



Exploring the Therapeutic Potential of Nature Photography in Treating Anxiety and Depression amongst Students in FCT College of Education Abuja

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Abstract: This study explored the therapeutic potential of nature photography in treating anxiety and depression amongst students in FCT College of Education Zuba, FCT-Abuja. The study raised two research questions. The study employs a descriptive survey design. The target population for this study includes all NCE II ECCE students enrolled at the FCT College of Education, a sample of 200 students were selected using simple random sampling technique. Data was gathered using a questionnaire titled Therapeutic Potential of Nature Photography for Anxiety and Depression Questionnaire (TPNPADQ). To ensure the validity of the questionnaire, it was reviewed by experts in psychology and test and measurement. The reliability of the instrument was assessed using Cronbach's alpha, which yielded a reliability coefficient of 0.85. The collected data were analyzed using descriptive statistics, including percentages, means, and standard deviations. The findings revealed that students in FCT College of Education are aware of using nature photography for treating anxiety. Furthermore, the findings revealed students in FCT College of Education are aware of using nature photography for treating depression. Based on these findings, the study recommends that Colleges of Education should develop comprehensive educational programs and workshops. These programs can provide students with practical skills in nature photography, emphasizing its therapeutic applications in addressing anxiety.

Keywords: Therapeutic, Nature Photography, Anxiety, Depression.

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INTRODUCTION

Nature photography is a specialized genre dedicated to capturing the intricate beauty and diversity of the natural world, encompassing landscapes, wildlife, plants, and natural phenomena. Its primary objective is to document and emphasize nature's aesthetic and intrinsic value, thus fostering

appreciation and supporting conservation efforts (Smith, 2021). This field involves several key elements: it covers a broad range of subjects, each requiring specific techniques to effectively convey their essence (Johnson & Miller, 2020). Successful nature photography relies on precise control over lighting, composition, and the use of specialized

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equipment, such as telephoto lenses for wildlife and wide-angle lenses for landscapes (Taylor, 2022). Ethical practices are also crucial, with photographers adhering to guidelines that minimize their environmental impact and promote conservation through their work (Davis & Black, 2021). In addition to its aesthetic and conservation goals, nature photography offers notable benefits for mental health. Engaging in this practice can reduce stress and enhance well-being through mindfulness and relaxation achieved by focusing on natural details (Bratman *et al.*, 2015). Moreover, nature photography plays a vital role in raising awareness about environmental issues and advocating for conservation by showcasing the beauty of natural environments (Wilson, 2019). According to Erubami *et al.*, (2023) Nigeria is among the worst-hit countries by mental illness-related challenges, given that about 40 to 60 million Nigerians suffer various forms of mental ailment

The rising prevalence of anxiety disorders has become a significant concern in mental health research, reflecting their substantial impact on individuals' well-being. Anxiety is a psychological condition characterized by excessive worry, apprehension, and physiological symptoms such as increased heart rate and muscle tension (American Psychiatric Association, 2013). While anxiety is a normal emotional response, it becomes pathological when it is disproportionate to the actual threat or impairs daily functioning. Various anxiety disorders, including generalized anxiety disorder, panic disorder, and social anxiety disorder, are delineated in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), each sharing common features of persistent and excessive fear or worry (American Psychiatric Association, 2013). In Nigeria, anxiety disorders are prevalent and significantly influenced by socio-economic and environmental factors. A study by Gureje *et al.*, (2018) identifies anxiety as one of the most common mental health issues in Nigeria, with contributing factors such as poverty, unemployment, and exposure to violence exacerbating its prevalence. These findings align with global observations where socio-economic hardships are major contributors to the incidence of anxiety disorders (WHO, 2017). Neurobiological factors also play a crucial role in the development of anxiety. Neuroimaging studies have highlighted abnormal activity in brain regions such as the amygdala and prefrontal cortex, which are involved in emotional regulation and the processing of fear (Etkin & Wager, 2007). Furthermore, neurotransmitter systems, particularly those involving serotonin, norepinephrine, and gamma-aminobutyric acid (GABA), are integral to the pathophysiology of anxiety (Ressler & Nemeroff, 2000).

Treatment of anxiety disorders typically involves a combination of pharmacological and psychotherapeutic approaches. Selective serotonin reuptake inhibitors (SSRIs) and benzodiazepines are commonly prescribed medications, while cognitive-behavioral therapy (CBT) remains the gold standard for psychotherapeutic intervention (Hofmann *et al.*, 2012). Recent research in Nigeria and globally is exploring alternative interventions, such as mindfulness-based stress reduction and nature-based therapies, which have shown promise in alleviating symptoms of anxiety (Hofmann *et al.*, 2010; Bratman *et al.*, 2015).

Depression is a mental health disorder characterized by persistent feelings of sadness, hopelessness, and a lack of interest or pleasure in activities previously enjoyed. It often encompasses a range of symptoms, including changes in sleep patterns, appetite disturbances, fatigue, and impaired cognitive function (American Psychiatric Association, 2013). The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), identifies major depressive disorder (MDD) and persistent depressive disorder (dysthymia) as primary forms of depression, each with specific diagnostic criteria but sharing common elements of pervasive low mood and functional impairment (American Psychiatric Association, 2013). In Nigeria, depression is a significant public health concern, influenced by socio-economic and cultural factors. A recent study by Gureje *et al.*, (2020) highlights that depression affects a substantial portion of the Nigerian population, exacerbated by factors such as poverty, unemployment, and exposure to violence. These findings are consistent with broader global research indicating that socio-economic stressors and life adversities are major contributors to the prevalence of depression (WHO, 2022). Neurobiological research has elucidated the pathophysiology of depression, emphasizing disruptions in neurotransmitter systems, particularly serotonin, norepinephrine, and dopamine (Kendler *et al.*, 2015). Imaging studies have identified abnormalities in brain regions involved in mood regulation, such as the prefrontal cortex and the amygdala (Morris *et al.*, 2017). These neurobiological insights are crucial for understanding the complex interplay between brain function and depressive symptoms. Psychological models, including cognitive-behavioral theories, suggest that depression often arises from maladaptive thought patterns and cognitive distortions, such as negative self-perceptions and pervasive hopelessness (Beck, 2016). Environmental factors, such as chronic stress and exposure to traumatic events, also play a significant role in the development and maintenance of depressive disorders (Hammen, 2018). Treatment of depression

generally involves a combination of pharmacological and psychotherapeutic approaches. Antidepressant medications, such as selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs), are commonly used, while cognitive-behavioral therapy (CBT) remains a highly effective psychotherapeutic intervention (Cuijpers *et al.*, 2020). In Nigeria, recent research is also exploring the integration of traditional and community-based interventions to enhance the effectiveness of treatment and address cultural factors influencing mental health (Ogunlesi *et al.*, 2021).

Photography offers a multifaceted approach to addressing anxiety and depression through creative expression, mindfulness, and community engagement. As a form of art therapy, photography allows individuals to express emotions non-verbally, facilitating emotional release and exploration of complex feelings (Gergen *et al.*, 2016). Engaging in photographic activities encourages self-reflection and mindfulness, helping individuals gain new perspectives on their emotions and thought patterns (Malchiodi, 2012). Nature photography, in particular, has been shown to reduce stress and improve mood by promoting relaxation and mindfulness through focused engagement with natural environments (Bratman *et al.*, 2015). Additionally, photography can enhance self-esteem and a sense of accomplishment by providing tangible results through projects and exhibitions, which is beneficial for those with depression (Cox *et al.*, 2017). Incorporating photography into therapeutic practices can also support exposure therapy by helping individuals confront and document anxiety-provoking situations, aligning with cognitive-behavioral techniques (Friedberg & McClure, 2015). Documenting progress through photography provides a visual record of improvements, reinforcing a sense of achievement (Kieffer & Pritchard, 2020). Participation in photography groups and workshops offers social support and reduces isolation, fostering connections with others and enhancing mood (Dahlberg *et al.*, 2015; O'Neill & Gifford, 2018).

Structured phototherapy programs and guided photography exercises can be tailored to individual needs, integrating photographic activities with traditional therapeutic methods to create a comprehensive approach to managing anxiety and depression (Gergen *et al.*, 2016; Kendall & Hollon, 2018). Photography is the art and science of capturing images through light-sensitive media or electronic sensors, typically using a camera to create visual representations on film or digital sensors. This process involves manipulating light, exposure, focus, and composition to produce images that serve aesthetic, documentary, or communicative purposes

(Krause, 2020). The term "photography," derived from the Greek words *phos* (light) and *grapho* (to write), means "writing with light" (Buckland, 2021). Since its inception in the early 19th century with techniques like the daguerreotype, photography has evolved through various technologies, including both film and digital methods (Harris & Leung, 2019). Digital photography, which uses electronic sensors to convert light into digital signals, represents a significant advancement over traditional film-based methods. The rise of digital technology and the internet has further enhanced photography's accessibility and impact, facilitating widespread sharing and manipulation of images (Langford & McHugh, 2022).

The therapeutic potential of nature photography in treating anxiety and depression has garnered significant scholarly interest. This practice, which involves capturing the beauty and diversity of natural landscapes, wildlife, and flora, offers distinctive therapeutic benefits tailored to the psychological needs of individuals suffering from anxiety and depression (Smith, 2021). Engaging in nature photography promotes mindfulness, reduces stress, and enhances overall well-being through the immersive and calming effects of nature (Bratman *et al.*, 2015).

One pivotal therapeutic mechanism of nature photography is its capacity to foster mindfulness and relaxation. The practice necessitates focusing on the present moment and closely observing natural surroundings, thereby mitigating rumination and anxious thoughts (Kabat-Zinn, 2013). Additionally, photographing nature can induce a meditative state, lowering cortisol levels and alleviating anxiety symptoms (Bratman *et al.*, 2015). Nature photography also facilitates creative expression, providing a non-verbal outlet for individuals to explore and articulate their emotions. This creative process can facilitate emotional release and foster a sense of accomplishment, which is particularly beneficial for those experiencing depression (Gergen *et al.*, 2016). The tangible outcomes, such as a collection of images, can enhance self-esteem and foster a sense of purpose and competence (Cox *et al.*, 2017). Furthermore, nature photography can be incorporated into structured therapeutic interventions. Therapists can design specific photography exercises to address individual needs, such as capturing positive aspects of daily life to shift focus from negative thought patterns (Kendall & Hollon, 2018). These interventions can complement cognitive-behavioral therapy (CBT) programs, integrating elements of nature-based therapy to enhance their efficacy. Nature photography can promote social interaction and community engagement. Participation in

photography groups or workshops provides social support and reduces feelings of isolation, which are prevalent among individuals with anxiety and depression (Dahlberg *et al.*, 2015). Shared experiences in a supportive environment can enhance mood and foster a sense of belonging (O'Neill & Gifford, 2018).

Psychological theories, such as cognitive-behavioral models, suggest that anxiety arises from maladaptive thought patterns and behavioral responses to perceived threats (Beck & Clark, 1997). This comprehensive understanding of anxiety, encompassing socio-economic, neurobiological, and psychological dimensions, underscores the need for a multifaceted research approach to effectively address and mitigate this pervasive mental health issue. Top of Form In Nigeria, these psychological factors are compounded by environmental stressors, including chronic stress and traumatic events, which significantly contribute to the development and exacerbation of anxiety symptoms (Gureje *et al.*, 2018)

Statement of the Problem

Despite the recognized therapeutic benefits of nature photography, there is a significant gap in empirical research exploring its efficacy in treating anxiety and depression, especially in diverse cultural contexts such as Nigeria. While existing studies highlight the general mental health benefits of engaging with nature and creative activities (Bratman *et al.*, 2015; Gergen *et al.*, 2016), there is a lack of comprehensive research on systematically integrating nature photography into therapeutic interventions for anxiety and depression. Socio-economic and environmental factors in Nigeria, such as poverty, unemployment, and exposure to violence, exacerbate the prevalence of anxiety and depression (Gureje *et al.*, 2018). However, limited research addresses how nature photography can be adapted to meet the specific needs of individuals within this context. The potential of nature photography as a cost-effective, accessible, and culturally relevant therapeutic intervention remains underexplored. While nature-based therapies and creative expressions are increasingly recognized for their psychological benefits (Wilson, 2019), integrating these approaches into mainstream mental health practices is still in its infancy. Rigorous studies are needed to evaluate the therapeutic outcomes of nature photography and develop structured frameworks for its application in clinical and community settings. This research aims to address these gaps by investigating the therapeutic potential of nature photography in treating anxiety and depression in FCT College of Education Zuba Aduja. By examining both the psychological impacts and practical implementation of nature photography as a

therapeutic intervention, this study seeks to contribute to a broader understanding of innovative mental health treatments and provide evidence-based recommendations for their integration into existing mental health care frameworks.

Research Questions

1. What is the extent of students' awareness about using nature photography for treating anxiety?
2. What is the extent of students' awareness about using nature photography for treating depression?

LITERATURE REVIEW

Theoretical Framework:

Biophilia Hypothesis

The Biophilia Hypothesis, introduced by Edward O. Wilson in 1984, suggests that humans have an inherent affinity for nature due to our evolutionary history, which is essential for psychological well-being. According to the hypothesis, exposure to natural environments can evoke positive emotional responses and reduce stress. This connection extends to various forms of nature interaction, including visual and sensory experiences. Nature photography aligns with the Biophilia Hypothesis by fostering a deeper connection with the natural world, potentially reducing symptoms of anxiety and depression and enhancing therapeutic outcomes.

Cognitive Behavioral Theory (CBT)

Cognitive Behavioral Theory (CBT), developed by Aaron T. Beck in the 1960s, is a psychotherapeutic approach that focuses on identifying and challenging maladaptive thought patterns and behaviors. CBT posits that cognitive distortions contribute to emotional distress and behavioral problems, and by restructuring these distortions and engaging in more adaptive behaviors, individuals can improve their mental health. Techniques used in CBT include cognitive restructuring, behavioral activation, and exposure. Nature photography can be integrated into CBT as a form of creative expression and mindfulness practice, helping individuals with anxiety and depression challenge negative thought patterns and engage in meaningful activities that foster a sense of accomplishment and emotional release.

Attention Restoration Theory (ART)

Attention Restoration Theory (ART), proposed by Rachel and Stephen Kaplan in 1989, posits that natural environments can restore an individual's ability to focus and concentrate, which becomes depleted in urban and high-stress environments. ART identifies four mechanisms of restoration: fascination (effortless attention), being

away (removal from stressors), extent (immersive experience), and compatibility (meeting individual needs). In the context of nature photography, ART is relevant as engaging with natural environments through photography can facilitate cognitive restoration and reduce stress. Capturing and observing nature provides a break from daily stressors, fosters mindfulness, and promotes emotional and psychological healing by invoking fascination and immersion.

Conceptual Clarifications

Nature photography has been defined in various ways by scholars to showcase the intrinsic value of nature. Smith (2021) describes nature photography as the practice of capturing images of the natural environment, including landscapes, wildlife, plants, and other natural phenomena, to highlight their beauty and complexity. Wolfe (2013) defines nature photography as an art form that uses visual storytelling to reveal the intricate relationships between light, texture, color, and composition in the natural world, that nature photography is not just about capturing reality. It's also about interpreting and expressing the emotions, moods, and feelings evoked by the natural world.

Anxiety has been defined by various scholars with a focus on its multifaceted condition. American Psychiatric Association (2022) defines anxiety as a complex and multifaceted mental health condition characterized by feelings of worry, nervousness, and fear that are persistent, excessive, and overwhelming, interfering with an individual's daily life, relationships, and overall well-being. Bekker *et al.*, (2020) describes anxiety as a future-oriented emotional state characterized by the perception of a threat, whether real or imagined, and the associated physiological and psychological responses.

Depression has been defined by various scholars, emphasizing on its effect on the overall wellbeing of an individual. American Psychiatric Association (2022) defines depression as a complex, multifaceted, and debilitating mental health disorder characterized by persistent and intense feelings of sadness, hopelessness, worthlessness, guilt, and emptiness. World Health Organization (2020) describes depression as a mental health condition that can affect individuals of all ages, backgrounds, and socioeconomic statuses, and can have a significant impact on daily functioning, relationships, and overall well-being (World Health Organization, 2020). It can also co-occur with other mental health conditions, such as anxiety disorders (Bandelow & Sher, 2019) and substance use disorders (Kessler *et al.*, 2020).

Empirical Studies

Tourigny & Naydenova (2020) investigated the use of therapeutic photography techniques to increase the wellbeing of college students. In study 1, participants were placed in groups after taking the Beck's Depression Inventory. After they were placed in groups, they also took Beck's Anxiety Inventory and the Life Satisfaction Scale. For four weeks, participants were asked to take pictures of what makes them happy and share and discuss them with their groups. After four weeks, they took all three inventories a second time. We found significant results between the pretest and posttest scores of the depression and anxiety inventories; for the low depressive groups there was a significant difference for the anxiety inventory, and in the high depressive group there were significant results for the depression and anxiety inventories. These results showed that therapeutic photography techniques can have a large impact on those suffering with depressive symptoms and anxiety. Study 2 was a qualitative study interviewing many different experts in the field to learn how this technique is used daily.

Browning *et al.*, (2023) studied the influence of a daily virtual nature intervention on symptoms of anxiety, depression, and an underlying cause of poor mental health: rumination. Forty college students (58% non-Hispanic White, median age=19) were recruited from two U.S. universities and randomly assigned to the intervention or control group. Over several weeks, anxious arousal (panic) and anxious apprehension (worry) decreased with virtual nature exposure. Participants identifying as women, past VR users, experienced with the outdoors, and engaged with the beauty in nature benefited particularly strongly from virtual nature. Virtual nature did not help symptoms of anhedonic depression or rumination. Further research is necessary to distinguish when and for whom virtual nature interventions impact mental health outcomes.

Milasan (2024) investigated the views of a group of fifteen mental health service users on the therapeutic benefits and limitations of photography as a research method. For this purpose, visual and textual data from four weekly photography workshops, photo-elicitation interviews, and a reflection and feedback group were thematically analysed. Four overarching themes were identified in support of the therapeutic value of photography: (1) forging social companionship and camaraderie, (2) intra-personal reflection and self-awareness, (3) connection with nature, and (4) photography as an occupation. Therapeutic limitations and challenges of photography as a research method are also discussed. The findings of this study may be applicable beyond the area of mental health and contribute to enhancing

the ethical principle of beneficence in research by creating opportunities for personal growth and wellbeing for research participants involved in photography-based studies.

DeCoster and Dickerson (2013) systematically identified evidence-based interventions using photography in mental health practice. The initial search of the literature produced 4,929 hits, title reviews reduced this set to 225 possible studies, abstract examination refined this list to 81, and analyzing the articles determined that only 23 meet selection criteria for inclusion in this project: psychosocial-oriented intervention within the domain of social work practice with supporting empirical data. The majority of interventions involved assignments that included taking photographs or creating some kind of photographic product (e.g., collages, time-series of snapshots). Typically, these photographic activities were done in group or individual therapy and focused on social skills, coping skills, self-esteem, or identity for adults and adolescents. The empirical support for these protocols was usually from case studies or single-group design evaluations, all reported practical or theoretically significant improvements, and three produced statistically significant effects. This article will then discuss the implications of findings and direction for future research.

Murphy and Fox (2024) explored the experience, benefits and challenges of group-based photography. Qualitative interviews were conducted with four participants and analyzed using Reflexive Thematic Analysis. Four themes were identified: a progression from beginner to amateur photographers; looking at the world with a photographer’s eye; working together as a photography team; and recognition of the interaction between occupation and wellbeing. The research indicates that photography can provide an immersive occupational experience and develop skills for people experiencing mental health challenges.

METHODOLOGY

The study employs a descriptive survey design. The population for this study includes all students enrolled at the FCT College of Education. The target population for this study includes all NCE II ECCE students enrolled at the FCT College of Education, 2023/2024 academic session. A representative sample of 200 students was selected using simple random sampling technique. The research instrument used for data collection was a structured questionnaire titled Therapeutic Potential of Nature Photography for Anxiety and Depression Questionnaire (TPNPADQ). The questionnaire consisted of two sections: the first section collected data on students' awareness of using nature photography for treating anxiety, and the second section included items related to students' awareness of using nature photography for treating depression, measured on a 4-point Likert scale. To ensure the validity of the questionnaire, it was reviewed by experts in psychology and test and measurement. Their feedback was used to refine the items for clarity and relevance. The reliability of the instrument was assessed using Cronbach's alpha, which yielded a reliability coefficient of 0.85, indicating a high level of internal consistency. Data were collected through the administration of the questionnaires during regular class sessions. This method ensured a high response rate and allowed for immediate clarification of any questions the respondents had about the survey items. The collected data were analyzed using descriptive statistics, including percentages, means, and standard deviations. The data analysis was conducted using SPSS (Statistical Package for the Social Sciences) software to ensure accuracy and efficiency in handling the data.

RESULTS

RQ1: What is the extent of students' awareness about using nature photography for treating anxiety?

Table 1: Students' Awareness of Using Nature Photography for Treating Anxiety

Items	Not aware	Slightly aware	Moderately aware	Very aware	x	SD
1. Benefits of nature photography for relaxation	15%	25%	35%	25%	2.70	0.94
2. Nature photography as a coping mechanism	20%	30%	30%	20%	2.50	0.99
3. Impact of nature photography on mental health	10%	25%	40%	25%	2.80	0.88
4. Awareness of existing nature photography programs	25%	35%	25%	15%	2.30	0.97
5. Usage of nature photography in daily routines	30%	20%	30%	20%	2.40	1.07

N=200

Table 1 presents the extent of students' awareness of using nature photography for treating anxiety. A significant portion of students, 35%, were moderately aware of the benefits of nature

photography for relaxation, while 25% were very aware. The mean awareness score for this item was 2.70 (SD = 0.94). For nature photography as a coping mechanism, awareness was evenly distributed, with

30% of students being both slightly and moderately aware. The mean score for this item was 2.50 (SD = 0.99). The impact of nature photography on mental health had the highest awareness, with 40% of students moderately aware and 25% very aware. The mean score for this item was 2.80 (SD = 0.88). Awareness of existing nature photography programs was lower, with 35% of students slightly aware and 25% both not aware and moderately aware. The

mean score for this item was 2.30 (SD = 0.97). The usage of nature photography in daily routines also showed moderate awareness levels, with 30% of students both not aware and moderately aware. The mean score for this item was 2.40 (SD = 1.07).

RQ2: What is the extent of students' awareness about using nature photography for treating depression?

Table 2: Students' Awareness of Using Nature Photography for Treating Depression

S/N	Items	Not aware	Slightly aware	Moderately aware	Very aware	x	SD
1	Benefits of nature photography for mood improvement	18%	27%	34%	21%	2.58	0.95
2	Nature photography as a therapeutic tool	22%	28%	30%	20%	2.48	0.99
3	Impact of nature photography on emotional well-being	12%	24%	38%	26%	2.78	0.90
4	Awareness of existing nature photography programs	28%	32%	24%	16%	2.28	0.97
5	Usage of nature photography in managing depression	32%	22%	28%	18%	2.32	1.05

N=200

The table presents the extent of students' awareness of using nature photography for treating depression. For the benefits of nature photography for mood improvement, 34% of students were moderately aware, and 21% were very aware. The mean awareness score for this item was 2.58 (SD = 0.95), indicating a moderate level of awareness among students. In terms of nature photography as a therapeutic tool, awareness was somewhat evenly distributed, with 28% of students slightly aware and 30% moderately aware. The mean score for this item was 2.48 (SD = 0.99), suggesting that while there is some recognition of its therapeutic potential, there is room for increased awareness. The impact of nature photography on emotional well-being had the highest level of awareness among the items, with 38% of students moderately aware and 26% very aware. The mean score for this item was 2.78 (SD = 0.90), indicating a relatively high level of awareness compared to other items. Awareness of existing nature photography programs was notably lower, with 32% of students slightly aware and 28% not aware. The mean score for this item was 2.28 (SD = 0.97), pointing to a significant gap in awareness regarding available programs. Lastly, the usage of nature photography in managing depression showed that 32% of students were not aware, and 28% were moderately aware. The mean score for this item was 2.32 (SD = 1.05), reflecting moderate to low awareness levels.

DISCUSSION

Findings revealed that students in FCT College of Education were aware of using nature photography for treating anxiety. This finding is in

line with the research of Browning *et al.*, (2023); Tourigny & Naydenova (2020), who found a strong positive correlation between nature photography and reduced anxiety levels among college students. Additionally, the findings indicated that students in FCT College of Education were aware of using nature photography for treating depression. These results are consistent with other studies (Browning *et al.*, 2023; Tourigny & Naydenova 2020; Nichol, 2019) that have demonstrated the therapeutic benefits of nature photography for individuals with depressive symptoms. These findings highlight the potential of nature photography as a complementary approach to treating anxiety and depression among college students.

CONCLUSIONS

Based on the findings of the study the following conclusions were made

1. Students in FCT College of Education are aware of using nature photography for treating anxiety
2. Students in FCT College of Education are aware of using nature photography for treating depression

RECOMMENDATIONS

1. Colleges of Education should develop comprehensive educational programs and workshops. These programs can provide students with practical skills in nature photography, emphasizing its therapeutic applications in addressing anxiety
2. Colleges of Education should increase efforts to promote and provide access to mental

health programs to address depression. This can be achieved through informational campaigns, collaboration with mental health professionals, and the creation of dedicated spaces or clubs for nature photography.

REFERENCES

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (5th ed.)*. American Psychiatric Publishing.
- Bandelow, B., & Sher, L. (2019). Anxiety disorders and depression: A review of the evidence. *Journal of Clinical Psychology, 75*(1), 15-28.
- Beck, A. T. (1976). *Cognitive Therapy and the Emotional Disorders*. International Universities Press.
- Beck, A. T. (2016). *Cognitive therapy of depression*. Guilford Press.
- Beck, A. T., & Clark, D. A. (1997). An information processing model of anxiety: Automatic and strategic processes. *Behaviour Research and Therapy, 35*(1), 49-58.
- Bekker, M. H. J., & van Doorn, C. A. (2020). Anxiety and anxiety disorders: A comprehensive overview. *Journal of Clinical Psychology, 76*(1), 1-13.
- Bratman, G. N., Hamilton, J. P., Hahn, K. S., Daily, G. C., & Gross, J. J. (2015). Nature experience reduces rumination and subgenual prefrontal cortex activation. *Proceedings of the National Academy of Sciences, 112*(28), 8567-8572.
- Browning, M. H., Shin, S., Drong, G., McAnirlin, O., Gagnon, R. J., Ranganathan, S., & Heller, W. (2023). Daily exposure to virtual nature reduces symptoms of anxiety in college students. *Scientific reports, 13*(1), 1239.
- Collier, P. (2018). *Photography and Self-Identity: Exploring the Therapeutic Potential of Photographic Art in Mental Health*. Routledge.
- Cox, A. E., McAdams, D. P., & Fink, E. L. (2017). The therapeutic value of art: The impact of photographic activities on mental well-being. *Journal of Creativity in Mental Health, 12*(3), 336-349.
- Cuijpers, P., Karyotaki, E., Weitz, E., Andersson, G., Hollon, S. D., & van Straten, A. (2020). The effects of psychotherapies for major depression in adults on remission, recovery and improvement: A meta-analysis. *Journal of Affective Disorders, 277*, 540-548.
- Dahlberg, L., Torssander, J., & Hallberg, J. (2015). The effects of group activities on mental health and well-being: A systematic review. *International Journal of Social Psychiatry, 61*(6), 578-586.
- DeCoster, V. A., & Dickerson, J. (2014). The therapeutic use of photography in clinical social work: Evidence-based best practices. *Social Work in Mental Health, 12*(1), 1-19.
- Erubami, J. A., Bebenimibo, P., Ezeah, G. H., & Muobike, O. I. (2023). Newspaper depiction of mental illness in Nigeria. *Journal of Public Health in Africa, 14*(11), 15-27.
- Etkin, A., & Wager, T. D. (2007). Functional neuroimaging of anxiety: A meta-analysis of emotional processing in PTSD, social anxiety disorder, and specific phobia. *American Journal of Psychiatry, 164*(10), 1476-1488.
- Friedberg, R. D., & McClure, J. M. (2015). *Clinical Practice of Cognitive Therapy with Children and Adolescents: The Nuts and Bolts*. Guilford Press.
- Gergen, K. J., McNamee, S. S., & Barrett, F. J. (2016). Toward transformative dialogue. *International Journal of Public Administration, 39*(7), 535-545.
- Gureje, O., Oladeji, B. D., Kola, L., & Owoeye, O. (2020). The prevalence of major depressive disorder and its correlates in Nigeria. *International Journal of Social Psychiatry, 66*(4), 364-372.
- Gureje, O., Oladeji, B. D., Montgomery, A. A., Bello, T., & Kola, L. (2018). A cluster randomized clinical trial of a stepped care intervention for depression and anxiety in primary care (STEP CARE) - study protocol. *BMC Psychiatry, 18*(1), 76.
- Hammen, C. (2018). Stress and depression. *Annual Review of Clinical Psychology, 14*, 293-319.
- Hofmann, S. G., Asnaani, A., Vonk, I. J., Sawyer, A. T., & Fang, A. (2012). The efficacy of cognitive behavioral therapy: A review of meta-analyses. *Cognitive Therapy and Research, 36*(5), 427-440.
- Hofmann, S. G., Sawyer, A. T., Witt, A. A., & Oh, D. (2010). The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. *Journal of Consulting and Clinical Psychology, 78*(2), 169-183.
- Kabat-Zinn, J. (2013). *Mindfulness for Beginners: Reclaiming the Present Moment—and Your Life*. Sounds True.
- Kaplan, R., & Kaplan, S. (1989). *The Experience of Nature: A Psychological Perspective*. Cambridge University Press.
- Kendall, P. C., & Hollon, S. D. (2018). *Handbook of Depression*. Guilford Press.
- Kendler, K. S., Gardner, C. O., & Prescott, C. A. (2015). A longitudinal study of stress, social support, and the development of major depression. *Journal of Nervous and Mental Disease, 203*(10), 831-835.
- Kessler, R. C., Amminger, G. P., Aguilar-Gaxiola, S., Alonso, J., Angermeyer, M. C., & Gureje, O. (2020).

The prevalence and correlates of serious mental illness among World Health Organization's World Mental Health Survey Initiative. *World Psychiatry, 19*(2), 168-184.

- Kieffer, J. M., & Pritchard, R. J. (2020). Visual documentation of progress in mental health treatment: The role of photography in therapeutic contexts. *Journal of Therapeutic Practice, 33*(2), 112-124.
- Malchiodi, C. A. (2012). *Art Therapy and Clinical Neuroscience*. Routledge.
- Milasan, L. H. (2024). 'Taking Pictures is Like Treasure Hunting': Exploring the Therapeutic Value of Photography as a Qualitative Research Method. *International Journal of Qualitative Methods, 23*, 16094069241236219.
- Morris, D. W., Wang, J. C., & Li, D. (2017). Neuroimaging studies of depression: A review of recent advances. *Journal of Clinical Psychiatry, 78*(2), e01-e09
- Murphy, C. K., & Fox, J. (2024). Turning on "the Photographer Mind": Experiences of Mental Health Service Users in a Tutor-Led Photography Group in an Irish Context. *Occupational Therapy in Mental Health, 1-21*.
- Nichol, L. (2019, November 4). *How nature photography can help people dealing with mental health issues*. Inews.co.uk. Retrieved 19th July, 2024 from <https://inews.co.uk/news/health/nature-photography-mental-health-depression-357820>
- O'Neill, M., & Gifford, L. (2018). *The Healing Power of Art: A Study on Art Therapy for Anxiety and Depression*. Cambridge University Press.
- Ogunlesi, A. T., Olawale, O., & Bakare, M. O. (2021). Community-based mental health interventions in Nigeria: A review of traditional approaches and their effectiveness. *African Journal of Psychiatry, 24*(1), 1-10.
- Ressler, K. J., & Nemeroff, C. B. (2000). Role of serotonergic and noradrenergic systems in the pathophysiology of depression and anxiety disorders. *Depression and Anxiety, 12*(1), 2-19.
- Smith, B. (2021). The healing power of nature: A review of the impact of nature on mental health. *Journal of Environmental Psychology, 46*, 45-56.
- Tourigny, L., & Naydenova, I. (2020). Using therapeutic photography techniques to increase the wellbeing of college students. *Journal of Counseling and Psychology, 3*(1), 4.
- Wilson, E. O. (1984). *Biophilia*. Harvard University Press.
- World Health Organization (WHO). (2017). *Depression and other common mental disorders: Global health estimates*. World Health Organization.
- World Health Organization (WHO). (2022). *Depression and other common mental disorders: Global health estimates*. World Health Organization.
- World Health Organization's World Mental Health Survey Initiative. *World Psychiatry, 19*(2), 168-184.

APPENDIX

S/N	AWARENESS ON ANXIETY	Not aware	Slightly aware	Moderately aware	Very aware
1	Benefits of nature photography for relaxation				
2	Nature photography as a coping mechanism				
3	Impact of nature photography on mental health				
4	Awareness of existing nature photography programs				
5.	Usage of nature photography in daily routines				
	AWARENESS ON DEPRESSION	Not aware	Slightly aware	Moderately aware	Very aware
1	Benefits of nature photography for mood improvement				
2	Nature photography as a therapeutic tool				
3	Impact of nature photography on emotional well-being				
4	Awareness of existing nature photography programs				
5	Usage of nature photography in managing depression				