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## Impact of Outdoor Recreation Programs on Mental Health in Tanzania

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### Abstract

**Purpose:** The aim of the study was to assess the impact of outdoor recreation programs on mental health in Tanzania.

**Methodology:** This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low cost advantage as compared to a field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

**Findings:** The study show that programs, often designed to immerse individuals in nature through activities like hiking, camping, and outdoor sports, have been shown to reduce symptoms of anxiety, depression, and stress. Engaging with nature fosters a sense of calmness and relaxation while promoting physical activity, which in turn contributes to improved mood and overall well-being. Moreover, participation

in outdoor recreation programs encourages social interaction and a sense of belonging, which are crucial factors in combating loneliness and enhancing mental resilience. Studies also indicate that spending time outdoors can lead to increased mindfulness and a greater appreciation.

**Implications to Theory, Practice and Policy:** Biophilia hypothesis, attention restoration theory and stress reduction theory may be used to anchor future studies on assessing impact of outdoor recreation programs on mental health in Tanzania. Designing outdoor recreation programs that are tailored to the specific needs and preferences of target populations can optimize their effectiveness. Implementing policies that prioritize the preservation and accessibility of green spaces in urban and rural areas is crucial for promoting mental health at the population level.

**Keywords:** *Outdoor, Recreation, Mental Health*

## INTRODUCTION

Outdoor recreation programs have emerged as potent tools in enhancing mental health and well-being. In developed economies like the United States and the United Kingdom, mental health outcomes have garnered increasing attention due to rising stress levels and anxiety among the population. For instance, in the USA, a study by Smith, Johnson and Brown (2019) reported that stress levels have been steadily increasing over the past decade, with approximately 79% of adults experiencing stress sometimes or frequently throughout their day. Moreover, mood disorders, including depression and bipolar disorder, have become prevalent, affecting around 9.7% of the US population according to the National Institute of Mental Health.

Similarly, in the United Kingdom, mental health issues have been on the rise, with anxiety being a significant concern. Research by Jenkins, Bhugra and Bebbington (2018) highlighted that anxiety disorders affect approximately 6% of the UK population, leading to significant impairments in daily functioning and quality of life. Moreover, the COVID-19 pandemic exacerbated mental health challenges, with a survey by the Office for National Statistics revealing that over two-thirds of adults in the UK reported feeling somewhat or very worried about the impact of the pandemic on their lives.

Similarly, in Brazil, economic instability and social inequalities contribute to a growing prevalence of mental health disorders. Lima and Barros (2020) noted a significant increase in anxiety disorders, affecting approximately 9.3% of the population. Economic hardships, coupled with limited access to mental health services, exacerbate the situation, leading to a higher burden of untreated mental illnesses. Addressing mental health challenges in these developing economies requires multifaceted approaches that encompass not only healthcare interventions but also socio-economic policies aimed at reducing inequality and improving access to education and employment opportunities.

In Egypt, mental health issues such as depression are a significant concern exacerbated by socio-economic challenges. Okasha, Elkholy and Khalil (2018) found that depression affects approximately 5.6% of the population, with women being disproportionately affected. Moreover, stigma surrounding mental health often prevents individuals from seeking help, further exacerbating the burden of untreated mental illnesses.

Similarly, in Mexico, rapid urbanization and economic disparities contribute to mental health challenges. Research by Borges, Medina-Mora, Orozco and colleagues (2020) highlighted a notable prevalence of mood disorders, with depression affecting around 5% of the population. Moreover, access to mental health services is limited, particularly in rural areas, where the majority of the population resides. Efforts to address mental health issues in these countries require comprehensive strategies that promote awareness, reduce stigma, and strengthen mental health infrastructure to ensure accessible and quality care for all individuals.

Similarly, in South Africa, Lund, Brooke-Sumner and Baingana (2021) emphasized significant mental health disparities, particularly among marginalized communities. High rates of depression and anxiety are linked to enduring poverty, historical inequalities, and ongoing socio-political challenges. Addressing mental health issues in these sub-Saharan economies requires comprehensive strategies that integrate mental health services into primary healthcare systems, tackle socio-economic disparities, and promote mental health awareness and destigmatization at both individual and societal levels.

Moving to developing economies, such as India and Brazil, mental health outcomes also reflect concerning trends. In India, a study by Patel, Sharma and Kumar (2018) found that the prevalence of depression has been steadily increasing, affecting around 5% of the population. Additionally, stress levels have risen due to various socio-economic factors, including rapid urbanization and job insecurities. Similarly, in Brazil, research by Lima and Barros (2020) indicated a growing prevalence of anxiety disorders, with approximately 9.3% of the population affected, largely attributed to economic instability and social inequalities.

In other developing economies such as Indonesia and Kenya, mental health outcomes also present significant challenges. In Indonesia, rapid urbanization and modernization have led to increased stress levels and mental health disorders. According to a study by Handayani, Ningsih, and Suwanti (2020), the prevalence of depression has been rising steadily, affecting around 3.7% of the population. Additionally, cultural factors and limited access to mental health services contribute to underreporting and undertreatment of mental illnesses.

Similarly, in Kenya, socio-economic disparities and political instability exacerbate mental health issues. Research by Jenkins, Kiima, and Njenga (2018) highlighted a high burden of mental health disorders, with depression affecting approximately 4% of the population. Moreover, the lack of mental health infrastructure and trained professionals further impedes access to care, leaving many individuals untreated. Addressing mental health challenges in these countries requires coordinated efforts to improve access to mental health services, raise awareness, and reduce stigma surrounding mental illness.

In sub-Saharan economies like Nigeria and South Africa, mental health challenges persist amidst various socio-political and economic factors. For example, in Nigeria, research by Gureje, Oladeji and Araya (2019) highlighted a high prevalence of mood disorders, with depression affecting approximately 4% of the population. Moreover, access to mental health services remains limited, exacerbating the burden of untreated mental illnesses. Similarly, in South Africa, studies by Lund, Brooke-Sumner, and Baingana (2021) revealed significant mental health disparities, particularly among marginalized communities, with high rates of depression and anxiety linked to poverty and historical inequalities.

Participation in outdoor recreation programs, including activities such as hiking, camping, nature walks, and birdwatching, offers numerous benefits for mental health outcomes. Engaging in these activities allows individuals to disconnect from the stressors of daily life and immerse themselves in natural surroundings, promoting relaxation and stress reduction. Research by Bratman, Daily, Levy and Gross (2015) suggests that spending time in nature can significantly lower cortisol levels, a key indicator of stress, leading to improved mood and overall well-being. Additionally, outdoor recreation fosters physical activity, which is known to release endorphins and serotonin, neurotransmitters that contribute to feelings of happiness and contentment (Hassan, Rao & Kulandaivelu, 2020).

Moreover, participation in outdoor recreation programs has been linked to reduced symptoms of anxiety and depression. Studies by Barton and Pretty (2010) and White, Alcock, Wheeler and Depledge (2013) have shown that exposure to natural environments can alleviate symptoms of anxiety and depression, with even brief interactions with nature leading to positive mood changes. Furthermore, the social aspect of outdoor activities, such as group hikes or camping trips, provides opportunities for social connection and support, which are essential for mental health and

resilience (Mygind, Kjeldsted, Hartmeyer & Mygind, 2019). Overall, participation in outdoor recreation programs offers a holistic approach to improving mental health outcomes by combining the restorative benefits of nature with physical activity and social interaction.

### **Problem Statement**

The impact of outdoor recreation programs on mental health is a topic of growing interest and significance in contemporary society. While numerous studies have suggested positive associations between participation in outdoor activities and mental well-being, gaps in understanding remain regarding the specific mechanisms through which these programs influence mental health outcomes. For instance, recent research by Bratman, Daily, Levy and Gross (2015) has highlighted the restorative benefits of nature experiences, including stress reduction and improved mood. However, further investigation is needed to elucidate the long-term effects of outdoor recreation on mental health and to identify optimal strategies for integrating these programs into mental health interventions (Hassan, Rao & Kulandaivelu, 2020).

Moreover, disparities in access to outdoor recreation programs and natural environments raise concerns about equitable mental health outcomes across diverse populations. While some studies have indicated that exposure to nature can alleviate symptoms of anxiety and depression (Barton & Pretty, 2010; White, Alcock, Wheeler & Depledge, 2013), limited research has examined the differential impact of outdoor recreation programs on marginalized communities. Understanding how factors such as socio-economic status, race, and geographical location intersect with participation in outdoor activities is essential for addressing disparities in mental health outcomes and promoting inclusive approaches to outdoor recreation (Mygind, Kjeldsted, Hartmeyer & Mygind, 2019).

### **Theoretical Framework**

#### **Biophilia Hypothesis**

Originated by Edward O. Wilson, the Biophilia Hypothesis suggests that humans possess an innate affinity for nature due to evolutionary processes, leading to psychological and physiological benefits from interactions with natural environments. This theory is highly relevant to the impact of outdoor recreation programs on mental health, as it underscores the intrinsic human connection to nature and the potential therapeutic effects of exposure to natural settings (Kellert & Wilson, 2018).

#### **Attention Restoration Theory (ART)**

Developed by Rachel Kaplan and Stephen Kaplan, ART posits that exposure to natural environments can restore mental fatigue and improve cognitive function by providing a restorative environment that allows for effortless attention and reflection. This theory is pertinent to research on outdoor recreation programs and mental health as it highlights the role of nature in promoting psychological restoration and stress reduction, thereby enhancing overall well-being (Kaplan & Berman, 2018).

#### **Stress Reduction Theory**

Proposed by Roger Ulrich, the Stress Reduction Theory suggests that natural environments have a calming effect on the human psyche, leading to reduced stress levels and improved mood. This theory emphasizes the physiological and psychological benefits of exposure to natural elements,

such as green spaces and water bodies, in mitigating the negative impacts of stress on mental health (Ulrich, 2018).

### **Empirical Review**

Roe, Aspinall, Thompson and Ward Thompson (2018) evaluated the effects of a wilderness therapy program on adolescents' mental health outcomes. Utilizing a mixed-methods approach encompassing surveys and qualitative interviews, the researchers uncovered profound improvements in participants' self-esteem, resilience, and overall psychological well-being subsequent to their involvement in the program. This suggests that wilderness therapy serves as a potent catalyst for fostering positive mental health among young individuals, offering a transformative experience that nurtures personal growth and emotional resilience amidst the challenges of adolescence.

Vein, Shanahan, Astell-Burt, Barber, Brymer, Cox, Dean and Lonsdale (2020) embarked on a longitudinal study to unravel the intricate interplay between outdoor recreational activities and mental health outcomes among urban residents. Through meticulous data collection and analysis, the researchers unveiled a compelling dose-response relationship, wherein heightened engagement in outdoor pursuits such as hiking and camping corresponded to tangible reductions in symptoms of depression and anxiety over time. These findings underscore the potential of outdoor recreation programs as not only cost-effective but also accessible interventions for ameliorating mental well-being, particularly in densely populated urban settings where access to green spaces may be limited, thus highlighting the intrinsic therapeutic value of natural environments.

Thompson, Clark and Culver (2019) aimed at elucidating the therapeutic potential of nature-based interventions in alleviating mental health challenges among military veterans grappling with post-traumatic stress disorder (PTSD). Their meticulously designed study demonstrated that participation in a wilderness retreat program yielded significant reductions in PTSD symptoms while concurrently fostering improvements in social functioning among veterans. These findings underscore the pivotal role of nature-based interventions in addressing the intricate mental health needs of individuals grappling with trauma, offering a holistic approach that transcends conventional therapeutic modalities.

Mackay, Neill and Glendinning (2021) delved into the therapeutic benefits of gardening programs for individuals contending with severe mental illness, unveiling profound insights into the transformative power of horticultural therapy. Through qualitative interviews and participant observations, the researchers unearthed compelling evidence of gardening's positive impact on participants' mood, self-esteem, and overall sense of purpose. This underscores the potential of horticultural therapy as a versatile and holistic approach to mental health care, offering individuals grappling with severe mental illness a nurturing and empowering avenue for self-expression and personal growth.

Stanley, Bland, Boring and Lee (2018) aimed at exploring the transformative impact of a community-based outdoor recreation program on the mental health outcomes of at-risk youth. Through meticulous pre- and post-program assessments, including standardized measures of depression and anxiety, the researchers uncovered tangible improvements in participants' emotional well-being and social connectedness following their participation in the program. These findings underscore the pivotal role of outdoor recreation programs in fostering resilience and

well-being among vulnerable youth populations, offering a beacon of hope amidst the adversities they may face.

Furthermore, Roebbers, Milla, Fucile and Hascher (2022) investigated the influence of nature-based physical activity interventions on children's mental health and academic performance. Leveraging a robust quasi-experimental design, the researchers unveiled compelling evidence of the transformative impact of outdoor activities such as nature walks and adventure playgrounds on children's attentional capacity and mood regulation. These findings underscore the pivotal role of nature-based interventions in promoting holistic development among school-aged children, offering a multifaceted approach that transcends traditional educational paradigms.

James, Banay, Hart and Laden (2019) conducted a seminal meta-analysis synthesizing findings from a myriad of studies examining the impact of outdoor recreation on mental health outcomes. Their exhaustive analysis provided compelling evidence for the manifold benefits of nature exposure in mitigating stress, alleviating anxiety, and ameliorating symptoms of depression across diverse populations. These findings underscore the transformative potential of outdoor recreation programs as scalable and accessible interventions for nurturing mental well-being and fostering resilience in communities worldwide, thereby advocating for the integration of nature-based interventions into holistic mental health care frameworks.

## METHODOLOGY

This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low cost advantage as compared to a field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

## RESULTS

**Conceptual Gaps:** While many studies have explored the positive effects of outdoor recreation programs on mental health outcomes, there is a lack of research addressing the underlying mechanisms through which these programs exert their therapeutic benefits. Understanding the specific aspects of wilderness therapy, gardening programs, or nature-based interventions that contribute to improved mental well-being would provide valuable insights for designing more targeted and effective interventions (Roe, Aspinall, Thompson & Ward Thompson, 2018; Thompson, Clark, & Culver, 2019; Mackay, Neill & Glendinning, 2021).

**Contextual Gaps:** The majority of research in this area has focused on specific populations, such as adolescents, military veterans, or individuals with severe mental illness, while overlooking other demographic groups. There is a need for studies that explore the effectiveness of outdoor recreation programs across diverse populations, including different age groups, cultural backgrounds, and socioeconomic statuses, to ensure that interventions are inclusive and accessible to all (Shanahan, Astell-Burt, Barber, Brymer, Cox, Dean & Lonsdale, 2020; Stanley, Bland, Boring & Lee, 2018).

**Geographical Gaps:** Most of the existing research on outdoor recreation programs and mental health outcomes has been conducted in urban or Western contexts, neglecting the experiences of individuals in rural or non-Western settings. Investigating the impact of these programs in diverse geographical contexts would provide a more comprehensive understanding of their effectiveness

and relevance across different cultural and environmental contexts (James, Banay, Hart & Laden, 2019; Roebbers, Milla, Fucile & Hascher, 2022).

## **CONCLUSION AND RECOMMENDATIONS**

### **Conclusion**

In conclusion, the impact of outdoor recreation programs on mental health is significant and multifaceted. Through various studies, including those examining wilderness therapy, nature-based interventions, and community-based outdoor activities, compelling evidence has emerged demonstrating the positive effects of engaging with natural environments on mental well-being. These programs offer a holistic approach to mental health care, fostering improvements in self-esteem, resilience, social connectedness, and overall psychological well-being among diverse populations, including adolescents, military veterans, individuals with severe mental illness, and at-risk youth.

Furthermore, research has highlighted the therapeutic benefits of outdoor activities in alleviating symptoms of depression, anxiety, and post-traumatic stress disorder, while also promoting cognitive and emotional development among children. The findings underscore the intrinsic therapeutic value of nature, emphasizing the importance of incorporating outdoor recreation programs into holistic mental health care frameworks. However, despite the growing body of research supporting the positive effects of outdoor recreation on mental health, there remain conceptual, contextual, and geographical gaps in our understanding, which warrant further investigation.

Moving forward, it is imperative to address these research gaps to develop more targeted and inclusive interventions that can effectively promote mental well-being across diverse populations and contexts. By advancing our understanding of the mechanisms underlying the therapeutic benefits of outdoor recreation programs and exploring their effectiveness in different cultural and environmental settings, we can harness the transformative potential of nature to nurture mental health and resilience in communities worldwide. Ultimately, integrating outdoor recreation programs into mental health promotion efforts can contribute to building healthier, happier, and more resilient societies.

### **Recommendations**

The following are the recommendations based on theory, practice and policy:

#### **Theory**

Conducting research to delve deeper into the underlying mechanisms through which outdoor recreation programs exert their therapeutic effects on mental health is essential. This involves exploring psychological, physiological, and socio-environmental pathways to gain a comprehensive understanding of how nature-based interventions promote well-being. Such investigations contribute to theoretical frameworks and enhance our understanding of the intricate relationship between nature exposure and mental health outcomes.

#### **Practice**

Designing outdoor recreation programs that are tailored to the specific needs and preferences of target populations can optimize their effectiveness. This involves considering factors such as age, cultural background, and mental health condition when developing program activities and delivery



formats. Incorporating evidence-based practices, such as mindfulness-based interventions or adventure therapy techniques, can enhance program outcomes and maximize participant engagement and satisfaction. Integrating outdoor recreation programs into mental health care settings, including hospitals, clinics, and community centers, can expand access to nature-based interventions for individuals experiencing mental health challenges. This integration involves collaboration between mental health professionals, outdoor educators, and policymakers to develop comprehensive treatment plans that incorporate outdoor activities as complementary therapeutic modalities. Training mental health providers in outdoor-based interventions ensures competency in delivering nature-informed care and promotes interdisciplinary collaboration.

### **Policy**

Implementing policies that prioritize the preservation and accessibility of green spaces in urban and rural areas is crucial for promoting mental health at the population level. Municipalities can adopt zoning regulations that protect natural areas and allocate resources for the creation of parks, trails, and community gardens. Additionally, initiatives to improve public transportation and infrastructure can enhance access to nature for underserved communities, addressing inequities in green space distribution. Securing funding and governmental support for outdoor recreation programs aimed at improving mental health outcomes is essential for their sustainability and scalability. Policymakers can allocate resources for research, program development, and implementation, recognizing the value of nature-based interventions as cost-effective and preventive mental health strategies. Collaborating with public and private stakeholders, including non-profit organizations and community groups, can leverage collective resources and expertise to support outdoor recreation initiatives.

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