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Ecopsychology, Restorativeness, Spiritual Values and Emotional Disturbances among Undergraduates Students: A Systematic Literature Review

Noorlila Ahmad[1], Abu Yazid Abu Bakar[2]*

[1] Kuliyyah of Education, International Islamic University of Malaysia, 53100 Kuala Lumpur, Malaysia
[2] Faculty of Education, Universiti Kebangsaan Malaysia, 43600 Bangi, Malaysia
*Correspondence: E-mail: yazid3338@ukm.edu.my

ABSTRACT

A plethora of research on nature exposure has made a significant impact on human health. Prior studies appear to focus on psychological and physiological experiments. Nonetheless, there is still a need for an ongoing review concerning the emotional connection between natural environments and human health. The review captures to discussion on the topic of emotional connection relationships of ecopsychology, restorativeness of spiritual values, and negative emotions with nature exposure in the environment especially among undergraduate students. The proposed conceptual framework includes the variables identified from previous research, the underpinning theories, the methodological processes, the selection of the population, and the results. Despite the ongoing discussion, the effects of nature's role in reducing emotional disturbance, particularly stress, have yet to be indicated. The new scenario revealed that the use of the internet and modern technology, along with the urbanization process has contributed to the disassociation between nature and humans. The current review proposes several recommendations for futur Therefore , this review of research proposes several recommendations for future research in the hope of instilling awareness of the importance of nature exposure in improving psychological well-being and physiological health. These findings could illustrate the critical role nature plays in the vulnerability and communication aspect of future research to ensure more engaging natural environment activities.

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1. INTRODUCTION

The uprising trend of mental illness cases is crucial in that it requires urgent attention, particularly among university students who have been found to experience very high levels of stress (Downs & Eisenbery, 2012). Previous studies on emotional disturbances among undergraduate students have attributed their stress, anxiety, and depression to psychological distress, such as demography factors, psychosocial, academic performance, financial, relationship, communication, consumption of alcohol and drugs, dietary, less psychical activities and internet usage. For this reason, the instability of emotional disorders has seriously affected psychological and physiological (Franken, 1994). Among the effects were mental fatigue, cognitive constraints, focus or attention, and anger or aggression (Kuo & Sullivan, 2001). Manifestation for undergraduate students resulted in their underachievement academic, low esteem, a dropout from classes, and even cases leading to suicide attempts (Law, 2007). Thus, this situation has given opportunities to the researcher to consistently the needs of reporting what is suitable aid, especially in providing psychological resources to relieve emotional disturbances.

Findings from previous research suggest that a conducive environmental area is an aid to psychological resources for individuals to act more positively (Hartig *et al*., 2001). The nature of the green space can be seen as a psychological support for self-rest hence reducing stress (Hartig & Staats, 2006). However, nature-based experiences as a form of restoration activity are the least popular when compared to other types of social activity, particularly among the young generation (Nabilla *et al*., 2018). Previous empirical studies have also emphasized the use of the natural environment to improve health (Annerstedt & Währborg, 2011). The question in this review that arises is how far the emotional connection for the young generation bond and in the nature-based experiences as part to lessen the stress and mental benefits.

A nature-based environment induces the feeling of an emotional sense of pleasure, calmness, and relaxation. Evidence from earlier findings has shown that a religion's spiritual values significantly reduce emotional upheavals and improve daily life. As such, it balances emotional stability and health resulting from modern materialistic demands and gets one closer to the Creator, obeying all the precepts. A significant relationship between awareness of spiritual experience and health. Therefore, awareness of spiritual experience can be seen as a self-healing tool. Another study in the Malaysian context found spiritual values to be a self-resilience factor in facilitating students' coping with their physiological and physical changes. On the other hand, the relationship between nature-based environment and humans relates to something greater than ourselves (referring to the Creator as God) and can provide a sense of self-healing. Activities conducted in the garden (such as praying, meditation, thinking, pondering, and appreciating the beauty natural environment) can be implemented to improve psychological well-being.

2. METHOD

The systematic literature review (SLR) was carried out based on the following criteria: (a) concerning the relationship between ecopsychology and emotional disturbance (stress, anxiety, and depression (b) published in peer-reviewed journals; (c) indexed following the Social Sciences Citation Index (SSCI) or the Science Citation Index Expanded (SCIE); and (d) presented studies in the areas of environmental psychology, education, social and behavioral sciences. We sought articles relating to people's exposure, connectedness, and engagement with the natural environment and health perspective within the educational context. The

following databases were searched: ISI Web of Science, Scopus, and Google Scholar Search (Haddaway *et al*., 2015). Our selection was not limited by the year of publication. The articles were searched using the combination of the following keywords: "ecopsychology", "restorativeness", or "spiritual values" with one of the following terms: "students", "nature", "stress", "anxiety", and "depression".

During the review process, the researchers sought answers on the following matters: (a) emotional disturbance and its association with the emotional connection with the natural environment; (b) the nature of the data collected, whether experimental, self-reported data, qualitative or other data sources; (c) the research design, level of analysis, and population selection.

The research questions of this study were formulated to identify the research gaps in the current methods and strategies. The strategies adopted in previous studies mainly focus on to-date shreds of evidence, theoretical aspects, methodology interest, populations, and studies resulting in gaps. Such a gap has prompted the authors to examine the level of ecopsychology among youth, who have limited accessibility to nature and green space and prefer activities that can be done indoors. Frumkin *et al*. (2017) in their paper review published questions on potential doubts that may arise if people who walk in natural settings evince lower levels of stress than those who do not, is that because the natural contact has a salutary effect, or is it because people who are better at managing their stress choose to take more nature walks? Thus, we propose a conceptual framework that is based on previous research related to the relationship between ecopsychology. The aim is to mitigate emotional disturbance among students with restorativeness and spiritual values complement mediators as a way forward.

3. RESULTS AND DISCUSSION

3.1. Results

The first research objective is to identify the relationship between (i) various facets of exposure to the natural environment, and (ii) various psychological health-related variables. Towards this end, we proposed a conceptual framework (**Figure 2**) comprising related variables as identified from the literature review. The variables relate to the significant relationship between exposure to nature and psychological well-being (both positive and negative emotions). Other scholars (Frumkin *et al*., 2017) have also highlighted the psychological, cognitive, physiological, social connection, spirituality, and cultural benefits of nature.

Another meta-analysis review also describes the effect size in the nature exposure with experimental manipulation of nature vs urban applying video and photographs indicated there is a significant effect (Mackay & Schmitt , 2019). Most of the studies focus on pre- and post -test experimental exercises in green and urban environments . The exercises included walking , cycling , running , camping , gardening (Herzog *et al*., 2003 ; Frumkin , 2001) as well as other passive activities , such as viewing nature through a window , or painting (Benfield *et al*., 2010; Kuo & Sullivan, 2001, Ulrich, 1984). These studies specifically measured health outcomes by assessing salivary cortisol levels , heart rate (using EEG methods), and brain imaging activities (Jiang *et al*., 2014 ; Bratman *et al*., 2015). The participants were assessed using psychological measurements , such as the Depression , Anxiety and Stress Scale (DASS), Profile of Moods (POMS), Psychological Well -being (PWB), and State -Trait Anxiety Inventory (STAI) to rate how nature had helped them elucidate emotional disturbances.

Most of the previous studies have examined the effects of exposure to nature (and other elements related to nature) on emotional disturbance and psychological well-being. Some of the studies found that such a relationship was mediated by certain mediators, such as restorativeness and spiritual values (Kamitsis & Francis, 2013). Exposure to nature was found to (i) create a connection for feeling calm, relaxed, and happy and (ii) promote self-restoration from mental fatigue, hence restoring focus capacity and reducing stress (Hartig, 2003; Kaplan, 1995). In contrast, an urban or artificial environment has been found to increase emotional distress (Hartig *et al*., 1997; Laumann *et al*., 2001). This evidence reinforces the notion that nature can create harmony and reduce emotional disturbance.

Previous researchers in the field of ecology have found an emotional connection between nature and well-being through the element of spirituality. Correspondingly, other scholars (Kamitsis & Francis, 2013) discovered the significant effect of nature on psychological well-being. These findings affirm the importance of nature for ecopsychological relations, restoration, spiritual values, and human emotions. Thus, this research intends to examine how the effects of ecopsychology unfold on participants' stress, anxiety, and depressive emotions.

In this review, it is also aimed to compare and contrast the findings of previous studies that employed different data sources and research designs. Our review suggests that the qualitative and experimental designs on the direct relationship between ecopsychology, restorativeness, spiritual values, and human health in the natural environment are well documented. The proposed research designs proved to be meaningful and scientific in the findings based on the respondents' facts, views, and pre-test and post-test results during probing questions and controlled tests. However, the methodologies were unable to establish new models and test the current model. The researchers also identified that most of the previous studies derived findings on significant relationships and effect size. The studies used a cross-sectional of the self-reported method in assessing the level and causal relationship between variables, which raises concern about common method bias (CMB). The bias resulting from the methods can be rectified by Harman's single-factor test.

Concomitantly, the results of this review proposed that the conceptual framework (**Figure 2**) be tested to explain the relationship between all the proposed variables. This proposed framework of how ecopsychology affects emotional disturbance validates the relationships among the variables examined in previous studies. In doing so, the researchers established restorativeness and spiritual values as mediators between ecopsychology and emotional disturbance. The variables were established from the theoretical background and previous models (Kamitsis & Francis, 2013). Kamitsis and Francis (2013) assessed spiritual values as the mediator between connectedness to nature and psychological well-being. Marselle *et al*. (2016) recommended perceived restorativeness to comprise being away, fascination, compatibility, and coherence as mediators between certain predictor variables (perceived naturalness, perceived biodiversity, walk duration, and perceived walk intensity) and post-walk emotional well-being. Both models will be tested to investigate the link between emotional connection in a natural environment and the lessening of negative emotions and improvement of psychological well-being. The proposed framework is also a continuation of the previous theoretical foundation supported by the proposed Eco-Spiritual Helping Model (ESH), which aims to improve psychological health with a spiritual dimension (Besthorn *et al*., 2010).

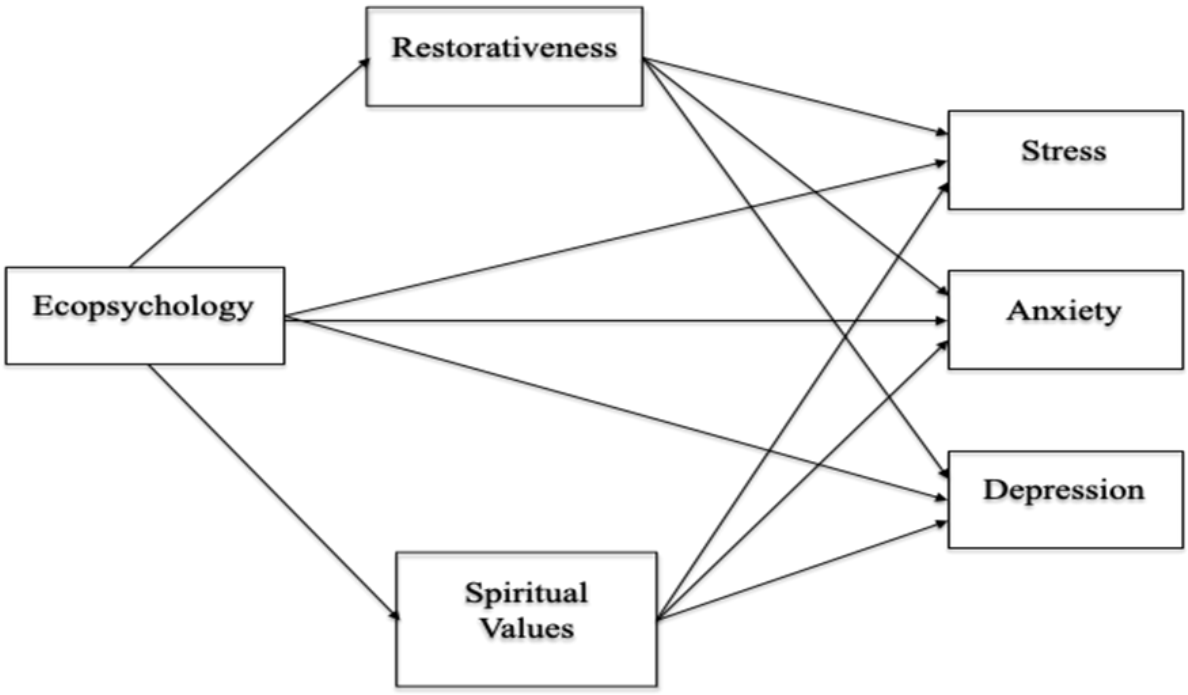

Figure 2. Proposed conceptual framework.

3.2. Discussion

The present review examined the extant literature on the relationship between exposure to nature reduced emotional disturbance and improved psychological well-being. The focuses of the study are on (1) the relationship between the different facets of exposure to the natural environment and different health-related variables and (2) the differences, to-date, collectively past studies employed based on various data sources and research designs. In general, the association between ecopsychology and emotional disturbance in a natural environment is mostly supported by the previous studies reviewed. These studies, however, mainly focused on psychologically positive and negative emotions. Due to the increasing number of stress, anxiety, and depression cases globally, further study is required to uncover how the ecopsychology concept lessens emotional disturbance. The present review also discusses the knowledge, theoretical underpinning, methodological, and population strategies concerning the subject matter.

3.2.1. Knowledge and Evidence Gaps

A nature-based environment is claimed to have restoration elements. Studies in a nature setting (Barton *et al*., 2012) found that green or blue (water) areas not only pertain to plant types but also to seasons and areas (Mackay & Neill, 2010), playgrounds (Van Herzele & de Vries; 2012), small gardens or arboretum (Adevi & Martensson, 2013; Berman *et al*., 2008), forests (Berger & Tiry, 2012), parks or green areas on the road (van Dillen *et al*., 2012), beaches; aquarium (Cracknell *et al*., 2016); mountains and forests (Berman *et al*., 2008), wildlife protection, and undeveloped landscapes. Such diversity offers a salutogenic concept in promoting the value of health. Environmental restoration in nature can therefore be said to be able to reduce the stress load experienced by individuals.

Nature can significantly reduce stress. The direct linkage between emotional well-being and health has continuously been proven. Some of the previous studies have assessed the relationship between nature exposure and physical disease. In one study in New Zealand,

found no evidence that nature influences the mortality of patients with cardiovascular disease despite other studies attesting to the association between a nature-based environment and health benefits. Nature offers spiritual values, which refer to one's relationship and sense of intimacy with God. Such intimacy evokes a sense of awe of God's creation. Nature gives a sense of peace and serenity and creates a space to explore a sense of spiritual value through self-reflection. This sense of "oneness" with nature and the universe leads to a transcendental experience. Few studies have also considered the effect of exposure to a natural environment (particularly blue space) on improving individual self-esteem and mood after exercising (Barton & Pretty, 2010). Other studies have found that healthy food including chocolate manages to combat a high level of stress with antioxidants (Macht & Mueller, 2007). A study by Hibbeln and Cow (2014) found that fish has omega 4 which can help reduce depression. Coconut full of shooting is loaded with electrolytes and therefore is good for the heart (Khaw *et al*., 2017). Other natural substitutes as determinant factors that can substitute indoor activities besides outdoor activities in a natural environment.

The phenomenon of nature deficit disorder, particularly among children, seems to be more apparent in the era of urbanization. The contributing factors are (1) obsession with the internet and gadgets (the time spent recorded was 6.5 hours per day on average) (Roberts & Foehr, 2008); (2) parental concern over the safety of children playing outside (Brussoni *et al*., 2012); (3) crime cases in parks or outdoors particularly among women (Boomsma & Steg, 2014); (4) changes in weather, haze, temperature, and environmental pollution (de Montigny *et al*., 2012); and (5) perceptions through social and cultural norms. These factors will significantly impact visitation to nature and evoke (i) uneasy feelings and (ii) hesitation in allowing children to engage in physical activities outdoor and interaction with nature. Therefore, accumulative concerns regarding nature deficit disorder need to be taken seriously to elevate individual attitudes, behavior, and perceived benefits, which will highly influence their visit to urban parks. Pro-environmental is more prominent in promoting the natural space for human health and well-being as the central purpose of urban planning and interaction with nature (Barton *et al*., 2009).

3.2.2. Theoretical Gaps – Underpinning Theory

Bettering mental health has become challenging. Stress is experienced when a person perceives that the "demands exceed the personal and social resources the individual can mobilize." This notion is called the "transactional model of stress and coping." Neither the environment event nor the person's response defines stress; rather, the individual's perception of the psychological situation is the critical factor. The effects stress has on a person are based more on his or her personal feelings of threat, vulnerability, and ability to cope than on the stressful event itself. Stress as a "particular relationship between the person and environment that is appraised by the person as exceeding their resources and endangering their well-being." The most common symptoms experienced by those frequently attacked by overstress are categorized into behavior (productivity and absence), physiological (diseases such as dizziness, nausea, hypertension), and psychological (anxiety and depression). Thus, having stress, anxiety, and depression in a more prolonged and continuous period has been shown to have harmful effects; it often results in one body's need to return to homeostatic conditions by releasing hormones and other chemicals to restore the prestress conditions. Biological changes due to stress include (a) increased stress hormones like catecholamines, corticotropin-releasing hormone, serotonin, neuropeptide Y, cortisol, and glucagon; (b) impaired immune function, such as reduced white blood cell count, and reduced T-cell activity; (c) increased risk of chronic diseases like cardiovascular disease,

diabetes and cancer; and (d) increased oxidative stress markers like thiobarbituric acid reactive species (TBARS) (Cohen *et al*., 2007; Kawaguchi *et al*., 2007; Simon & Zieve, 2013).

Attention Restorative Theory (ART) and Stress Recovery Theory (SRT) theories to, (i) relate the malfunction of the special effect of mental health issues, and (ii) promote natural environment as nonclinical efforts to reduce emotional disturbance, thus improving improve health well-being. They assert that concentration improved after one spent time in nature, or even looked at the scenes of nature. ART also describes the conditions that promote recovery from mental fatigue. These conditions, which are found in restorative settings, are characterized by (a) being away (temporary escape from one's usual setting or situation); (b) extent (a sense of being part of a larger whole); (c) fascination (an involuntary form of attention requiring effortless interest, or curiosity); and (d) compatibility (a setting that satisfies the individual's purposes). Past research has shown that attention is categorized into two components: involuntary attention and voluntarily directed attention. Involuntary attention is captured by inherently intriguing or essential stimuli, whereas voluntary or directed attention is directed by a cognitive-control process (Kaplan, 1995). To support this, SRT is focusing on all aspects of stress; "mental, emotional and physiological" (Wilson, 2007). The intuitively based belief is that exposure to trees, water, and other nature tends to foster psychological well-being and produce restoration from the stress of everyday urban living. Both theories predict that the natural environment can offer a high restoration effect compared to modern urban or man-built environments. However, scholars have debated that restorativeness can occur anywhere if an individual feels attracted and comfortable with the living environment (Hartig *et al*., 2003). Some of the empirical findings concur that the impact of restoration is high in nature or green spaces compared to artificial or urban areas (Benfield *et al*., 2015).

Introduced in 1990, the term ecopsychology emphasises emotional connection towards nature. Before it was instituted, hypothesis of Biophilia on human emotions with other living organisms (e.g., plants, vegetation, water elements, and animals) related to physical, psychological, and spiritual focusing on life processes. This assumption refers to human, aesthetic, intellectual, cognitive, and spiritual aspects of restoration response in nature. In contrast, it was found that the natural environment can be substituted by a man-built environment, which is supplemented with modern technology, such as the internet and gadgets for the need for more convenience (Fisher, 2006). For this reason, rapid urbanization is said to affect the proximity of green spaces, hence upsetting mental health psychologically and even physically. The manifestation of a lack of Vitamin "N" (N refers to Nature) results in one's emotional disconnection, which is likely to lead to disengagement of relationship with nature. Ecopsychological approaches are critical for psychological and spiritual healing. The approaches can reduce emotional disturbance associated with the natural environment (Fisher, 2013). Such connection is explained based on the broad understanding of how emotional connection to nature is specifically related to human mental health. The natural environment allows restorative effects and indirectly promotes perceived human behavior and interaction toward conservation and ecological bonds in the environment.

In this review, researchers identified an apparent theoretical gap in the prior research concerning natural environment studies. The theory of ecopsychology is dated while current studies have been focusing more on the ART and SRT to study emotional disturbances. Some of the prior theories appear to be essential for understanding nature-based experiences. However, an investigation in terms of restorativeness and spiritual values at once to connect theoretical development is warranted. Thus, we recommend an integrated theoretical

framework comprising the ART and the SRT. These preferred theories emphasize the aspect of psychological resources that can reduce emotional disturbances. However, the studies conducted to relate the natural environment to psychological well-being and health are rarely associated with the theory of ecopsychology and spirituality on well-being (Fisher, 1998). Past studies have revealed the elements of deep emotional connection, a sensation of restorativeness, mystical experiences, and a feeling of oneness, or a more profound connection with the Creator as part of spirituality obligation. Therefore, we propose the idea of using these theories to clarify the relationship between the variables studied and the lessening of emotional disturbances.

3.2.3. Methodological Gaps

Overall, the experimental pre-post design was the prevailing method used for studying the use of a nature-based environment for health purposes. The challenges in the intervention process have been cost and time constraints as well as in securing the sample to be studied. Researchers need to obligate and observe details on the confounding factors, reverse causation, and possible effects or biased results. The experimental pre-post design method managed to identify how human biological markers of stress are indicative of the far-reaching effects of stress and its detrimental effects on long-term health (Lee *et al*., 2015). Such a qualitative approach has contributed to significant research knowledge. The method has been used to understand why people think, feel, react, and behave in the way to assess lived experiences. Previous studies have also explored how nature-based experiences are connected to human psychological aspects investigated how nature creates human motivation from the perspective of ecopsychology.

Because of the various research designs, Chalquist (2009) suggests the nature-based environment as one method of "ecotherapy." This approach is an aid to provide psychological, mental, and spiritual experience by taking outdoor activities and exposing oneself to nature. The method, in turn, creates "nature-connectedness to reduce emotional disturbance and positive relationship to increase psychological well-being" (Kamitsis & Francis, 2013). Activities such as kayaking and lighting a bonfire in the forest sparked a sense of unity with nature and the feeling of God's existence. This finding indicates that the themes of experiences in a nature-based environment can fulfill one's spiritual needs. The studies were also based on commemorating God, who created this earth as a more positive emotion and the sadness of one's disconnection from nature (Hegarty, 2010).

A combination of mixed methods plays a significant result related to nature and mental health (Jakubec *et al*., 2016). One study conducted online (n = 118) through interviews (n = 15) found that the respondents agreed that a park provides physical comfort (91%), emotional relief space (92%), and spiritual sense (93%). The majority of the study participants were found to have similar views and feelings about nature's offer to the self. They believed that nature could provide psychological well-being in general. To disentangle the methodology gaps, advocated the use of various research methods. Thus, we seek to extend the use of the research method specifically for the data analysis. We intended to test the model in different demographical locations. Growing initiative research design conducted a proposed conceptual model framework supplement with mediator studies (Kamitsis & Francis, 2013). They found that restorativeness and spiritual values strongly connect the nature-based environment with psychological and emotional well-being.

3.2.4. Population Categories Gap

Various populations have been tested to gain benefits from the natural environment. Despite the consistent findings, Huynh *et al*. (2013) reported a weak connection between the natural environment and emotional well-being. They claimed that results from the previous studies might be influenced by other factors, such as demographic characteristics, family affluence, and perception of neighborhood surroundings. Perhaps, the sampled participants were among the young generation who were keen to participate in different activities, such as social activities via media technology and the internet (Hasan, 2019). Even outdoor physical activities such as jogging, running, yoga, and other fitness exercises can be done indoors in a gym or health center (Plante *et al*., 2007; Thompson Coon *et al*., 2011). In explaining such contrasting results, Barton and Perry (2010) claimed that the relationship between nature and emotional well-being has not been explicitly studied and remains unclear concerning the youth populations. Additionally, Mitchell (2013) reported that exercise in the green space has short- and long-term positive effects both on mood and mental health.

Table 1 lists the previous studies that involved undergraduate students. The majority of the studies compared the natural environment and urban living to test the students' positive and negative emotions. The sampled students were tested in an intervention setting; they were required to watch a green landscape video view still photos of nature and walk in the forest (Berman *et al*., 2008). A salivary amylase test was used to test the students' stress levels and examine their feelings of happiness, calmness, anger, tension, and energy (Hartig *et al*., 1991). Urban busting living might increase tension, stress, and distractions, Wells and Evans (200) reported children (n = 12) with low family background income showed significant improvement in their directed attention and academic performance. Spending time in nature could alleviate their mental fatigue due to impulsiveness, impatience, and irritability (Berman *et al*., 2008; Cimprich & Ronis, 2003; Hartig *et al*., 1991). In addition, it shows previous studies that investigate the mediator and moderator relationship between nature-connectedness and mental health involving undergraduate students. Howell *et al*. (2011) suggested (i) nature-connectedness, (ii) social, emotional, and psychological well-being, and (iii) degree of mindfulness (moment-to-moment awareness) as possible mediators and moderators to explain the association between nature and well-being. More studies have been conducted on nature exposure and connectedness. The studies focused primarily on restorativeness and spirituality as mediators to lessen the emotional disturbances in a natural environment. However, the findings are yet to be tested among undergraduate students. Little research has been conducted to test these mediators and examine the relationship between ecopsychology and emotional disturbances (stress, anxiety, and depression).

Table 1. List of studies among undergraduate students and nature-based environment.

No.	Authors	Sample	Research	Year
1.	Zelenski *et al*.	250 undergraduate students	A group of participants was assigned to watch a nature video and an architectural video to examine mood and positive and negative affect	2015
2.	Mao *et al*.	20 healthy male university students	Participants assigned to the forest walks experienced improved mood and reduced levels of stress and inflammatory biomarkers in comparison to the urban walkers	2012
3.	Howell *et al*.	452 introductory psychology students	To examine moderators and mediators of the relationship between nature connectedness, well-being, and mindfulness	2011

Table 1 (Continue). List of studies among undergraduate students and nature - based environment.

No.	Authors	Sample	Research	Year
4.	Thompson Coon *et al*.	11 studies (with individual sample sizes ranging from 8 to 269; 6 solely university students)	To examine the positive effect of walking outdoors on mood, including improvements in feelings of self-esteem, energy, and vitality and reductions in feelings of depression, tension, frustration, or concern	2011
5.	Valtchanov *et al*.	22 university students	To access natural views significantly improved participants' moods, with no changes seen among participants who viewed the images of abstract paintings	
6.	Mayer *et al*.	76 undergraduate psychology students	To examine connectedness to nature strongly predicts the relationship between experiences with nature and emotional well-being	2010
7.	Saroglou, Buxant & Tilquin	87 psychology students	To exhibit videos showing panoramic views of natural landscapes, increased reported levels of spirituality	2008
8.	Berman *et al*.	50 university students	Participants walking in nature experienced improvements in directed attention and mood, while those walking in urban settings did not, and viewing images of nature improved directed and executive attention	2008
9.	Tsunetsugu *et al*.	12 male university students	Stress levels were lower following the 15-minute walk in the forest than in the urban setting; the forest walk also produced feelings of comfort, calm, and refreshment	2007
10.	Plante *et al*.	88 female undergraduate students aged 18 to 22 years old	To examine the level of AD-ACL (energy, calmness, tension, tiredness) and PACES (physical activity enjoyment) in the natural environment	2007
11.	Yamaguchi *et al*.	10 male university students	To access stress levels using salivary amylase test	2006

4. CONCLUSION

In a nutshell, this review research provides a way of understanding the relationship between natural environment relatedness and emotional disturbance, particularly across different sources of data, research designs, and levels of analysis. Throughout the review process, we observed that most studies included the elements of exposure, connectedness, and engagement towards nature in lessening emotional disturbance and improving psychological well-being. Some studies have designed models of restorativeness by adding the effects of spiritual values concerning natural environment relationships. Despite such fundamental understanding, the impact might be different across demographical and geographical climates. We proposed that more advanced and varied research techniques be applied to improve our current theoretical framework, including the examination of the possible reciprocal relationship between ecopsychology and emotional disturbance. We also recommend that more research be conducted in newly developed countries to address more proximity to the natural environment and emotional disturbances.

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6. AUTHORS' NOTE

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