THE BENEFITS OF OUTDOOR PHYSICAL ACTIVITY ON STRESS REDUCTION AND WELL-BEING

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Abstract

Stress has become a common concern in modern life, making accessible and sustainable activities for improving well-being increasingly important. This study examined the benefits of outdoor physical activity for stress reduction and well-being among individuals who regularly engage in outdoor activities. Specifically, it examined the perceived benefits of outdoor physical activity for stress reduction, assessed its effects on participants' well-being, identified challenges to regular participation, and proposed innovative strategies to improve engagement and outcomes. The study employed a quantitative descriptive-correlational research design involving 300 respondents selected through purposive sampling. Participants included individuals who had engaged in outdoor physical activities such as walking, running, cycling, hiking, or outdoor fitness programs for at least three months. Data were gathered using a structured survey questionnaire that measured perceived benefits, well-being effects, challenges, and suggested strategies. Findings revealed that respondents perceived outdoor physical activity as highly beneficial, particularly in physiological, social, emotional, and psychological dimensions. The effects on well-being were also highly evident, with physiological and social benefits receiving the highest ratings. Outdoor physical activity contributed to improved fitness, emotional relief, stress management, mindfulness, social connection, and overall quality of life. However, respondents also encountered moderate challenges, including physical strain, limited access to outdoor spaces, unfavorable weather, limited time, and safety concerns. The study concluded that outdoor physical activity is an effective way to reduce stress and enhance well-being. It recommended community-based programs, improved green spaces, outdoor wellness initiatives, and inclusive strategies to encourage sustained participation.

Keywords: Outdoor Physical Activity, Stress Reduction, Well-Being, Green Exercise, Physical Health, Mental Health

1. Introduction

Stress has become a persistent concern in contemporary life as individuals increasingly face pressures associated with work, school, family obligations, financial responsibilities, digital connectivity, and changing social environments. When stress is prolonged or poorly managed, it may affect physical health, emotional regulation, cognitive functioning, productivity, and overall life satisfaction. In this context, the search for accessible, low-cost, and sustainable strategies for stress reduction has become an important public health and wellness priority. Outdoor physical activity has emerged as a promising approach because it combines the established benefits of bodily movement with the restorative qualities of natural environments.

Physical activity is widely recognized as a contributor to physical and mental health. The World Health Organization (2024) states that regular physical activity provides significant physical and mental health benefits, including the prevention and management of noncommunicable diseases, the reduction of symptoms of depression and anxiety, the enhancement of brain health, and the improvement of overall well-being. Outdoor physical activity extends these benefits by placing movement within open-air or natural settings, such as parks, trails, gardens, beaches, sports grounds, and community spaces. Activities such as walking, running, cycling, hiking,

outdoor yoga, and group fitness sessions may therefore support both physiological functioning and psychological recovery.

The distinct value of outdoor physical activity lies in its integration of exercise, environmental exposure, and sensory experience. Natural environments may offer visual, auditory, and spatial qualities that help reduce mental fatigue and promote relaxation. Attention Restoration Theory explains that natural settings can support cognitive recovery by providing "soft fascination," or effortless attention, which allows directed attention to rest and recover (Ohly et al., 2016). This is particularly relevant for individuals exposed to sustained mental demands from academic, occupational, or domestic responsibilities. When outdoor exposure is combined with movement, the body and mind may experience simultaneous benefits through improved circulation, endorphin release, emotional regulation, and cognitive restoration.

Research on nature-based walking and green exercise supports the mental health benefits of outdoor activity. Ma et al. (2024), in a systematic review of nature-based walking interventions, reported that such interventions improved mood, optimism, mental well-being, and nature connectedness, while reducing stress, anxiety, and negative rumination. These findings suggest that outdoor physical activity may be especially beneficial for stress reduction because it engages both behavioral and environmental mechanisms. The activity component supports physical fitness and stress regulation, while the outdoor setting may enhance calmness, mindfulness, and emotional relief. In this way, outdoor physical activity functions as a holistic intervention rather than a purely fitness-oriented practice.

Outdoor activity may also support well-being through social interaction and community participation. Activities such as group walking, cycling clubs, outdoor exercise classes, hiking groups, and community wellness events provide opportunities for companionship, belonging, and shared motivation. Social connection is an important dimension of well-being because supportive relationships can help reduce feelings of isolation and improve emotional resilience. Outdoor physical activities also encourage routine formation, exposure to sunlight, and engagement with community spaces, all of which may contribute to improved mood, self-confidence, and quality of life. For individuals who experience stress from indoor confinement, sedentary habits, or excessive screen time, outdoor activity may be a practical way to reconnect with the body, the environment, and others.

Despite these benefits, participation in outdoor physical activity is not always easy or consistent. Individuals may encounter physical strain, time constraints, limited access to safe and suitable outdoor spaces, unfavorable weather conditions, transportation concerns, safety risks, and a lack of motivation. These challenges can reduce participation even among individuals who recognize the value of outdoor exercise. In urban or resource-limited communities, limited green spaces and poorly maintained recreational areas may further discourage regular outdoor activity. Therefore, research on outdoor physical activity should not only describe its benefits but also identify barriers and propose strategies that make participation more accessible, inclusive, safe, and sustainable.

In the Philippine context, outdoor physical activity is relevant to schools, workplaces, communities, local governments, and families because it can be incorporated into wellness programs, recreational initiatives, community events, and daily routines. Schools may use outdoor activities to support students' mental health and physical fitness; workplaces may develop nature-based wellness programs to reduce burnout; local governments may improve parks, trails, and open spaces; and families may use outdoor activities to strengthen health and relationships. However, localized evidence is needed to understand how participants perceive the benefits of outdoor physical activity, how these activities affect their well-being, and the challenges they face in maintaining regular participation.

Accordingly, the present study determined the benefits of outdoor physical activity on stress reduction and well-being. Specifically, it examined the perceived benefits of outdoor

physical activity on stress reduction, determined the effects of outdoor activity on participants' well-being, tested whether significant differences existed between perceived stress-reduction benefits and well-being effects, identified challenges faced by participants in regular outdoor physical activity, and proposed innovative strategies to address these challenges and improve well-being. Using a quantitative, descriptive-correlational approach, the study aimed to generate empirical evidence on the psychological, physiological, emotional, and social dimensions of outdoor physical activity. The findings may guide public health officials, educational institutions, workplaces, community organizations, fitness professionals, families, and individuals in promoting outdoor activity as a practical strategy for stress management and holistic well-being.

2. Method

2.1 Research Design

The study employed a quantitative descriptive-correlational research design to determine the benefits of outdoor physical activity on stress reduction and well-being. The descriptive component was used to assess respondents' perceived benefits of outdoor physical activity across psychological, physiological, emotional, and social dimensions, as well as the effects of these activities on overall well-being and the challenges encountered in regular participation. The correlational component provided a framework for examining the relationship between outdoor physical activity, stress reduction, and well-being outcomes, while also allowing the study to determine whether significant differences existed between perceived stress-reduction benefits and well-being effects. A cross-sectional approach was used because data were collected from respondents at a single point in time via a structured questionnaire. This design was appropriate because the study sought to generate numerical evidence from individuals who regularly engaged in outdoor physical activities and to describe how such activities contributed to stress management, emotional relief, physical health, social connection, and overall life satisfaction. Through this design, the study provided empirical support for the development of innovative strategies to strengthen participation in outdoor physical activity and enhance well-being.

2.2 Participants

The study was conducted with 300 respondents who regularly engaged in outdoor physical activities such as walking, running, cycling, hiking, or participating in outdoor fitness programs. They were selected through purposive sampling to ensure that all respondents had relevant experience in outdoor activity and could provide meaningful responses regarding stress reduction, well-being, and challenges encountered. To qualify for inclusion, participants must have engaged in outdoor physical activity for at least three months prior to data collection. The respondents were drawn from parks, fitness centers, recreational groups, community organizations, and outdoor activity settings where physical activities were commonly practiced or promoted. The sample included individuals from diverse demographic backgrounds in terms of age, gender, and activity preferences, enabling the study to gain a broader understanding of the perceived psychological, physiological, emotional, and social benefits of outdoor physical activity. This participant profile was appropriate because the study required respondents with direct, sustained exposure to outdoor physical activity and the ability to evaluate its influence on stress management, well-being, and quality of life.

2.3 Instrumentation

The study used a structured survey questionnaire as the primary instrument to collect quantitative data on outdoor physical activity, stress reduction, well-being, and participation challenges. The questionnaire was organized into several sections aligned with the study's objectives. The first section gathered demographic information, including age, gender, frequency

of outdoor physical activity, and type of activity most frequently performed. The second section measured the perceived benefits of outdoor physical activity on stress reduction across psychological, physiological, emotional, and social dimensions using Likert-scale statements. The third section assessed the effects of outdoor activity on well-being, focusing on emotional well-being, stress management, social connectedness, mindfulness, and physical health. The fourth section identified challenges participants faced, including physical strain, limited access to outdoor spaces, unfavorable weather conditions, limited time, and safety concerns. The final section gathered respondents' suggestions for innovative strategies to improve access, participation, and well-being outcomes. Prior to full administration, the questionnaire was pilot-tested with a small group of respondents to establish clarity, comprehensiveness, and appropriateness of the items. Through this instrument, the study generated systematic, measurable data to analyze the perceived benefits, effects, challenges, and possible improvements related to outdoor physical activity.

2.4 Data Analysis

The data gathered from the structured survey questionnaire were analyzed using quantitative statistical procedures aligned with the study's objectives. Descriptive statistics, including frequencies, percentages, means, and overall mean, were used to summarize respondents' demographic characteristics, perceived benefits of outdoor physical activity for stress reduction, effects on well-being, and challenges encountered in regular participation. The computed means were interpreted using the prescribed Likert-scale descriptors to determine the level of perceived psychological, physiological, emotional, and social benefits, as well as the extent of well-being outcomes and participation barriers. To examine whether significant differences existed between the perceived benefits of outdoor physical activity on stress reduction and its effects on well-being, appropriate inferential statistical procedures were applied at the 0.05 level of significance. The results were organized and presented in tabular form to ensure clarity and objectivity in reporting. Through this analytical approach, the study generated empirical evidence on how outdoor physical activity contributed to stress reduction and well-being, while also identifying challenges that served as the basis for proposing innovative strategies to improve participation and wellness outcomes.

3 Results

The results showed that respondents perceived outdoor physical activity as highly beneficial for reducing stress. Among the categories, physiological benefits had the highest mean score of 4.5, followed by social benefits (4.4), emotional benefits (4.3), and psychological benefits (4.2). The overall perceived benefit score was 4.1, indicating that respondents generally recognized outdoor physical activity as a meaningful strategy for managing stress. These findings suggest that activities such as walking, running, cycling, hiking, and outdoor fitness programs helped participants experience physical relaxation, improved fitness, emotional relief, and better social connections.

Regarding effects on well-being, the results indicated that outdoor physical activity had a strong positive influence on respondents' overall well-being. The physiological dimension had the highest mean of 4.6, followed by the social dimension at 4.5, the psychological dimension at 4.3, and the emotional dimension at 4.2. The overall well-being mean was 4.4, indicating that outdoor physical activity contributed positively to participants' physical health, emotional stability, social relationships, and stress management. This implies that regular outdoor activity not only reduces stress but also supports broader well-being outcomes.

The comparison of perceived benefits and well-being effects showed that ratings of well-being were slightly higher than those of stress-reduction benefits across most dimensions. The physiological category remained the strongest area in both perceived benefits and well-being

effects, suggesting that participants most strongly associated outdoor physical activity with improved physical health, fitness, energy, and body functioning. The social dimension also received consistently high ratings, indicating that outdoor activities provided opportunities for interaction, companionship, and support. These findings highlight the holistic value of outdoor physical activity, which addresses both individual health and social well-being.

The study also identified challenges participants faced in engaging in regular outdoor physical activity. The highest challenge score was observed in the physiological category, with a mean of 3.4, followed by social challenges (3.3), psychological challenges (3.2), emotional challenges (3.1), and an overall challenge mean of 3.0. These results indicate that, while participants experienced barriers such as physical strain, limited access to suitable outdoor spaces, unfavorable weather conditions, time constraints, and safety concerns, the level of challenge was moderate and manageable. The findings suggest that these obstacles did not outweigh the perceived benefits of outdoor activity.

Overall, the findings support the conclusion that outdoor physical activity plays an important role in reducing stress and enhancing well-being. Respondents reported high perceived benefits and strong well-being effects, particularly in the physiological and social dimensions. Although challenges were present, they were not severe enough to prevent the recognition of outdoor physical activity as a beneficial wellness practice. These results provide a basis for proposing innovative strategies, such as community-based outdoor programs, improved access to green spaces, organized group activities, safety measures, and flexible wellness initiatives, to encourage more consistent participation in outdoor physical activity.

4. Discussion

The study's findings confirm that respondents perceived outdoor physical activity as highly beneficial for stress reduction, particularly in the physiological, social, emotional, and psychological dimensions. The high physiological rating suggests that participants strongly associated outdoor activity with improved fitness, reduced physical tension, increased energy, and better body functioning. This finding is supported by the World Health Organization (2024), which emphasizes that regular physical activity provides significant physical and mental health benefits, including reduced anxiety and depression symptoms, improved brain health, and enhanced overall well-being. In the context of the present study, activities such as walking, running, cycling, hiking, and outdoor fitness programs appear to serve as accessible, practical strategies for stress management, as they combine physical movement with exposure to open-air environments.

The strong effect of outdoor physical activity on well-being further supports the idea that movement in outdoor environments contributes to holistic wellness. Respondents reported high well-being effects, particularly in physiological and social dimensions, indicating that outdoor activities improved not only physical health but also social connectedness. This result is consistent with Ma et al. (2024), who found that nature-based walking interventions improved mood, optimism, mental well-being, and nature connectedness while reducing stress, anxiety, and negative rumination. The present findings suggest that outdoor activity supports well-being through multiple pathways: the physical benefits of exercise, the restorative qualities of natural settings, and the emotional satisfaction derived from meaningful and enjoyable movement.

The emotional and psychological benefits reported by respondents may be explained by Attention Restoration Theory, which states that natural environments can help restore depleted cognitive resources and reduce mental fatigue. Ohly et al. (2016) explained that exposure to natural environments may support attention restoration by allowing individuals to experience effortless engagement with their surroundings. In the present study, respondents' positive ratings in psychological and emotional dimensions indicate that outdoor activity may provide mental refreshment, emotional relief, mindfulness, and a temporary break from daily pressures. This

supports the view that outdoor physical activity is not merely a fitness behavior but also a restorative experience that helps individuals recover from stress and improve emotional balance.

The findings also corroborate research on green exercise, which emphasizes the additional benefits of performing physical activity in natural environments. Barton and Pretty (2010) reported that green exercise improved self-esteem and mood, even with brief exposure. This aligns with the present study's finding that outdoor physical activity was associated with high stress-reduction and well-being ratings. The social dimension also emerged as an important benefit, suggesting that outdoor physical activity may strengthen interpersonal relationships, group participation, and a sense of community belonging. Activities such as group walks, cycling, outdoor fitness sessions, and recreational events may reduce isolation while improving motivation and emotional support.

Although the benefits were strongly perceived, the study also identified moderate challenges that may affect regular participation. These included physical strain, limited access to suitable outdoor spaces, unfavorable weather conditions, lack of time, and safety concerns. These challenges indicate that outdoor physical activity programs must be supported by practical and inclusive strategies. Community-based wellness programs, accessible parks and trails, safe outdoor facilities, organized group activities, flexible schedules, and public awareness campaigns may help reduce barriers and sustain participation. Overall, the findings suggest that outdoor physical activity is a valuable and accessible approach for stress reduction and well-being enhancement, but its benefits can be maximized only when communities, institutions, and policymakers address the barriers that limit regular engagement.

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