

Forest is a state of wellbeing: A review of the health benefits associated with the practice of “Shinrin-yoku”

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ABSTRACT

Shinrin-Yoku (SY), also known as Forest Bathing (FB), is a Japanese practice of immersing oneself in nature by using all five human senses in a mindful and slow manner. SY is reported in the literature as having many positive health benefits and is becoming popular worldwide. This heightened awareness, combined with the scientifically proven health benefits associated with SY, researchers recently conducted a Scoping Review (ScR) to identify programmatic components, monitored health information, nature prescriptions, trends, geographical locations, themes and time on nature. Following the PRISMA-ScR recommendations the researchers followed seven electronic databases for SY empirical studies published from 2017 through 2022. Due to the interdisciplinary aspect of SY research, PubMed, CINAHL, PsychInfo, ScienceDirect, SCOPUS, EMBASE, JSTOR were included in the ScR. The results were screened and extracted by the researchers by using Covidence. The databases provided 241 results, with 110 references deleted during the deduplication process, 131 papers were initially in the title and abstract review phase. The results provided 82 unique results identified as relevant during a full text review by each researcher. The final stage of the ScR provided 63 papers meeting the inclusion criteria and were extracted for reportable data. The results of the ScR indicate SY has positive Physiological (PHYS) and Psychological (PSYCH) results across a variety of settings and age groups. Nature blends the mind, body and even the spirit together to promote wellbeing and, therefore, continued research is necessary to unearth even more short and long-term health benefits for all individuals living in a primarily urban world.

Keywords: Shinrin-Yoku; Forest bathing; Health benefits of nature; Nature therapy; Scoping review

Abbreviation: SY: Shinrin-Yoku; FB: Forest Bathing; ScR: Scoping Review; PHYS: Physiological; PSYCH: Psychological.

INTRODUCTION

The rates of PHYS health-related morbidities, such as cardiovascular disease, cancer, obesity, liver disease and other chronic diseases associated with sedentary lifestyles, are continually rising [1-3]. Furthermore, mental health issues, such as suicide, Post Traumatic Stress Disorder (PTSD), substance use disorder, and depression continue to escalate [4]. Health promotion programs and integrative healthcare practices are needed more than ever due to the rise in acute and chronic illnesses globally. Quantitative and qualitative research shows SY has a positive impact on mitigating the increase in health problems [5,6]. Historically, the Greeks promoted spending time in nature as a stress reducer and to enhance overall wellbeing. Furthermore, artists, poets, adventurers, naturalists and writers indicate the wonder and awe felt when one is in a natural environment. Nature, as a form of healing, has been practiced by the indigenous people in their use of herbal medicine and rituals. Recently, Moises Hernandez, a descendent of the Lenca Mayan people, stated we have everything we need in nature...holistic medicine, community building, and education.

The PHYS and PSYCH health benefits of SY have been published in scientific journals [7-9]. For purposes of this review, the PSYCH advantages attributed to SY will be highlighted. The effects of SY practice on human stress, PTSD and other trauma related episodes will be showcased in the literature review.

DESCRIPTION

Researchers discovered taking a 20-minute stroll in nature reduced human stress-levels. Hunter, Gillespie and Chen, 10 set out to determine the nature contact parameters, such as frequency, duration and nature quality on the stress biomarkers, cortisol and amylase. The researchers determined nature exposure reduced both biomarkers significantly. Hunter and colleagues have made significant headway in determining the amount of nature exposure necessary to reduce stress levels. While their study was a quantitative method, a mixed-methods approach may be of value for the lived-experience of stress reduction. When stress reduction is obtained by a specific amount of time in nature and its direct effect on human anxiety, rumination, and insomnia then individuals have a guide in their busy industrial lives. This study is important in supporting the Nature Rx movement.

According to Bobo, trauma is an emotional response to a serious physical or emotional injury or event that can cause significant distress and disruption to your life. Such events as war, physical, mental or sexual abuse, natural disasters, terrorism, accidents, life-threatening events and military combat are documented causes. Upon a cursory literature search, there is limited research of the effects of SY on trauma responses, however, present limited research points in the direction of the positivity of nature immersion has

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on the signs and symptoms related to trauma. Seymour published results indicating the further we are physically from nature the more likelihood of the presentation of depression and anxiety. A 10-year longitudinal comprehensive study of two million plus adults' medical records in Wales, led by researchers at the University of Liverpool, determined the effect of differences in exposure to green (wooded area, park, or field) and blue spaces (marina, lake or sea) on human mental health, specifically depression and anxiety. This study provides a deeper understanding of nature and the human condition. Furthermore, these same researchers make a call for researchers to search for reasons there is a difference in health equity evidence of those living in low versus high-income neighborhoods. The hypothesis of individuals in greatest need and may benefit the most, must have access to green and blue spaces to protect mental and physical health and promote wellbeing. This hypothesis spotlights the need to research health equity in our public health systems.

Bobo explains trauma related conditions present with symptoms of feeling disconnected from the physical body and the environment. Nature therapy provides a nurturing connection with the earth and promotes healing for these individuals. Purported ways nature exposure, such as the practice of SY, heals trauma experienced by survivors are mindfulness practices, reduction of stress and anxiety levels, promotion of feelings safe, soothing the senses, physical activity, enhancing emotional regulation, improving self-esteem and self-confidence, and growing resilience. Mindfulness practices, such as meditation, staying in the present moment, while being fully immersed in nature, allows for the release of negative emotions and thoughts. Healing forest provides meditation with nature: Paths for beginners. These nature meditations showcase how nature may provide nurturance, stability, freedom and a sense of harmony. The calming effect of nature has a powerful impact on one's capacity to relax (stimulate the parasympathetic nervous system) and improve grounding and wellbeing, as well as ameliorate symptoms of PTSD. When trauma survivors feel a sense of safety provided by the connection with the earth and its elements there is a sense of control and empowerment. Nature immersion provides soothing sounds (water running in a stream), beautiful sights (fall foliage colors), and enjoyable fragrances (cedar

and pine), all of which provide a nurturing connection that reverses feelings of disassociation and disconnection. Physical movement promotes the release of endorphins that assists in mood regulation, self-worth and personal accomplishment. Overall, the blending of these qualities assists trauma survivors to face each day uniquely with gratitude and fosters a deeper understanding of themselves and those around them.

CONCLUSION

The empirical research on SY is becoming more established, as evidenced by the increase attention to the benefits of being in nature, however, there are still many concepts, populations, hypotheses and curiosities to be determined, discussed and revealed through conversations and various research methodologies. Most importantly, nature is to be enjoyed, and we as individual educated stewards are to make certain all individuals may benefit from being one with nature no matter the social or economic status, physical location or education. As Johann Wolfgang von Goethe reminds us: Close your eyes, prick your ears, and from the softest sound to the wildest noise, from the simplest tone to the highest harmony, from the most violent, passionate scream to the gentlest words of sweet reason, it is by nature who speaks, revealing her being, her power, her life, and her relatedness so that a blind person, to whom the infinitely visible world is denied, can grasp an infinite vitality in what can be heard.

We intuitively know the deep PHYS and PSYCH benefits associated with lingering in nature due to our history of living in/ with and as an integral part of nature. As evidenced by this mini-review, healthcare providers, scientists, naturalists, psychologists, and neurologists may engage with a deeper understanding of the benefits associated with SY and look at its wonderful healing for mankind. It appears to be a natural healing art, forest as a state of wellbeing. John Muir poignantly states after his return from one of his expeditions, for going out, I found, was really going in. Going out in nature brings home the practice of going in (ward) and this inwardness promotes resilience, comfort, safety, connection and a sense of inner peace for individuals who are facing psychological challenges.

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