

Environmental Education Integrates Individuals' Nature-Connectedness to Improve their Health Conditions

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Abstract: Extensive development of technological, household, and entertainment equipment, online studies, and remote jobs have vastly altered humans' lifestyles that restrict regular nature exposure and outdoor activities, promoting a confined living standard. This reduced contact puts adverse effects on individuals' well-being. In contrast, appropriate nature-connectedness is immensely advantageous for humans' physical and mental health. Therefore, this study discusses the impacts of natural environment on individuals' well-being that could be successfully accomplished through Environmental Education because it incorporates natural environment in its sessions. This interrelatedness subsequently impacts students' health conditions. So, the study is designed to investigate teachers' perceptions regarding this matter. A cross-sectional, parallel exploratory research is used. The sample is teachers of secondary level (6 – 10) schools of North Karachi, 100 for quantitative data; selected through simple random sampling, 50 for qualitative data; selected through purposive sampling. Likert scale (five-points) and interview questions are designed for data collection that are analyzed through one-sample t-test on SPSS (Version 20) and thematic analysis respectively. The results show 29.149 and 30.001 t-test results against 1.984 critical value and allude towards the significance of EE, and a unanimous acceptance of utilizing EE to interact students with the natural environment to improve their health states.

Keywords: Environmental Education, Nature's Connection, Secondary School Level, Students, Teachers, Physical Health, Mental Health



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Introduction

A precisely planted area has crucial effects on humans' health conditions and play a vital role in its enhancement. Having to experience a nature-rich environment every day improves human productivity, enhances the quality of life, and helps in maintaining good health conditions. In this regard, an article published by CNN also backs in favor of natural settings; an eight-year-long research conducted in 2016 states that plantations around residential areas pay big support in the longevity of life through maintaining better health states. Statistically proving female participants residing in greener areas were apprehended with a decrease of 12% in death ratio than of the contrary women. Peter James, study author and research associate at the Harvard Chan School's Department of Epidemiology further posited that this natural environment is also responsible for good mental health (Jimison, 2017). In this support, a theory presented in CNN's published article portrays that human eyes perceive green colors more aptly. On the color spectrum, the place where the green color falls is the same spot where human eyes catch the best of their visions. The article states that humans are trichromats receiving three basic colors: blue, green, and red. Upon seeing different colors the cones in human eyes generate wavelengths which create an understanding of a particular color being seen.

Retina interprets light falling in between 400 and 700 nanometers which is called "The Visible Spectrum." The Visible Spectrum illustrates a green color residing in the middle of the spectrum at about 555 nanometers, a spot where human vision is at its fullest (Jimison, 2017). As evidenced by Elliot (2015), the green color stimulates better intellectual performance. The research was put out to find the effectiveness of green, red, and white colors on the physiological, psychological, and behavioral conditions of participants, where the samples were exposed to all three colored environments separately staged by putting up HD TV screens illuminating the certain colors. The samples were supposed to either walk or run for 20 minutes. The apprehended interpretations show that green color ruled out both the other colors and the study exposit strong evidence of green color being a reason for reduced heart rate and increased perceptual ratio. In this light, experiments show that the green color is responsible for the relaxation of physiological organisms and prevents the body from exhausting (Briki & Majed, 2019).

Over several years of research, it is signified that many people intend to stay inside their homes for about 90% of their time which makes them prone to higher health threats as science has uncovered that air circulating in homes is very contaminated and that is because of having air conditioners running all the time which demands to be shutting doors and windows. Cooking indoors emits greenhouse gases, heaters, vacuum cleaners, and many other such activities produce heat and moisture which trap inside the houses, and cause indoor air pollution. Moreover, carpets, furniture, rugs, household products, and whatnot have pests, bacteria, and viruses. Pat animals also have several bacteria and mites in their furs, saliva, and claws. Insufficient hygienic routines increase cockroaches, centipedes, and silverfish inside slum areas of houses that disperse bacteria and cause particular diseases attached to them (Bower, 2009). Carbon monoxide (CO) is considered to be the most deadly compound causing vitriol deaths. It can easily be produced by cooking and heating materials including gas-based room heaters, furnaces, charcoal grills, wooden stoves, kerosene heaters, or any other fuel-consuming products. The National Fire Protection Association (NFPA) declared these products as convicts for several non-fire deaths. The person with CO consumed majorly shows symptoms like headaches, faintness, unconsciousness, weariness, chest pain, sickness, nausea, and concussion. People with potential cardiac illness are more inclined to massive chest pain, additionally, the worst-case scenario of inhaling CO could also be fatal (Mott et al., 2002; & Bower, 2009).

This accentuates the extreme significance of spending time outside in aptly planted areas and being involved in active physical activities. Every second spend in the greener areas immensely enhances the physical and mental health of individuals and also support in improving their intellectual capabilities. These exposures to the planted surroundings positively affect one's sleep cycle, chronic illness, cardiovascular function, stress, anxiety, frustration, and many other mental disturbances. Another great impact of utilizing free time in the natural environment comes out as moderately reduced screen time that efficiently impacts eye health (Harvard, 2024). If kids spend at least of two hours in the natural environment it could also gate keep the risks of getting myopia and could even reduce it significantly. The reason for this reduction in myopia is that eyes get to focus the farthest possible spots when children are outside and it provides an opportunity to the eye muscles to relax and strengthens the vision (Xiong et al., 2017; Jonas et al., 2021). Cheng et al. (2025) has also exposit regarding a link between eye health and green environment. They have mentioned that exposure to planted surroundings impacts on the decrease of worsen vision and also supports eye health.

Reported references and studies have also suggested that green color is the prime reason for the better health state of humans and in residential surroundings this could be easily and naturally achieved by planting more in the vicinity and spending more time in this natural environment to create a better lifestyle. This act of plantation and spending time in the greener areas could be conveniently achieved through Environmental Education (EE). With the incorporation of Environmental Education it is made probable through contextual and practical approaches of teaching to educate individuals about environmental conditions, different concepts, problems and challenges of environmental conditions, significance and necessity of having a plant-rich environment, and the essentiality of plantation and development of an ecosystem and eco-friendly behaviors (Harrison, 2023; Milupi et al., 2023). EE also incorporates students' efforts in attaining, recovering, and sustaining the environment by training and building skills in them and utilizing their potentialities and capabilities. As young learners have the drive to accomplish what they are fixated upon, they could be motivated and nurtured to be devoted to environmental progression, growth,



preservation, and environmental revolution through their sincere efforts and appropriate gestures. Students could be taught to change their anti-environmental practices which helps to clarify to them several benefits of having natural surroundings and importance of spending time outside in a plant-rich area. This also brings about their supportive behavior for perceiving and helping surroundings to make it a better place to live in (Wu et al., 2023). Riordan and Klein (2010) set off for the investigation of students' endeavors for environmental problems that turned out well and students were found enthusiastically active in spending time in natural settings and alongside they were also playing a great part in sustaining and recovering the deteriorating world. Following this observation, researchers concluded that in these chaotic situations, students are beams of light reaching out to get the drowning world back up. A survey-based research was conducted at the North Center University of Baia Mare, Romania over 358 participants with the foremost target of anticipating integration of students' awareness and understanding in the betterment of environmental conditions. Study inferences optimistic consequences in the favor of protected environment. In the light of students' perceptions and responses, it alludes that EE would signify students' active involvement in various aspects of the steadying environmental state (Boca & Saraçlı, 2019). Furthering up, Wallner (2005, as cited in Boca & Saraçlı, 2019) emphasizes that educational institutions should also follow the same lead by putting their share in this maneuver by preparing students and attributing them to acquaint with eco-friendly lifestyles. Moreover, researchers specifically signify the patronage of EE for this particular role. The research work of Whitburn et al. (2023) mentions that UNESCO has declared that EE has the most crucial role in prioritizing and voicing for the precision and enhancement of a healthy environment. This course also specifically aims to educate, motivate, and bring individuals to nature's contact and design their behavioral patterns in order to improve their different health aspects and develops in them healthy habits, active lifestyle, and ecological friendly choices (Milupi et al., 2023).

Literature Review

Environmental Education

The term "Environmental Education" utterly explains it is primarily concerned with academics. Environmental Education is inclusive of all the literary and pragmatic aspects of the environment administrating environmental studies, awareness, phenomena, resources, natural procedures and all there is to unfold regarding the environmental information. EE builds up common understanding and concepts regarding ecosystems and nurtures capabilities and attributes to confront diminishing scenarios and make liable and sensible decisions favorable for individuals' habitats (Erhabor & Don, 2016). It exhibits coherent strategies for the conservation and improvisation of the ecosystem along with determining and fostering in humans prestige of their environment. Moreover, it helps develop sincere behavior towards the environment and intensifies the need of adopting to lifestyles that are more probable for humans' health conditions and environmental greenness. Another governing element of EE is that it opens up opportunities for research in this field to curb the extensively increasing adversities and ultimately advances the lives of all living organisms (Ardoin et al., 2020). For an optimal and valuable induction of EE and delivery of advancements of having greener and natural surroundings, it is of utmost importance to use all the suitable and favorable strategies for the conduction of environmental education, and this course must be strengthen through all the available aids and technologies to make its sessions most effective (Filho & Granvik, 2020). By adopting and incorporating a myriad of different methodologies and teaching assistance it would be made possible to convey environmental knowledge and several environmental tasks and activities more fruitfully. It is also very significant to utilize every approachable resource for environmental education's practical knowledge for students because EE exposes students to the natural environment and explains complex concepts of environmental mechanisms and provides the logical clarification of impacts of a greener area on human health by providing them with the practically implementable assignments that require students' personal and practical efforts while being in the actual contact of the natural world (Lasino et al., 2023; & Guerra et al., 2024).

Environmental Education Integrates Individuals with the Nature

Natural surroundings are beneficial for individuals and greatly influence their multiple aspects; most importantly humans' health conditions. Plants are immensely substantial for individuals' health disorders and illness and significantly assist in their speedy recoveries (Diener & Mudu, 2021). Urban planted areas are highly essential for one more reason: they clean the air pollution and make the atmospheric surroundings fresh and more breathable that



ultimately enhances physical health states of people. These floral surroundings around residential areas are also helpful in resisting noise pollution that mitigates frustration, stress, anxiety, and annoyance of humans and also improve their mental health conditions (CUBICOON, 2021).

Physical Invulnerability

Gatti (2016), exposit that the world is rapidly getting civilized racing towards the most advanced lifestyle neglecting natural habitats eventually resulting in the destruction of the environment which is directly linked to the instability of mankind. Danielraja (2019), says that every individual deserves to live diligently, however, some specific existent environmental aspects detain men to get accustomed to such amenities and joyous escapades of life. Several acute and chronic diseases are also associated with such chaotic scenarios. This intense situation could be tackled by ample plantations as they are capable of purifying the atmosphere and speeding up the healing process. For this, EE accentuates the importance of a plant-rich environment and elaborates that the contamination of the environmental state also negatively influences human health. It further posits that safeguarding the environment and having an eco-friendly approach provides healthy living and encourages students to indulge more in environmental activities to improve environmental and health-concerned conditions (Rychnovský, 2010). Regarding health issues, EE studies human behaviors and attitudes toward nature and its link with health conditions and educates people about the impacts of environmental conditions on human health (Samson-Akpan, 2008; Kujoh et al., 2020). EE drives humans to engross themselves more into nature (Clements et al., 2014) and this connection to the natural world enhances the Health-Related Quality of Life (Ekenga et al., 2019). WHO considered the enhancement of quality of life important and developed a four-field plan that after getting tested elaborated the four factors that come under the umbrella of WHOQOL-BREF (World Health Organization Quality of Life – Brief Scale) – a short for WHOQOL 100 (World Health Organization Quality of Life 100) are: physical, and psychological health, social relations, and the environment (Ferrans et al., 2005; Chang et al., 2020). The interaction of humans with nature significantly influences humans' quality of life and results in reduced mental and physical traumas (Chang et al., 2020). EE promotes green consumption and develops a sense of connection and relation to the nature in humans and motivates them to acquire environmental-friendly attitudes (Wu et al., 2023). EE effectively inclines people towards the natural world (Tianyu & Meng, 2020) and this contributes to the improvement of physical and mental health-related issues.

A horde of European studies has boiled down to the reason that urban green areas are behind the three times active behaviors and around 40% lower obesity levels of its inhabitants. Plants with large foliage and branches regale a thick fence around residential areas which detain or reduce deafening noises produced by traffic or by any other reasons (University of Washington, 2018). Japanese orthodoxies also favor in account of linkage of humans with botanical environments because they strengthen the immune system. Natural settings are enriched with several chemical, physical, and microbial features that effectively impact immunity including treatments for cancer, allergies, chronic heart illness, and act as immunoregulatory aspect (Kruize, 2019). They also treat long-term disorders, fists, asthma, hypertension, and even controls diabetic and obesity levels (CUBICOON, 2021). EE particularly looks for the challenges that human health faces in regards to the challenges that are faced by the environment and how they ultimately affect each other. EE further emphasizes the essentiality of physical activities for the betterment of physical health (Rychnovský, 2010). Integrating individuals in nature and getting them involved in physical activities in the open air and natural environment yields good effects on overall health including physical, emotional, social, and mental, and eliminates health-related risks and potential health disorders (Ekenga et al., 2019). A diverse multitude of research also suggests that integrating natural settings in human lives scales down anxiety levels, increases optimism, regales targets of lives, and makes people ambitious towards them. Such environments build managing skills, and natural disciplinary abilities, bring out individuals' sophisticated behaviors (Bratman et al., 2019), and have the potential to evolve habitats and assist in biodiversity growth as well (United States of Environmental Protection Agency, 2022).

Mental Stability

Stress is widely connected to one's environment. Both a raise and reduction of anxiety and stress are linked with what one is surrounded with and experiencing. A good environment stabilizes blood palpitation, blood pressure, immunity, mental states, and muscular activities. Further, a natural setting has a big role in decreasing anger, fear, depression, and anxiety, and in the soothing and calmness of feelings and moods. A good and natural environment is responsible



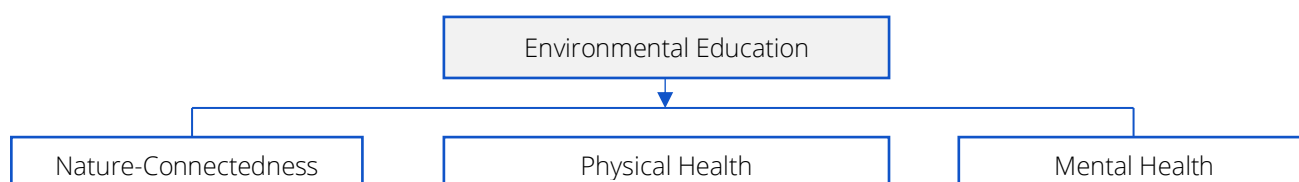
for all the good and pleasant feelings and events of humans as shown by research done in hospitals, offices, and schools (Delagran, n.d.). Nature has tremendous effects on humans' mental health conditions (Gopinath et al., 2023) and it is also proven by several experimental research studies solely conducted to investigate the results of natural environment on mental health. The studies unanimously showed that people being exposed to, or living in ecological environments manifested long-retaining memory, energetic thrifths, uplifted emotional states, reduced or no stress or anxiety issues, and a harmonized mental capability and stability, whereas, on the other hand, people with little to no experiences with plant-rich surroundings demonstrated disturbed, anxious, noxious behaviors, diverted or unfocused attitudes, and short-term attention spans (Kruize et al., 2019).

These advantages of plants could easily be received through EE as it indulges students in direct plant-rich environments and aids in a vivid understanding of complex ideas and expands the retention span of memory (Shutaleva et al., 2020). EE positively influences the physical, mental, and social well-being of humans by increasing their nature's interaction and by informing a myriad of benefits an ecological surrounding offers. This intrigues them to conduct their daily life activities in natural settings (Ekenga et al., 2019) and this assists in treating their mental and psychological disturbances and disorders (Kruize et al., 2019). Environmental educational sessions are conducted in the natural environment providing direct contact with the natural world and effectively increase individuals' sense of nature-connectedness and improve their mental health (White et al., 2013; Whitburn et al., 2023). Nature-rich environments amplify brain accuracy, and attention span, harmonize mood fluctuations and mental health stability, and reduce stress and anxiety (Thompson et al., 2012; Nutsford et al., 2013).

Multiple studies done in different countries distinguish among children who grew up in different environments. Children who were accommodated in lesser vegetated areas in Denmark demonstrated a great inclination towards varying psychic disturbances whereas children of the UK, US, and South Korea accustomed to thicker urban green regions portrayed stabilized mental states. These studies stress the favorable circumstances a botanical environment could bring in boosting children's motivation, attention, mental skills, cognition, perceptual abilities, and promising steps taken towards attaining a hassle-free quality of life (CUBICCON, 2021). The study done by Frances Kuo and Andrea Taylor in 2004, as mentioned by Grimmette (2014) tells that being in contact with a natural environment helps control attention-deficit/hyperactivity disorder (ADHD) as proven through an experiment performed on ADHD patients. The interaction with natural surroundings is not just beneficial for controlling the disorder among individuals having ADHD (Ekenga et al., 2019) but these ADHD students also show better cognitive outcomes when they interact with the natural environment (Gopinath et al., 2023). It is observed by the environmental educators that students who are put in the natural settings show better cognitive outcomes and mental conditions and these nature-based interactions also elevate their overall intellectual and psychological wellbeing (Whitburn et al., 2023). Utilizing EE for mentally ill individuals successfully increases their social interactions and exposure to the world. These experiences improve their socialization and increase their knowledge of the world through interacting directly with the world around them, and this is easily achieved by EE which puts individuals in direct contact with the nature (Sandoval, 1998). In a comparative study 17 and 23 groups of respondents were selected who separately initiated the task appointed to them, out of both groups the one who had to stroll around planted areas was anticipated with a relatively normal pulse rate than the other group (Song et al., 2014; Song et al., 2015). In another study a number of physical and mental health aspects were determined comprising cognition, emotional, perceptual, salivary cortisol hormone, and cardiac impulses' changeability by engrossing 38 subjects in a thirty-minute self-deliberated strolling around three sets of different environmental conditions (civil, natural, and watery-natural circumstances) segregated to each group. Thereby, natural and watery-natural settings took preceding leads (Gidlow et al., 2016).

Conceptual Framework

This generates the conceptual framework as:



Research Objectives

1. To investigate teachers' perceptions regarding environmental education and nature-connectedness.
2. To determine teachers' perceptions for the essentiality of environmental education in strengthening physical health.
3. To examine teachers' perceptions for the essentiality of environmental education in mitigating mental health disorders.

Research Questions

1. What are the perceptions of teachers regarding environmental education and nature-connectedness?
2. How do teachers perceive the essentiality of environmental education in strengthening physical health?
3. How do teachers perceive the essentiality of environmental education in mitigating mental health disorders?

Research Hypotheses

1. Teachers perceive that environmental education provides nature-connectedness.
2. Teachers perceive that environmental education strengthens physical health.
3. Teachers perceive that environmental education mitigates mental health disorders.

Methodology

This is a cross-sectional, parallel exploratory research, using both quantitative and qualitative research approaches. The data sets are collected simultaneously and later the similarity patterns are found. Research sample is teachers of secondary level (6 – 10) of 20 schools of North Karachi Town, Karachi, Pakistan. Simple random sampling is used to choose participants to collect quantitative data, and through purposive sampling the respondents are selected for qualitative data collection. The sample size is 100 teachers for quantitative data and 50 teachers for the qualitative data. For the quantitative data, Likert Scale of 26 close-ended structured items is designed having five degrees of freedom from strongly agree to strongly disagree (scaling 5 – 1 respectively). The qualitative data is collected through 4 semi-structured interview questions. To conduct the interviews, the respondents were divided into 8 groups, where 6 groups had 6 participants and 2 groups had 7 participants. These interviews were conducted in 8 different sessions focusing each group in every session. For the analysis of data the inferential statistics were used through one-sample t-test on SPSS (Version 20). The confidence level is 95% making the alpha 0.05, tested against the tabulated critical value for the two-tailed t-test that is 1.984 and the p-value. Thematic analysis is used to interpret the qualitative data as suggested by Braun and Clarke (2006).

Data Analyses

Statistical Analyses

H_0 1: Statistically there is no significant difference in teachers' perceptions regarding environmental education and nature-connectedness.

Table 1

EEAN (Environmental Education and Nature-connectedness)

One-Sample Test						
Test Value = 1.984						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
EEAN	29.179	99	.000	14.376	13.40	15.35

H_0 : $\mu=0$

α : 0.05

The p-value is .000 < 0.05, thus rejecting the null hypothesis.

The tabulated critical value of the two-tailed t-test is 1.984

Reading of the t-test is 29.179 > 1.984, thus rejecting the null hypothesis in support to alternative hypothesis.

H_a : $\mu \neq 0$



H₀2: Statistically there is no significant difference in teachers' perceptions for the essentiality of environmental education and physical health.

Table 2

EEAPH (Environmental Education and Physical Health)

	One-Sample Test					
	Test Value = 1.984					95% Confidence Interval of the Difference
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
EEAPH	29.149	99	.000	14.366	13.39	15.34

H₀: $\mu=0$

α : 0.05

The p-value is .000 < 0.05, thus rejecting the null hypothesis.

The tabulated critical value of the two-tailed t-test is 1.984

Reading of the t-test is 29.149 > 1.984, thus rejecting the null hypothesis in support to alternative hypothesis.

H_a: $\mu \neq 0$

H₀ 3: Statistically there is no significant difference in teachers' perceptions for the essentiality of environmental education and mental health disorders.

Table 3

EEAMH (Environmental Education and Mental Health)

	One-Sample Test					
	Test Value = 1.984					95% Confidence Interval of the Difference
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
EEAMH	30.001	99	.000	18.476	17.25	19.70

H₀: $\mu=0$

α : 0.05

The p-value is 0.000 < 0.05, thus rejecting the null hypothesis.

The tabulated critical value of the two-tailed t-test is 1.984

Reading of the t-test is 30.001 > 1.984, thus rejecting the null hypothesis upon alternative.

H_a: $\mu \neq 0$

Qualitative Data

Thematic Analyses

Theme I: Environmental Education Incorporates Nature and Students

The respondents were asked to comment regarding what they know about students' behaviors and habits as shown in the classroom regarding their leisure time activities and preferences in their lives outside of schools if ever students shared them. Further it was also asked if students were involved in physical activities or spending a significant time in an ecological setting. The teachers responded that students often share bits of their activities and hobbies they enjoy doing randomly or regularly in their free time, and most of them are linked with the social media scrolling, watching televisions, texting their friends through chatting apps, and spending time while sleeping. Teachers mentioned that hardly ever any student mentioned stepping outside of their houses or being involved in any sort of physical activity, except for few boys who regularly go outside to play cricket matches with their friends. Apart from them, mostly girls only spend time inside their houses or sometimes go for shopping with parents. They further mentioned that none of the students have ever shared their experiences of spending a significant amount of time in a plant-rich surrounding. The respondents then probed that how much environmental education is essential in incorporating students with a natural environment and that how EE could connect students with ecological settings. The



respondents answered that comprehending from its name it vividly alludes that this particular educational program is specifically for providing knowledge about the environment. Teachers perceive that such type of educational programs are informative and they can also provide ample opportunity to connect students with the natural environment. Along with this, EE could also emphasize several beneficial impacts of natural environment and nature's exposure. Respondents also envisioned that EE will provide physically active tasks to students that will develop their healthy habits and motivate them to spend their leisure time while being in the contact of nature and adopting such hobbies and interests that will help them stay active, healthy, and alert.

Theme II: Optimal Physical Health

The respondents were questioned about how EE could provide the benefits of a natural environment to human health as per their perceptions. The answers showed that respondents think EE is crucial for this purpose because EE could incorporate a variety of contents that would effectively provide knowledge about the benefits of a natural environment. Most respondents said that EE would elaborate the benefits of a natural environment and emphasize its importance on human health. EE would explain that people should spend their time in nature-rich surroundings because it is significant for them. Furthermore, EE would also include content regarding the essentiality of outdoor activities (exercising, reading, walking, etc.), and this way, students would get motivated to spend time outside which would ultimately enhance their health conditions. However, only a few respondents said it would be easy to conduct the educational sessions in an open-air/natural environment through EE that would practically connect students to nature. Through EE it would also be convenient to give students such tasks and activities that would require natural contact like litter picking tasks, planting, exploring, and teaching through demonstration methods – where teachers would not just give theoretical knowledge but would also demonstrate certain phenomena by taking students out in the natural environment, and through this EE would be incorporating students with a natural environment that would leave its positive impacts on students' health. They also mentioned that through this practical teaching, EE would emphasize the importance of physical activities in the open air and would develop a realization in students about the importance of nature's contact for health by practically administering it. Apart from this students would also realize that such an environment must be taken care of for it to keep flourishing forever.

Theme II: Mental Health Stability

The respondents were asked about their perceptions regarding how EE and natural surroundings affect mental health, emotional stability, and behaviors of students. Shadowed by the previous answers the respondents answered that as EE could utilize a pragmatic approach for teaching, it would provide students with the natural contact for conducting educational sessions and for practically involving physical activities, and this way EE would be bridging the advantages of a natural environment to the students and stabilize their mental health. Advancing the answer, respondents mentioned that it is important concerning the current situations where students are rapidly getting addicted to the usage of gadgets and social media, and all of this is also limiting and almost reducing their outdoor interactions that are affecting their behavioral patterns, moods, and mannerisms. They are becoming ill-manner, aggressive, impatient, stubborn, and have several similar behaviors, so in these circumstances EE in the educational system would be a great help to bring them closer to the environment to educate them and at the same time to strengthen their mental health. Respondents think that interactions with the natural environment would reduce and treat anxiety, stress, and depression issues of teachers as well while conducting EE sessions.

Discussion

The results of the research illuminated relation in the quantitative data findings and the introspected data of the teachers. The statistical analyses showed that all the computed t-test values are greater than the critical value of t-test and p-values are less than the alpha of the research. These inferential results are found evidently rejecting null hypotheses; furthering in the acceptance of the presumed hypotheses of the research that environmental education plays a significant role in improving students' physical and mental health. Similarly, the thematic analyses of the research interprets favorable responses of the participants for environmental education and enhancement of the physical and mental health states of the individuals. These anticipations of the quantitative and qualitative data explicitly demonstrate that both results align to each other despite of being collected separately and show a



connection in responses, both simultaneously alluding the substantial part of EE in the integration of students with the natural environment and encouraging them to adopt a healthy lifestyle.

The apprehended results clarify that according to respondents' perceptions and accumulated results, EE integrates with the beneficial impacts of a natural environment and this improves students' physical health conditions. A similar context is also conceptualized in different studies where the researchers have found EE as an important vessel for the improvement of students' health conditions with the connection of the natural environment (Samson-Akpan, 2008; Clements et al., 2014; Ekenge et al., 2019; Kujoh et al., 2020; Wu et al., 2023). The respondents also understand that EE elucidates the positive impacts of nature's contact and works as a bridge for humans to connect with the natural environment which in turn reduces and treats anxiety, stress, and depression and ultimately enhances mental health. Correspondingly, many studies also exposit that EE interconnects with the natural environment to transfer its benefits to individuals. Moreover, EE also offers the opportunities to connect with different communities to provide socialization (Sandoval, 1998; Nutsford et al., 2013; Gidlow et al., 2016; Whitburn et al., 2023). Subsequently, the results clarify that environmental education is the prime factor that brings people close to each other and enhances physical and mental health states. It greatly supports in achieving a quality life, active physical state, and mental stability that also helps in producing effective and progressive outcomes in several physical and mental tasks.

Conclusion

Inconsiderate gestures of humans thriving to be innovative - deprived their quality of life and these scenarios have now turned severely critical. The immensely advanced lifestyle, full of technological gadgets and increased screen time has reduced the outdoor exposure. Children are oblivious to the natural environment and neglect its significance on health. Spending time indoors has become a common practice for a very long time that even new generations are now following the same patterns imitating others and having harmful behavior towards their health and being indifferent regarding its impact on long run that is consequently leading towards chronic health disorders. This signifies the necessity of educating them regarding the essentiality of nature-connectedness and its influence on human health. It is highly important to have regular exposure to the natural world because this connection keeps individuals physically active and it is also influential on their mental health. People feel less anxious and more spirited if they regularly spend time outside. There is a necessity to aware students regarding this and encourage them to increase outdoor exposure and activities in a natural environment for which environmental education is the most probable source to speed this process and the results of the research are also in this accord and support the exigency of environmental education. According to the respondents' perceptions EE will efficiently provide such opportunities where students would be interacted to the natural settings and they could be easily motivated towards the healthy living habits. These activities would also reduce their excessive screen time that puts a great share in deteriorating their entire health state. In connection to this, the study furthers to advise parents that they should be attentive towards their own living patterns and pay attention to their health and their children's health. Furthermore, parents should also avoid such behaviors that keep them inside the houses; instead they should prefer spending time outside and bring their children along because kids learn from their elders and this will also develop their healthy habits and concerning behavior towards their health state. Additionally, school administrations should plan trips for students to the floral exhibitions to aware students regarding different plants and their beneficial qualities. This way students would be taught about plantation and personally experience the essentiality of vegetation and cleanliness. These activities would encourage students to plant in their locality and it will also develop their habits of spending time in greener areas.



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