

Are outdoor forest experiences a viable form of pain management for chronic pain patients?

Aim: To critically evaluate whether an outdoor experience in a local forest environment using meditative exercises is a viable alternative therapeutic method for pain management.

RO1: Create and manage a pain management day programme that involves forest bathing (Shirin Yoku), mindfulness activities based on biophilic activities, and some light physical exercise-focused sensory-reception, with a reflective period at the beginning and the end of the day.

RO2: Investigate and explore participant reactions to outdoor experiences concerning chronic pain levels and biopsychosocial factors. To be undertaken pre- and post-experience via questionnaires and semi-structured interviews.

RO3: Analyse and critically compare participant experiences regarding their outdoor pain management experience alongside their current pain management programme experience.

RO4: Critically evaluate the sustainability and viability of a forest experience as a pain management programme based on the participants' experience and theories of Wilson's Biophilia (1984), Kaplan's Attention Restoration Theory (1989) and Ulrichs (1984) theory of views of nature aiding recovery.

Theory

Chronic pain is a new concept, and the 20th Century marks a dynamic evolution in understanding pain. It was not until the 1990s that Chronic Pain was defined 'as a condition in which pain is present for three months or more in at least five parts of the body (Han et al., 2016) which gives us scope and breadth to understand the perspectives towards pain until this point. Furthermore, Chronic Pain has recently been recognised as being multi-factorial, 'biological, psychological, and social factors contribute to the pain syndrome.' (WHO, 2020). Furthermore, Chronic Primary Pain is also a new diagnosis that recognises 'Pain in one or more anatomical regions that is characterised by significant emotional distress (anxiety, anger/frustration, or depressed mood) or functional disability (interference in daily life activities and reduced participation in social roles). The diagnosis is appropriate independently of identified biological or psychological contributors unless another diagnosis would better account for the presenting symptoms.' (WHO, 2020).

This perception and biopsychosocial (Traverso-Yeprez, M, 2001) understanding of pain being multi-factorial (Angelum and Gomes Lima, 2007; Lima and Trad, 2014; Harding et al., 2010; Angelum and Gomes Lima, 2007) and not simply a symptom, is revolutionary. Previously thought of as existing in a vacuum (Bushnell et al., 2015) or being purely physiological or anatomopathological, multiple sources of analysis discovered that the cost of pain can be remarkably high, both to healthcare services and socioeconomic wellbeing nationally and worldwide (Lima et al., 2014; Han et al., 2016; Kang et al., 2015). The estimated prevalence of Chronic Pain in the UK is 43.5% (Stanhope et al., 2020), higher than in Australia, the United States and France, and costs are equal to that of cancer, cardiovascular, and diabetes treatments, respectively (Cousins et al., 1995; Lima et al., 2014)

Chronic pain is a multifaceted, complex, individually subjective, and solitary experience for the patient, yet remains nosological and physiological to most in the healthcare field (Angelum and Gomes Lima, 2007; Lima et al., 2014; Ajma et al., 2021). Despite this contemporary biopsychosocial

perspective of chronic pain, which identifies and accepts the phenomenon as an invisible condition with multiple social and cultural factors, treatment options have not much changed since the 1970s, and clinical impact is limited (Vachon et al., 2015, Lima et al., 2014). Pain management programmes are typically conducted in treatment settings that are devoid of distracting stimuli (Malenbaum et al., 2008), where participants are sat at desks for the entirety of the programme – usually up to 6 hrs a day - reading from a folder, limiting accessibility, freedom of movement and, potentially exacerbating physical symptoms.

A vacuum exists in which the natural environment can address pain and its associated factors. There is a gap between health professionals' understanding of pain and the experience lived by the patients. Current pain management programmes focus on fundamental psychological underpinnings of pain acceptance and management to counteract the comorbidities of chronic pain, depression, anxiety, and social isolation (Lima et al., 2014, Angelum and Gomes-Lima, 2007). However, there is not enough focused research on alternative methods of holistic pain management or the social and economic inequalities that contribute to pain. This is where there is an opportunity for natural outdoor experiences to mediate the space provided between current PMPs and the areas in which it fails to make a significant impact for the patient in both a healthcare capacity and for financial factoring.

Biophilia, Nature Therapy and Shirin Yoku.

In the last two decades, there has been building evidence that supports the hypothesis that the environment is an effective intervention to relieve pain and psychological distress (Han et al., 2016; Craig, 2003; Melzack, 1999; Fields and Basbaum, 1999 in Melenbaum et al., 2008). Wilson's (1984) Biophilia Hypothesis states that all human beings have a natural affinity and attraction to nature due to our inherent genetic disposition. It provides the basis for the belief that pain, and its associated psychological and physiological symptoms can be alleviated by spending time in nature.

Nature therapy (NT) is a concept defined as a "set of practices aimed at achieving 'preventative medical effects' through exposure to natural stimuli that render a state of physiological relaxation" (Song et al., 2016 in Hansen et al., 2017). The conceptual framework of Nature Therapy has extensive and relevant links to Biophilia. Indeed, Sir Professor John Arthur Thomson (1914), a biologist, openly asserted and clarified the healing power of nature in his key-note speech "Vis Medicatrix Naturae" the innate ability of the body to heal itself in connection to and with Nature (Selhub E.M. and Logan A.C., 2012 in Hansen et al., 2017).

A psychological underpinning and independent framework of NT has been posed by Berger (2008), whose novel theory focuses on individual detachment from nature, community experience and spirituality as linking to increases in mental and physical health issues. Berger states that Nature Therapy is a dualistic and integrative reflective healing process, as the therapy takes place in nature, and the experience exists as a part of human nature.

A pivotal addition to preventable healthcare and healing theory surfaced in Japan in the 1980s called Shirin-Yoku, or Forest Bathing (aka. Forest Therapy). Forest Bathing consists of numerous factors' including a psychological approach, physical activity, and the provision of a safe and restorative environment in which an individual can independently experience cognitive change' (Han et al., 2016). There have been multiple studies that have proved the effectiveness of the therapeutic effects of Shirin-Yoku (Jung et al., 2015; Lin Q, 2010; Lee et al., 2003; Lee et al., 2011; Sung et al., 2012; Park et al., 2014; Shun et al., 2010 in Kang et al., 2015). These findings confirm the relevance

and clinical importance of Forest Therapy; however, Shirin Yoku has not yet thus far received significant recognition or application in the Chronic Pain treatment field. Therefore, there is a clear opportunity for outdoor therapeutic experiences to aid those suffering from chronic pain.

Literature Review

The Literature Review highlighted the need for empirical data on chronic pain patients' experiences in the outdoors as a viable pathway for Chronic Pain therapy and management. Throughout the literature, I recognised various potential links between the healing nature of the outdoors that could aid with health and wellbeing. However, I also identified gaps in the literature where nature could help those who suffer from chronic pain.

In my literature review, I included the following areas of specialist study:(for this assignments word limitation, I will insert the Research Aim at the end of the heading)

- Biopsychosocial elements that affect health and well-being include a sub-focus on illness, disability (learning and physical), and unemployment. **RO2.**
- Chronic pain- its underlying causes and historical evidence of treatment. **RO2.**
- The current treatment methods for Chronic Pain, I.e., Pain Management Programmes, medication, and physical therapy. **RO2. RO3.**
- Green and Social Prescriptions – effects of nature on health and wellbeing – Biophilia. **RO3. RO4.**
- Nature Therapy, Forest Therapy, Shirin Yoku. **RO1. RO3. RO4**
- The effect of nature on the parasympathetic and sympathetic nervous system. **RO1. RO3. RO4.**

Methodology

The methodology that I will undertake is empirical ethnographic qualitative research. The data must be conducted in person, focusing on the effects of the outdoors on the individual. The chronic pain experience is not quantifiable as it is subjective, and each experience is independent of another. I will not be collating or researching any quantitative data.

I will collate my qualitative data from a random volunteer group of participants that I will have sourced via local CIC pain management programmes.

I will be using a mixed method of structured questionnaires and semi-structured interviews. One questionnaire will address the forest experience in general and address pain levels. A semi-structured interview will gather more personal experiences regarding pain level and note any biopsychosocial elements to their pain pre- and post-event. Finally, if applicable, I will collate thoughts and feelings on an outdoor pain management therapy group versus the CIC pain management group.

Timetable

1. Create advertisement and send to local CIC for distribution

1 Week

2. Read Forest Therapy and Forest Bathing guidebooks

1 Week

3. Create Forest Programme Schedule

1 Week

4. Collate replies, contact participants, arrange questionnaire, and interview timings and schedule facilities

1 week

5. Conduct questionnaires & allow for questionnaires to be returned

1-2 weeks

6. Forest Experience preparation and carry out

1 week

7. Write up findings and complete poster

1-2 weeks

Ethics

Please see Ethics Appendix.

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