

The Importance of Engaging in Recreational Sports Activities for University Students: A Theoretical Study

El Hafed BELABBAS ¹, Brahim DJOUADI ²

¹ PhD Student, Research Laboratory of Technological Sciences for Educational Sports Activities, University of Batna 2, Algeria. Email: el.belabbas@univ-batna2.dz

² Professor, Research Laboratory of Technological Sciences for Educational Sports Activities, University of Batna 2, Algeria. Email: b.djouadi@univ-batna2.dz

Received: 26/03/2024

Accepted: 20/07/2024

Published: 05/09/2024

Abstract:

This study emphasized the significant role that recreational sports play in enhancing university students' overall well-being, fostering social connections, and promoting a balanced lifestyle. Engaging in these activities not only helps in reducing stress but also contributes to improved academic performance and personal development. Furthermore, participation in recreational sports fosters social connections and enhances teamwork skills, which are essential for success both in and out of the classroom. These experiences not only contribute to personal growth but also prepare students for collaborative environments in their future careers. This ability to work effectively with others enhances their interpersonal skills, making them more adaptable and successful in the workforce. In conclusion, engaging in recreational sports is not just a means of physical fitness; it is a vital component of a well-rounded university experience that fosters lifelong skills. It enhances social connections, promotes mental well-being, and equips students with teamwork and leadership skills that are essential in both personal and professional realms.

Keywords: Sports activities, Recreational activities, University students

Introduction

In this introduction, we will explore the importance of recreational sports activities for university students. We will begin by defining recreational sports activities and highlighting their significance in the lives of students. Recreational sports activities encompass a wide range of physical activities pursued for enjoyment, leisure, and relaxation rather than competition or professional purposes. These activities can include but are not limited to hiking, biking, swimming, dancing, yoga, and various team sports. Engaging in recreational sports activities has been shown to have numerous benefits for university students, including promoting physical and mental well-being, reducing stress levels, improving time management skills, enhancing social connections, and boosting academic performance.

Additionally, these activities provide an opportunity for students to break from the academic routine and engage in activities that can contribute to their overall personal growth and development. In this introduction, we will delve into the various aspects of recreational sports activities and their positive impact on the university student experience.

In this field, we pose the question: How important is the practice of recreational sports activities? To research this topic, we relied on the descriptive and analytical method in order to reach a more accurate knowledge. To answer the question, we relied on three main axes, the first axis is the definition of recreational sports activities and their benefits on the student's health, the second axis: Challenges and consequences Strategies to promote the practice of sports activities and the role of the administrator and the university

Research objectives

The primary objective of this research is to analyze the significance of recreational sports in enhancing the overall well-being and academic performance of university students. This research aims to provide insights into how engaging in recreational sports can foster social connections, reduce stress levels, and promote a healthy lifestyle among students. By examining various case studies and existing literature, the study will highlight the multifaceted benefits of participation in sports outside the academic environment. This exploration will encompass both physical and psychological aspects, demonstrating how engaging in recreational sports can enhance physical health, foster social connections, and improve overall well-being. Ultimately, the paper aims to argue that universities should actively promote and support recreational sports programs to enrich the student experience. This initiative not only fosters physical well-being but also enhances social connections among students, ultimately leading to a more vibrant campus life. In the following sections, we will explore the numerous benefits of recreational sports, including their impact on mental health, teamwork, and community engagement.

Significance of the study

Understanding the role of recreational sports in enhancing physical health, mental well-being, and social interaction among university students is crucial. Engaging in these activities not only promotes fitness but also fosters a sense of community and belonging. Furthermore, these sports provide students with opportunities to develop teamwork skills, enhance their mental well-being, and relieve stress, making them an essential part of the university experience. These activities not only promote physical health but also foster social connections among peers, which are crucial for personal development during the university years. Engaging in recreational sports can significantly enhance students' mental well-being, providing a necessary balance to the academic pressures they face. This balance is crucial for maintaining focus and motivation, ultimately leading to improved academic performance. Moreover, engaging in recreational sports fosters a sense of community and belonging among students, which can further enhance their overall university experience.

1. Defining Recreational Sports Activities

The term "recreational sports activities" refers to recreational sports activities that are performed for enjoyment, relaxation, and physical well-being rather than for competition or professional purposes. These activities are designed to promote physical fitness, mental health, and stress relief, and they are often pursued during leisure time or as a part of a balanced and healthy lifestyle. Examples of recreational sports activities include hiking, cycling, swimming, yoga, and various team sports played for fun rather than competition. (Otravenko et al., 2021)

Engaging in recreational sports activities offers numerous benefits to university students. It provides an opportunity to stay active and maintain physical fitness, which is essential for overall health and well-being. Regular participation in recreational sports can also help reduce stress, improve mood, and enhance mental clarity, which are particularly important for students who often face academic and personal pressures. Additionally, these activities offer a chance to socialize, build relationships, and foster a sense of community among students, contributing to a more positive and cohesive university environment. (Mutz et al., 2021)

In summary, recreational sports activities play a crucial role in promoting the holistic well-being of university students. By engaging in these activities, students can maintain their physical health, manage stress, and cultivate social connections, leading to a more balanced and fulfilling university experience. (Houge Mackenzie & Hodge, 2020)

2. Health Benefits of Physical Activity

The practice of recreational sports activities among university students has numerous health benefits, both physically and mentally. Engaging in regular physical activity helps improve overall physical health, as it can contribute to weight management, increase muscle strength, enhance cardiovascular fitness, and boost immune system function.

Furthermore, it plays a crucial role in reducing the risk of chronic diseases, such as heart disease, stroke, high blood pressure, type 2 diabetes, osteoporosis, and certain types of cancer. Moreover, participating in recreational sports activities can positively impact mental health by reducing symptoms of anxiety and depression, improving mood, promoting better sleep quality, and enhancing overall psychological well-being. This is because physical activity stimulates the production of endorphins, which are chemicals in the brain that act as natural painkillers and mood elevators. Not only does it provide an effective way to manage stress and cope with academic pressures, but it also increases cognitive function and academic performance.

Regular physical activity has been shown to improve concentration, memory, and creativity, allowing students to excel in their studies. In addition to the physical and mental health benefits, taking part in recreational sports activities also fosters social connections and promotes a sense of community among university students. It provides opportunities for teamwork, cooperation, and friendly competition, enabling students to develop valuable interpersonal skills, leadership qualities, and a sense of belonging. By engaging in sports with their peers, students can form lasting friendships, strengthen relationships, and create a support network that enhances their overall well-being. Furthermore, participating in recreational sports activities can serve as a means for personal growth and self-discovery. It allows students to explore different sports and discover their talents and passions.

Through trying out new activities and challenging themselves, students can develop a sense of self-confidence, resilience, and determination. In addition, sports activities provide a platform for setting goals, overcoming obstacles, and learning important life lessons such as discipline, perseverance, and teamwork. In conclusion, the importance of engaging in recreational sports activities for university students cannot be overstated, as it offers significant benefits for their physical and mental health, contributing to their overall well-being and academic success. By incorporating regular physical activity into their routine, students can improve their physical fitness, reduce the risk of chronic diseases, enhance mental well-being, promote social connections, and foster personal growth. Therefore, universities should prioritize the provision of recreational sports facilities and programs to encourage students to lead active, healthy lifestyles and achieve their full potential. Engaging in recreational sports activities not only benefits the individual but also has positive ripple effects on the university community as a whole. It creates a vibrant and dynamic campus life, increases student engagement and satisfaction, and promotes a culture of wellness and balance. Therefore, universities should invest in state-of-the-art sports facilities, offer a diverse range of sports programs and events, and provide ample support, resources, and incentives for students to participate in recreational sports activities. By doing so,

universities can create an environment that nurtures the holistic development of students, preparing them to become well-rounded individuals and future leaders in society. (De et al.2022 ; Gothe et al.2020 ; Mahfouz et al.2020 ; Memon et al.2021).

2.1. Positive Impact on Physical Health

Engaging in recreational sports activities has a significantly positive impact on the physical health of university students. Regular physical activity has been proven to reduce the risk of chronic diseases such as obesity, diabetes, and heart disease. It helps in maintaining a healthy weight, improving cardiovascular health, and enhancing muscle strength and endurance. Furthermore, participating in sports activities contributes to the overall well-being of the body by boosting the immune system, promoting better sleep, and increasing energy levels. (San et al.2020)

Moreover, engaging in recreational sports activities can also have a positive effect on mental health by reducing stress, anxiety, and depression. This in turn can have a beneficial impact on physical health, as mental well-being is closely intertwined with physical well-being. Therefore, it is vital for university students to incorporate recreational sports activities into their lifestyle in order to experience the multitude of benefits that they offer, not only for their physical health but also for their overall well-being. This holistic approach to health and wellness is essential in promoting a balanced and fulfilling university experience. (Morse et al., 2021)

2.2. Positive Impact on Mental Health:

The positive impact of engaging in recreational sports activities on the mental health of university students cannot be overstated. Numerous studies have demonstrated the various ways in which physical exercise can contribute to improved mental well-being. Firstly, regular participation in sports can help reduce stress and anxiety levels, as physical activity stimulates the production of endorphins, which are known as the "feel-good" hormones. This leads to an overall improvement in mood and a greater sense of well-being. Additionally, engaging in recreational activities provides a form of escapism from the pressures of academic life, allowing students to de-stress and unwind. (Slavinski et al., 2021)

Furthermore, participating in sports also promotes better sleep patterns, which is essential for maintaining good mental health. Regular exercise has been shown to improve the quality of sleep and reduce the incidence of sleep disorders, such as insomnia. Adequate rest is crucial for cognitive function and emotional regulation, and thus, engaging in sports can indirectly contribute to better mental health through improved sleep. Moreover, participating in team sports or group activities fosters social connections and a sense of community, which can combat feelings of isolation and loneliness often experienced by university students. This

social support network can have a positive impact on mental health by providing emotional reassurance and a sense of belonging. In conclusion, the positive influence of recreational sports activities on the mental health of university students cannot be overlooked, as it offers a multifaceted approach to improving overall well-being. (Memon et al., 2020)

3. Social and Educational Benefits

The importance of recreational sports activities for university students goes beyond physical health benefits. Engaging in such activities also yields significant social and educational advantages. Firstly, participating in group sports or recreational activities fosters a sense of community and cooperation among students. It encourages teamwork, communication, and mutual support, which are essential skills not only in sports but also in professional and personal contexts. These experiences promote a collaborative spirit and instill a sense of belonging, which can enhance the overall university experience and contribute to a positive campus culture. (Wang & Bíró, 2021)

Moreover, recreational sports provide an excellent opportunity for students to acquire life skills and leadership qualities. Through participation in sports, individuals learn to manage their time effectively, set and pursue goals, and develop resilience in the face of challenges. They also have the chance to take on leadership roles within their teams, fostering qualities such as decision-making, problem-solving, and composure under pressure. These skills are essential for personal development and are transferable to academic pursuits and future careers. (Park et al.2021)

In summary, the social and educational benefits of engaging in recreational sports activities for university students are substantial. These activities promote a sense of community and cooperation while providing opportunities for the acquisition of valuable life skills and leadership qualities. Integrating such activities into the university experience can contribute to the holistic development of students and enhance the overall learning environment. (Okechukwu et al.2022)

3.1. Fostering Collegiality and Collaboration:

Participation in recreational sports activities among university students plays a significant role in promoting teamwork and cooperation. Engaging in team sports such as football, basketball, or volleyball provides students with the opportunity to develop essential social skills, including communication, leadership, and conflict resolution. Through collaborative efforts on the field or court, students learn to work together towards a common goal, fostering a sense of community and mutual support. These experiences contribute to building a collective spirit among the participants, enhancing their ability to collaborate effectively in academic and professional settings. (Okechukwu et al.2022)

Moreover, recreational sports activities create a platform for students from diverse backgrounds to come together and form strong bonds based on shared interests and experiences. This promotes inclusivity and diversity, as individuals from various cultures and disciplines unite through their passion for sports. The sense of belonging and camaraderie developed through these activities can have a positive impact on the overall campus environment, leading to improved social interactions and a more cohesive university community. In essence, the promotion of teamwork and cooperation through recreational sports activities not only benefits the individual participants but also contributes to the establishment of a harmonious and inclusive academic environment. (Memon et al., 2020)

3.2. Learning Life and Leadership Skills:

The practice of recreational sports activities for university students is not just about physical exercise. It also plays a crucial role in the development of essential life and leadership skills. Through engaging in sports and recreational activities, students have the opportunity to learn important skills such as teamwork, communication, time management, and decision-making. (Okechukwu et al.2022)

Participating in team sports, for example, allows students to understand the dynamics of working with others towards a common goal, fostering essential teamwork skills. Moreover, engaging in recreational activities provides students with the chance to enhance their communication skills, as effective communication is vital in sports settings. Additionally, the time management and decision-making abilities of students are honed as they learn to balance their academic responsibilities with their participation in sports. (Takemura et al.2020)

Furthermore, recreational sports also offer opportunities for students to develop leadership skills. Whether it is leading a team as a captain or taking initiative in organizing sporting events, students learn how to take on responsibilities and make decisions that can impact the success of the team or activity. Overall, the practice of recreational activities contributes significantly to the holistic development of university students by equipping them with crucial life and leadership skills that will benefit them beyond their academic years.

4. Challenges and Obstacles:

University students face many challenges and obstacles that may prevent them from regularly engaging in recreational activities. One of these challenges is a lack of time, as students find themselves busy with studying and academic projects, making it difficult to allocate enough time for exercise. Additionally, students also suffer from academic fatigue, spending long hours at the university and working hard to cope with academic pressures, which makes them

unable to engage in sports activities regularly. (Atoui et al.2021)

However, it is important for students to overcome these challenges and prioritize properly, as they should allocate the necessary time for recreational sports activities. By managing time well and organizing their schedules, students can find enough opportunities to exercise and maintain their physical fitness and mental health. Students can also search for sports activities that they can engage in regularly, such as participating in fitness courses at the university or joining local sports clubs. By overcoming these challenges, university students will be able to greatly benefit from the advantages of recreational sports activities and maintain their overall well-being. (Wang & Boros, 2021)

4.1. Lack of Time

One of the significant challenges that university students face when it comes to engaging in recreational sports activities is the lack of time. With academic responsibilities, assignments, and other commitments, students often find it difficult to allocate time for sports and physical activities. The demanding schedule of university life leaves little room for leisure and recreation, making it a challenge for students to prioritize sports in their daily routine. (De et al.2022)

The lack of time also affects the students' ability to de-stress and unwind from their academic pressures. Without sufficient time for recreational activities, students may experience burnout, increased stress levels, and a decline in overall mental and physical well-being. Moreover, the lack of time for sports can also lead to a sedentary lifestyle, which poses long-term health risks for students. (Kline et al.2021)

To address this challenge, universities need to create awareness about the importance of recreational sports activities and allocate time in the academic schedule for students to participate in sports. Additionally, promoting time management skills and encouraging a healthy work-life balance can help students prioritize sports and recreational activities despite their busy schedules. Overall, addressing the issue of time constraints is crucial in ensuring that university students can benefit from the positive impact of engaging in recreational sports activities. (Memon et al.2021)

4.2. School Burnout:

The academic workload on college students can often lead to a significant amount of stress and exhaustion. This academic fatigue, or " School burnout" is a common challenge that many students face during their university studies. The pressure of exams, assignments, and constant studying can take a toll on their physical and mental well-being. This kind of exhaustion can negatively impact their overall academic performance and personal life. It is

crucial for students to recognize the signs of academic fatigue and take proactive steps to address it. (Trabelsi et al.2021)

Common symptoms of academic fatigue can include feelings of constant tiredness, lack of motivation, difficulty concentrating, and irritability. If left unaddressed, this can lead to a decrease in academic performance and overall well-being. Therefore, it is essential for students to practice self-care and prioritize their mental and physical health. Engaging in recreational sports and physical activities can be highly beneficial in combating academic fatigue. Regular exercise has been proven to reduce stress, improve mood, and enhance cognitive function. It also provides an opportunity for students to take a break from their academic responsibilities, allowing them to recharge and return to their studies with a fresh perspective. (Trabelsi et al.2021)

In summary, academic fatigue is a significant challenge that many university students face, and it can have a detrimental impact on their academic performance and overall well-being. Recognizing the signs of academic fatigue and taking proactive steps to address it is crucial for students. Engaging in recreational sports and physical activities can be an effective way to combat academic fatigue and promote mental and physical well-being. By prioritizing self-care and making time for leisure activities, students can better manage their academic workload and achieve success in their studies. (Bodziony & Stetson, 2024)

5. Strategies to Promote Physical Activity

To enhance the practice of recreational sports activities among university students, it is crucial to implement effective strategies that encourage and facilitate such engagement. One strategy is to integrate sports into academic programs, allowing students to receive academic credit for participating in sports-related activities. This can be achieved by offering courses or workshops that focus on different sports, coaching, or sports management, thus promoting a culture of physical activity and wellness within the academic environment (De et al., 2022). Additionally, providing sports facilities and equipment on campus is essential for promoting and facilitating recreational sports among students. Universities can invest in building and maintaining state-of-the-art sports facilities, such as gyms, swimming pools, tennis courts, and sports fields, to create an inviting and accessible space for students to engage in physical activities. Moreover, ensuring the availability of high-quality sports equipment, such as workout machines, sports gear, and training tools, is essential for enhancing the overall experience of recreational sports participation. By implementing these strategies, universities can effectively promote and support the practice of recreational sports activities among their students, ultimately contributing to their physical, mental, and emotional well-being. (Bodziony & Stetson, 2024)

5.1. Integrating Sport into Academic Programs

Integrating sports into academic programs is of paramount importance in promoting the overall well-being of university students. By including sports in the academic curriculum, students are able to strike a balance between mental and physical activities, leading to a more holistic approach towards education. This integration allows students to develop essential life skills such as time management, teamwork, and discipline, which are crucial for their future success. Furthermore, academic institutions can also benefit from this integration by fostering a healthier and more active campus community, leading to improved student engagement and retention. (Antczak et al.2020)

Moreover, integrating sports into academic programs can also serve as a valuable tool for promoting diversity and inclusivity. By offering a wide range of sports activities within the academic setting, universities can cater to the interests and needs of a diverse student body, creating a sense of belonging and unity. This inclusivity can contribute to a positive campus culture, where students from different backgrounds come together, fostering mutual respect and understanding. Ultimately, integrating sports into academic programs is not only about promoting physical fitness, but also about nurturing well-rounded individuals who are equipped with the skills and mindset needed to thrive in both their academic and personal lives. (Kline et al.2021)

5.2. Providing Facilities and Sports Equipment

Providing sports facilities and sports equipment is essential to promote the practice of sports activities among students at the university. There should be diverse sports facilities readily available to all students in order to encourage them to engage in regular physical exercise. Some examples of these facilities include sports halls and open spaces for team sports such as basketball and football. Additionally, there should be sufficient sports equipment available, such as bicycles and fitness machines, to ensure that students have access to various means of exercising and diversifying their sports activities. (Mahfouz et al.2020)

Furthermore, regular maintenance of the facilities and sports equipment should be taken care of, through providing preventive maintenance and necessary repairs. Damaged sports equipment reduces students' benefit from physical exercises and decreases their desire to engage in sports. Therefore, it is important to provide a safe and well-equipped sports environment to support the students' health and physical well-being at the university. (Jurado-Fasoli et al.2020)

6. Administrative and Academic Roles:

In the context of university life, the administrative and academic roles play a crucial part in

promoting the participation of students in recreational sports activities. This involves creating a conducive environment that encourages students to engage in physical activities for leisure and stress relief. Additionally, the administrative and academic bodies are responsible for organizing and overseeing the various recreational sports activities available to the students. These activities are designed to cater to the diverse interests and preferences of the student body, aiming to promote a healthy and balanced lifestyle. (Sejbuk et al., 2022)

Furthermore, the administrative and academic roles also involve ensuring that the facilities and resources necessary for recreational sports activities are readily accessible to the students. This includes the maintenance and management of sports facilities, as well as the allocation of appropriate budgets to support the organization and execution of these activities. Additionally, these bodies are responsible for implementing policies and guidelines to ensure the safety and well-being of the students participating in recreational sports, as well as the fair and equitable distribution of resources and opportunities. (Klineet al.2021)

In summary, the administrative and academic roles in the university setting are pivotal in promoting and facilitating the engagement of students in recreational sports activities. Their efforts are directed towards fostering a supportive and inclusive environment that encourages students to prioritize their physical and mental well-being through participation in leisure sports activities. (Atoui et al.2021).

6.1. Encouraging Students to Participate

To encourage students to participate in recreational sports activities, it is essential for universities to provide a supportive environment that promotes physical well-being and a healthy lifestyle. This can be achieved through various means, such as organizing awareness campaigns, creating incentive programs, and offering a diverse range of sports activities. By highlighting the benefits of physical exercise and the positive impact it has on academic performance and overall health, universities can motivate students to actively engage in recreational sports. (Mahfouz et al.2020)

Additionally, promoting a culture of inclusivity and diversity in sports encourages more students to participate, regardless of their skill level or background. By fostering a supportive and non-judgmental atmosphere, universities can ensure that all students feel welcome and comfortable participating in recreational sports activities. Moreover, establishing partnerships with local sports organizations and arranging intercollegiate competitions can also serve as a means to stimulate student involvement in recreational sports. (Trabelsi et al.2021)

It is important for universities to recognize the significance of encouraging students to

participate in recreational sports activities, as it not only contributes to their physical well-being but also fosters a sense of community and belonging on campus. By actively promoting and facilitating student involvement in recreational sports, universities can contribute to the overall holistic development and well-being of their students. (Park & Suh, 2020)

6.2. Organization of Recreational Sports Activities

In the context of university life, organizing recreational sports activities plays a crucial role in promoting the overall well-being of students. The administration and university leaders must take the initiative to provide students with a diverse range of recreational sports activities that cater to different interests and abilities. By organizing such activities, the university not only encourages physical fitness but also fosters a sense of community and belonging among students. The organization of recreational sports activities also contributes to stress relief, mental health, and overall academic performance, as students are able to find a healthy balance between their academic and personal lives. Moreover, the administration's involvement in the organization of these activities ensures that they are conducted in a safe and responsible manner, with appropriate resources and supervision. Ultimately, the organization of recreational sports activities is an essential component of the university's efforts to support the holistic development and well-being of its students. (Zhai et al.2021).

7. Conclusions and Recommendations:

In conclusion, the importance of promoting a culture of recreational sports for university students cannot be overstated. Engaging in recreational activities not only improves physical health but also enhances mental well-being, reduces stress, and fosters a sense of community among students. Therefore, it is vital for universities to actively encourage and support students to participate in recreational sports, whether through organizing events, providing facilities, or incorporating physical activities into the curriculum.

It is also recommended that universities collaborate with sports organizations and local communities to create more opportunities for students to engage in recreational activities. This can include offering a variety of sports programs, organizing tournaments, and providing access to sports facilities both on and off campus. Furthermore, it is important for universities to emphasize the benefits of recreational sports and raise awareness about the importance of leading an active lifestyle.

In light of the numerous advantages that recreational sports offer, it is imperative for universities to integrate regular physical activities into the daily lives of students. By doing so, universities can contribute to the overall well-being of their students and create a positive and healthy campus environment. Ultimately, the promotion of recreational sports

among university students has the potential to have a lasting positive impact on their academic performance, personal development, and overall quality of life.

Conclusion

We began this essay by introducing the most salient benefits of recreational sports for students: health, enhanced mental and emotional states, and greater social integration. Throughout the essay, we have considered in greater depth the physical and emotional advantages participating in recreational sports offers. Student life is so often associated primarily with academic or professional growth, but we insisted that the cultivation of the affective self must intersect considerations for that driven self—inevitably navigating political, social, and ontological strife: from developing and maintaining practices of discipline and care as integral. The experience of university, then, must require from us steadfast and meaningful efforts at understanding our students' capacities for growth and acknowledging and working to ameliorate barriers. These efforts to include and encourage balanced lifestyles do not terminate upon campus life, but promote strategies useful for the sustained wellness of professional life.

By making attendance and participation accessible, and by supporting the various recreational sports students participate in, universities and all employed by them may better the personal and academic matriculation of all who comprise their communities. In this study, we have described some of the benefits of recreational sports. We have also described the challenges students face, and thus the barriers that might prevent them from participating in and reaping the benefits of participation in recreational sports. We urge students to consider how regularly engaging in physical exercise and recreational sports might lead to positive benefits: to academic and professional success, as well as overall well-being and satisfaction.

References:

- Antczak, D., Lonsdale, C., Lee, J., Hilland, T., Duncan, M. J., del Pozo Cruz, B., & Sanders, T. (2020). Physical activity and sleep are inconsistently related in healthy children: A systematic review and meta-analysis. *Sleep Medicine Reviews*, 51, 101278.
- Atoui, S., Chevance, G., Romain, A. J., Kingsbury, C., Lachance, J. P., & Bernard, P. (2021). Daily associations between sleep and physical activity: A systematic review and meta-analysis. *Sleep Medicine Reviews*, 57, 101426.
- Bodziony, V., & Stetson, B. (2024). Associations between sleep, physical activity, and emotional well-being in emerging young adults: Implications for college wellness program development. *Journal of American College Health*.

- De Nys, L., Anderson, K., Oforu, E. F., Ryde, G. C., Connelly, J., & Whittaker, A. C. (2022). The effects of physical activity on cortisol and sleep: A systematic review and meta-analysis. *Psych neuroendocrinology*, 143, 105843.
- Gothe, N. P., Ehlers, D. K., Salerno, E. A., Fanning, J., Kramer, A. F., & McAuley, E. (2020). Physical activity, sleep, and quality of life in older adults: Influence of physical, mental, and social well-being. *Behavioral Sleep Medicine*, 18(6), 797-808.
- Houge Mackenzie, S., & Hodge, K. (2020). Adventure recreation and subjective well-being: A conceptual framework. *Leisure Studies*.
- Jurado-Fasoli, L., De-la-O, A., Molina-Hidalgo, C., Migueles, J. H., Castillo, M. J., & Amaro-Gahete, F. J. (2020). Exercise training improves sleep quality: A randomized controlled trial. *European Journal of Clinical Investigation*, 50(3), e13202.
- Kline, C. E., Hillman, C. H., Sheppard, B. B., Tennant, B., Conroy, D. E., Macko, R. F., ... & Erickson, K. I. (2021). Physical activity and sleep: An updated umbrella review of the 2018 Physical Activity Guidelines Advisory Committee report. *Sleep Medicine Reviews*, 58, 101489.
- Mahfouz, M. S., Ali, S. A., Bahari, A. Y., Ajeebi, R. E., Sabei, H. J., Somaily, S. Y., ... & Shook, R. A. N. (2020). Association between sleep quality and physical activity in Saudi Arabian university students. *Nature and Science of Sleep*, 775-782.
- Memon, A. A., Coleman, J. J., & Amara, A. W. (2020). Effects of exercise on sleep in neurodegenerative disease. *Neurobiology of Disease*.
- Memon, A. R., Gupta, C. C., Crowther, M. E., Ferguson, S. A., Tuckwell, G. A., & Vincent, G. E. (2021). Sleep and physical activity in university students: A systematic review and meta-analysis. *Sleep Medicine Reviews*, 58, 101482.
- Morse, K. F., Fine, P. A., & Friedlander, K. J. (2021). Creativity and leisure during COVID-19: Examining the relationship between leisure activities, motivations, and psychological well-being. *Frontiers in Psychology*.
- Mutz, M., Reimers, A. K., & Demetriou, Y. (2021). Leisure time sports activities and life satisfaction: Deeper insights based on a representative survey from Germany. *Applied Research in Quality of Life*.
- Okechukwu, C. E., Daniele, M., Gabriele, D. E., & La Torre, G. (2022). Moderate-intensity aerobic exercise as an adjunct intervention to improve sleep quality among rotating shift nurses. *La Clinica Terapeutica*, 173(2), 184-186.

- Otravenko, O., Pelypas, D., Zhamardiy, V., Shynkarova, O., & Shkola, O. (2021). Leisure and recreational activities of student youth in the context of health-preservation. pdmu.edu.ua
- Park, H., & Suh, B. (2020). Association between sleep quality and physical activity according to gender and shift work. *Journal of Sleep Research*.
- Park, I., Díaz, J., Matsumoto, S., Iwayama, K., Nabekura, Y., Ogata, H., ... & Vogt, K. E. (2021). Exercise improves the quality of slow-wave sleep by increasing slow-wave stability. *Scientific Reports*, 11(1), 4410.
- San Román-Mata, S., Puertas-Molero, P., Ubago-Jiménez, J. L., & González-Valero, G. (2020). Benefits of physical activity and its associations with resilience, emotional intelligence, and psychological distress in university students from southern Spain. *International Journal of Environmental Research and Public Health*, 17(12), 4474.
- Sejbuk, M., Mirończuk-Chodakowska, I., & Witkowska, A. M. (2022). Sleep quality: A narrative review on nutrition, stimulants, and physical activity as important factors. *Nutrients*.
- Slavinski, T., Bjelica, D., Pavlović, D., & Vukmirović, V. (2021). Academic performance and physical activities as positive factors for life satisfaction among university students. *Sustainability*. mdpi.com
- Takemura, N., Cheung, D. S. T., Smith, R., Deng, W., Ho, K. Y., Lin, J., ... & Lin, C. C. (2020). Effectiveness of aerobic exercise and mind-body exercise in cancer patients with poor sleep quality: A systematic review and meta-analysis of randomized controlled trials. *Sleep Medicine Reviews*, 53, 101334.
- Trabelsi, K., Ammar, A., Masmoudi, L., Boukhris, O., Chtourou, H., Bouaziz, B., ... & ECLB-COVID19 Consortium. (2021). Sleep quality and physical activity as predictors of mental wellbeing variance in older adults during COVID-19 lockdown: ECLB COVID-19 international online survey. *International Journal of Environmental Research and Public Health*, 18(8), 4329.
- Trabelsi, K., Ammar, A., Masmoudi, L., Boukhris, O., Chtourou, H., Bouaziz, B., ... & Hoekelmann, A. (2021). Globally altered sleep patterns and physical activity levels by confinement in 5056 individuals: ECLB COVID-19 international online survey. *Biology of Sport*, 38(4), 495.
- Wang, F., & Bíró, É. (2021). Determinants of sleep quality in college students: A literature review. *Explore*. sciencedirect.com
- Zhai, X., Wu, N., Koriyama, S., Wang, C., Shi, M., Huang, T., ... & Fan, X. (2021). Mediating effect of perceived stress on the association between physical activity and sleep
www.psychologyandeducation.net

quality among Chinese college students. *International Journal of Environmental Research and Public Health*, 18(1), 289.