



Does nature heal me? A critical Analysis of Nature Based Interventions on the Subjective Well Being of Persons with Disabilities

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Abstract: Do you feel happy and find a purpose in life? When such questions are asked, people in India find difficult to answer as we are ranked 126 out of 143 nations in the World Happiness Report (WHR) 2024. The youth in India is the happiest while those in the lower middle age group with disability are the least happy. Do we really notice Persons with Disabilities are happy in true sense? The needs of PwD are focused on the domains of development, Activities of Daily living, and Academics etc., but Subjective well-being of the PwD is never taken into consideration. To improve this state of PwD, the concept of *Life Above Zero* can be implemented as it covers a wider area of positive impact such as resilience, happiness, positive emotions, and life satisfaction. Recent research is based on improving the Subjective Well Being of PwD by using natural environment. Nature Based Interventions were administered face to face and in natural outdoor settings including animal assisted interventions, Equine assisted therapy, horticulture, (Shinrin Yoku) forest bathing, bio-diversity conservation activities, planting seeds etc. The research is conducted based on the quantitative, quantitative-longitudinal, Qualitative- longitudinal method, and case study. The samples included in these studies are Persons with Intellectual and Developmental Disabilities, and Autism Spectrum Disorder. The outcomes revealed that NBI has a greater impact on improving health, reduced stress, improvement in well-being, social functioning, emotional functioning, behavioural functioning with interaction with nature. All these studies emphasize the importance of nature and bio-conservation in improving the subjective Well Being of Persons with Disabilities. This paper includes the critical analysis of the research studies of NBI and its impact on Person with Disabilities.

Keywords: Nature Based Interventions, Subjective Well Being, Persons with Disabilities

I. Introduction

The Constitution secures to the citizens including the disabled, a right of justice, liberty of thought, expression, belief, faith and worship, equality of status and of opportunity and for the promotion of fraternity. Everyone has the right to experience and express their liberty of thought, and to explore the opportunities for the promotion of fraternity. This also implies for Person with Disabilities to enjoy the privileges and lead a Quality life. QOL is a wider concept, and Subjective Well-Being (SWB) is a part of it. According to Ryff & Keyes, optimal functioning of an individual depends on three factors. It includes Subjective Well Being, Psychological Well-Being and Social Well-Being. SWB refer to People's evaluation of their lives including cognitive judgements, such as life satisfaction and affective evaluations (moods and emotions) such as positive and negative emotional feelings (OECD,2013). The positive emotions encompass joy, elation, contentment, pride, affection, happiness, and ecstasy. Whenever an individual experiences such emotions, it is recorded and measured. The negative emotions include guilt, shame, sadness, anxiety, worry, anger, stress, depression, and envy. The last component of SWB is Life Satisfaction, satisfaction with current life, satisfaction with past, satisfaction with future, significant other's view of one's life and desire to change life (Ocampo, J. 2024). Do we really notice Persons with Disabilities (PwD) are happy in true sense? The needs of PwD are focused on the domains of development, Activities of Daily living, and Academics etc., but SWB of the PwD is never taken

into consideration. To improve this state of PwD, the concept of *Life Above Zero* can be implemented as it covers a wider area of positive impact such as resilience, happiness, positive emotions, and life satisfaction. The research was undergone the method to measure SWB among PwD by taking body posture, facial expression, sounds, head posture, head movements, etc., into the account. An alternate proxy report is recorded from parents, caretakers, special educators who are close to the PwD. (S. Dero., K. Petry & B. Maeas, 2008). Recent research is based on improving the SWB of PwD by using natural environment. There are three levels of engagement with nature, and they are viewing nature, present near by the nature and active participation and involvement with nature. The level of SWB is improved according to their interaction with the nature (J. Pretty, 2004).

II. Method

The number of studies analysed in this paper are 12. All these articles are selected from Google Scholar, Research Gate, Web of Science, Journal of Therapeutic Horticulture, Multidisciplinary Digital Publishing Institute Journals and Elsevier.

Search Strategies

A search strategy is a structured set of key terms used to search a database. To obtain precise results, the search strategy integrates the essential elements of the search query.

Databases:

Google Scholar, Research Gate, Web of Science, Journal of Therapeutic Horticulture and Multidisciplinary Digital Publishing Institute Journals

Key words

Nature Based Interventions, Subjective Well-Being, Autism Spectrum Disorder, Intellectual Disability, Developmental Disability

Search Strategy

Horticulture, equine assisted therapy, animal assisted therapy, Shinrin Yoku, forest bathing, green therapy, blue therapy, Subjective Well-Being, Emotional Well Being, Happiness, Quality of life, Asperger's Syndrome, Autism Spectrum Disorder, Neurodivergent, Neurodevelopmental Disability, Children with special needs, ID, Intellectual Disability, Developmental Disability, Cerebral Palsy, and Learning Disability.

III. Inclusion and Exclusion Criteria

The intervention type and the population of interest are indicated by the inclusion and exclusion criteria. Along with the similarities and variations between each article, the criteria used to review the studies are also discussed.

Inclusion Criteria:

The activities related to nature for Persons with Intellectual Disability, Developmental Disability and Autism Spectrum Disorder with Mild and Moderate level.

Exclusion Criteria:

People with profound and severe intellectual disabilities are not included, and other disabilities too. Technology-based research, such as those involving digital or virtual reality, are not included.

IV. Concerns and Barriers

Adapting to the changing environment may be a bit challenging for those with disabilities. Therefore, some obstacles and issues need to be addressed. The topics covered in these articles include tantrums, strange behavior, echolalia, and incorrect social behavior in public. safety concerns, such as being lost, stumbling and falling, being bullied, and being in risk from strangers. phobias of intense visual and auditory stimuli, confined or dim spaces, noisy or crowded settings, strange activities, or spaces. Public realm problems include social marginalization and outside judgment. These are the issues and obstacles. Their inability to play and explore objects like sand, mud, leaves, twigs, and water is another indication of their sensory problems. They participated in activities including sorting, leaf collection, and journaling, among other things (Li, D., Larsen, et al., 2019).

V. Results

Forest Bathing

The three studies on forest bathing have been analysed in this study. The PwD experienced the wild and interacted with the forest environment. However, there were differences in the studies in terms of group size, amount of time spent in the forest, and number of extra activities. The quantity of extra activities and the amount of time spent in the forest. Up to ten regular guests with various disabilities made up the group in a residential facility. Two to four times a week, these participants spent a few hours in the forest. This group engaged in various activities like mowing and planting trees, flowers, and veggies in addition to taking walks in the forest. In contrast, a larger group of 22 persons routinely attends Forest activities held at a specialized autism treatment centre. (Burns, R. C., & Graefe, A. R.,2007).

Animal assisted Therapy

In this research, five studies about animal assisted therapy have been analysed. Most activities that were described primarily dealt with games, information, and animal care. Verbal communication, prosocial behaviors, and sensory-motor abilities were among the targeted skills that the research recognized as being acquired through these activities; however, most of the studies simply gave brief summaries of an average session without behavioural goals. In comparison to no animal, all five investigations found that social contact was substantially higher when an animal was present. Two consecutive declines in self-absorption and social isolation have been documented (O’Haire, M. E.,2013)

Gardening

This study analysed four research that deal with horticulture and gardening. Both educational and vocational purposes were taken into consideration when planning outdoor activities. Following the instructions, the PwD were able to carry out the detailed processes. Planting, transplanting, and repotting are the three procedures that are followed (S. J. Schleien et al.,1991). Each step's task analysis serves as an evaluation tool. Baseline data was established, and each step of the intervention process was carried out according to the protocols. Although the skills are not generalizable, the results showed that PwD could execute the processes.

VI. Conclusion

Recent research is based on improving the SWB of PwD by using natural environment. Many of the areas focused by the researchers to increase SWB and QoL of employees, prisoners, post operative patients, pain control, recuperative, and Health benefits. Nature Based Interventions were administered face to face and in natural outdoor settings including animal assisted interventions, Equine assisted therapy, horticulture, (Shinrin Yoku) forest bathing, bio-diversity conservation activities, planting seeds etc. All these activities have a greater impact on improving health, reduced stress, improvement in well-being, social functioning, emotional functioning, behavioural functioning with interaction with nature among PwD.

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