influence. Method: A systematic literature review was carried out. First, a general free text search was performed in databases, such as Scopus, PubMed or PsychInfo. Secondly, a specific search was performed combining keywords in order of increasing complexity. Also the Snowballing technique was used and it was consulted in the CSIC's (The Spanish National Research Council). Databases: Of the 130 articles obtained and reviewed, 80 referred to natural elements that influenced health. These 80 articles were classified and tabulated according to the nature elements found, the health aspects studied, the health measurement parameters used and the measurement techniques used. In this classification the results of the studies were codified according to whether they were positive, negative or neutral both for the elements of nature and for the aspects of health studied. Finally, the results of the 80 selected studies were summarized and categorized according to the elements of nature that showed the greatest positive influence on health and the biomarkers that had shown greater reliability to measure said influence. Results: Of the 80 articles studied, 24 (30.0%) were reviews and 56 (70.0%) were original research articles. Among the 24 reviews, 18 (75%) found positive results of natural elements on health, and 6 (25%) both positive and negative effects. Of the 56 original articles, 47 (83.9%) showed positive results, 3 (5.4%) both positive and negative, 4 (7.1%) negative effects, and 2 (3.6%) found no effects. The results reflect positive effects of different elements of nature on the following pathologies: diabetes, high blood pressure, stress, attention deficit hyperactivity disorder, psychotic, anxiety and affective disorders. They also show positive effects on the following areas: immune system, social interaction, recovery after illness, mood, decreased aggressiveness, concentrated attention, cognitive performance, restful sleep, vitality and sense of well-being. Among the elements of nature studied, those that show the greatest positive influence on health are forest immersion, natural views, daylight, outdoor physical activity, active transport, vegetation biodiversity, natural sounds and the green residences. As for the biomarkers used that show greater reliability to measure the effects of natural elements are the levels of cortisol (both in blood and saliva), vitamin D levels, serotonin and melatonin, blood pressure, heart rate, muscle tension and skin conductance. Conclusions: Nature is an asset for health, well-being and quality of life. Awareness programs, education and health promotion are needed based on the elements that nature brings us, which in turn generate proactive attitudes in the population towards the protection and conservation of nature. The studies related to this subject in Spain are very scarce. Acknowledgements. This study has been promoted and partially financed by the Environmental Foundation Jaime González-Gordon.

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