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Exploring the Links Between Sports Facility Access and Physical Activity

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ABSTRACT

Sports facilities like gyms and swimming pools provide resources and opportunities to foster consistent physical activity. However, access disparities in proximity, cost, and socioeconomic status can limit participation and widen health inequities. This study explores how sports facility access, specifically gym access, impacts health outcomes, focusing on physical activity levels and overall well-being. Using a mixed-method approach, survey data from 52 North New Jersey participants examined gym usage patterns, transportation, financial considerations, and barriers to participation. Mental health assessments were also conducted using a standardized scale. The findings demonstrate that proximity significantly affects gym attendance, with individuals closer to facilities 1.16 times more likely to exercise. Key motivators for physical activity include physical, mental health benefits and social support, such as going with someone. Barriers such as time constraints and lack of motivation deter participation. Regular physical activity is associated with reduced risks of chronic conditions, such as cardiovascular diseases, with evidence showing a 10% lower cardiovascular event rate for every 2,000 daily step increase. Some strategy recommendations to address these challenges include flexible hours, financial incentives, and inclusive environments to foster motivation and reduce barriers. Enhancing access to sports facilities can promote equitable opportunities for physical activity, leading to improved overall public health outcomes and reduced health disparities due to socioeconomic factors.

Introduction

Physical activity is essential for good health and well-being. According to the World Health Organization (WHO), physical inactivity is one of the leading risk factors for non-communicable diseases globally (Belloc & Breslow, 2004). In the United States, the Centers for Disease Control and Prevention (CDC) reports that only one in five adults meet the recommended physical activity guidelines for aerobic and muscle-strengthening activities (Billaudeau et al., 2010).

Despite the benefits of physical activity, many individuals need help participating. One significant barrier is access to sports facilities. Sports facilities, defined as gyms, swimming pools, and other spaces designed for physical activity, offer a variety of equipment, programs, and social interaction opportunities that can motivate and support people in reaching their fitness goals (Brownson et al., 2009).

However, distance to facilities and affordability can significantly limit access, particularly for low-income and geographically isolated populations. Research by Lee et al. (2016) found that adults with easy access to sports facilities were 1.16 times more likely to report participating in physical activity (Doggett et al., 2021).

Understanding the relationship between sports facility access and health well-being, which contains physical, mental, and social aspects of health, is essential for developing strategies to promote physical activity and improve public health outcomes. This study investigates this connection by examining how cost, accessibility, and proximity of sports facilities influence physical activity levels (Garcia et al., 2017). By analyzing this data, the research will explore potential strategies to enhance access to sports facilities and improve public health. Improved access can increase physical activity levels and reduce chronic health conditions such as obesity, cardiovascular disease, and mental health problems (Halonen et al., 2015).

Psychology Terminology and Underlying Theory

In this research, it is essential to understand the association between socioeconomic status (SES) and health outcomes, including cardiovascular disease (CVD) and all-cause mortality (Black et al., 2018). With social characteristics like status and occupation, SES includes economic measures such as income and education (Higgs et al., 2015). Cardiovascular disorders continue to be a major global source of morbidity and mortality, affecting both the heart and blood arteries (Karusisi et al., 2013). The term "incidental cardiovascular disease" describes new cases that appear within a given time frame, emphasizing how the disease progresses dynamically (Kraus, n.d.).

Health promotion significantly relies on physical activity, which can be divided into two categories: moderate-intensity (like walking, biking) and vigorous-intensity (like running, swimming) (Kubota et al., 2019). Theories of health behavior, such as social cognitive theory and social support theory, explain how people pick up and maintain healthy behaviors. These theories emphasize how social determinants of health—such as social support networks and socioeconomic circumstances—impact health outcomes and behaviors (Kumar et al., 2018). The research aims to inform policies and interventions to promote physical activity and improve overall health outcomes (MacDougall et al., 2008).

Literature Review

Regular physical activity is essential for public health and is proven to reduce the risk of chronic diseases. This literature review aims to discover the relationship between sports facility access and health well-being, focusing on factors influencing physical activity levels and association with economic costs, including cardiovascular disease, and incident cardiovascular disease.

Factors Affecting Physical Activity and Associated Economic Costs

Numerous factors influence individuals' engagement in physical activity, including geographical and social aspects to economic considerations. Lee et al. (2016) conducted a comprehensive survey, showing that easy access to sports facilities significantly increases the likelihood of physical activity participation. In their study, 201,723 participants were included and 80.9% of participants felt that sports facilities were easily accessible, while 19.1% of participants reported participating in some type of physical activity. Adults who reported easy access to sports facilities were 1.16 times more likely to report participating in physical activity than those who reported difficult access (OR = 1.16, 95% CI 1.13–1.20). Conversely, individuals facing difficulties in finding sports facilities, particularly those from lower-income groups, exhibit lower levels of physical activity. Also, occupation and sleep duration were identified as factors affecting physical activity engagement.

Smit et al. (2015) underscored the importance of community engagement and collaboration in promoting physical activity. Their study showed how exercise programs offered at sports facilities affect people with chronic diseases by collecting data from nine municipalities in the Netherlands between 2014 and 2017. Their study emphasized the role of resources, including funding, personnel, and infrastructure, in supporting initiatives aimed at enhancing physical activity levels. Moreover, neighborhood characteristics and environmental factors of health were found to influence individuals' physical activity behavior, showing the need for improvements, especially for chronic diseases.

Research by Welsh Demographic Service Data (WDSD) (2022) further elucidated the association between accessibility to sports facilities and participation in physical activities among adults. More specifically, 72% of the adults participated in sports in the 4 weeks prior to the interview, and 39% of them participated 3 or more times. Proximity to sports facilities, particularly outdoor venues, positively correlated with engagement in sports activities.

However, individuals with chronic conditions exhibited lower participation rates, indicating potential barriers to physical activity.

Hence, research by Hillsdon et al (2007) showed that there is a statistically significant negative relationship between deprivation and the density of physical activity facilities. They conducted research with a database of all indoor exercise facilities in England. The facilities were then linked to administrative areas and assigned a deprivation score. They used Census data to calculate the density of physical activity facilities per 1,000 people in each area. With the Census data method, they found in areas with the lowest socioeconomic status, there were only 6 facilities per 100,000 people. In contrast, in the highest socioeconomic areas, there were 10 facilities per 100,000 people. This showed there is a difference of 4 facilities per 100,000 people between the most and least deprived areas.

Relationship to All-Cause Mortality, Cardiovascular Disease Mortality, and Incident Cardiovascular Disease

The impact of physical activity on health outcomes, particularly chronic disease and cardiovascular disease incidence, has been studied. Studies conducted by Databases (2021) demonstrated a linear relationship between daily step counts and all-cause mortality. More specifically, in the study, 531 cardiovascular events occurred during more than 45,000 person-years of follow-up. Before the intervention, each increase of 2000 steps per day up to 10,000 steps was associated with a 10% lower cardiovascular event rate. Also, for every increase of 2000 steps per day over baseline, there was an 8% yearly reduction in cardiovascular event rate in individuals with impaired glucose tolerance. Therefore, Increasing daily step counts was associated with reduced mortality risk, showing the significance of regular physical activity in enhancing lifestyle. In addition, research in school sports facilities (Databases, 2021) revealed effective evidence linking physical activity levels with cardiovascular health. Longitudinal studies consistently reported lower cardiovascular event rates among individuals with higher daily step counts, regardless of demographic factors or weight status.

Research by Bergwall et al. (2021) showed that physical activity can significantly reduce the risk of CVD. Researchers analyzed data about physical activity levels in 168 countries. This data included information on self-reported physical activity from people aged 18 and over. The researchers looked at data on moderate-intensity and vigorous-intensity physical activity levels. Moderate-intensity activity is any activity that causes a moderate increase in heart rate and breathing, while vigorous-intensity activity causes a large increase in heart rate and breathing. They also considered occupational physical activity levels, showing how much physical activity people get through their jobs. They found that 25% of the world's population needs to be more physically active. This means that a quarter of people globally need more exercise. Furthermore, the researchers found that this number is expected to rise in the future, particularly in wealthier countries.

In conclusion, access to sports facilities is significant for physical activity and improving public health outcomes. Factors such as geographical proximity, economic status, and community engagement significantly influence individuals' engagement in physical activity. Hence, increasing physical activity levels have been consistently associated with reduced mortality and cardiovascular disease incidence. This review highlights the significant role of sports facility access in promoting physical activity and improving public health outcomes. Studies have shown that individuals with easy access to sports facilities are 1.16 times more likely to participate in physical activity compared to those facing access challenges (Lee et al., 2016). Regular physical activity, measured by daily steps, has been inversely linked to health risks. For instance, one study found that each 2,000-step increase up to 10,000 steps per day was associated with a 10% lower cardiovascular event rate (Databases (PubMed, CINAHL, and Cochrane), 2021). These findings suggest that increasing access to sports facilities, particularly for socioeconomically disadvantaged populations, could be one of the strategies to enhance well-being and public health.

Methodology

This study investigated the connection between gym access and health in North New Jersey. A mixed-method approach was used to achieve this objective, combining quantitative survey data collection and qualitative analysis. Participants participated in the study by Google Forms survey about demographics, health, gym use (type, distance, frequency), transportation to gyms, and their willingness to pay for memberships. For demographics, participants were asked to provide information on age, weight, height, gender, average household income, and other relevant demographic variables. For health conditions, participants were asked about any pre-existing health conditions or disabilities that might impact their ability to engage in physical activities, including cardiovascular diseases, chronic diseases, or mental disabilities. For gyms and sports facility usage, participants were asked about their utilization patterns of gym or sports facilities, including the type of facilities, frequency of visits, and distance traveled to access them. For transportation methods, participants were asked about the types of transportation they used to reach sports facilities, including public transit, walking, or cycling. For factors influencing attendance, the questions aimed to discover motivations and barriers affecting participants' access to sports facilities, including convenience, social support, cost, and time constraints. Participation was voluntary, and respondents were anonymous. The survey also analyzed why people might not go to the gym. This data collection aimed to discover any links between gym access, health considerations, and overall well-being for the public.

This study used a scale derived from the South Korean government's "2020 Standard Guidelines for Mental Health Examination Tools and Use" to assess participants' mental health. This scale categorizes the frequency of mental health symptoms over the past month, assigning 4 points for symptoms experienced throughout the entire month, 3 points for most of the month, 2 points for half of the month, 1 point for a few days of the month, and 0 points for no symptoms at all. Participants were asked a series of questions about their mental health, and they selected the frequency of their symptoms based on this scale. The total score was calculated by summing the points from each question. A score greater than 8 indicated a mental health problem, while a score between 1 and 7 was considered normal. This method provided a consistent and structured way to evaluate mental health using standardized results across all participants.

Results

Exploratory Data Analysis

The sample consists of 52 participants who completed a survey investigating the factors influencing gym attendance and physical activity levels. The participants range in age from 15 to 30 years old, with an average age of approximately 23 years. The majority identify as male, making up about 62% of the respondents. In terms of household income, the most frequently reported range is between $95,351 and $182,100.

Most participants reported no physical disabilities (94%) or chronic diseases (90%), while a smaller portion (13%) indicated having a mental health condition. The sample provides valuable insights into the barriers—such as time constraints and lack of motivation—and motivators affecting gym attendance among young adults. This demographic information helps contextualize the findings and supports the development of targeted strategies to enhance gym participation and promote public health.

Table 1. Descriptive Statistics of Participants

Age	Average: 23.25 Min: 15 Max: 30 St. Dev: 5.48	Weight	Average: 158.79 lbs Min: 105 lbs Max: 235 lbs St. Dev: 32.46
Gender	Male: 32 Female: 20 Other: 0	BMI	Average: 24.59 Min: 17.22 Max: 49.11 St. Dev: 5.71
Height	Average: 67.61 inches Min: 58 in Max: 80 in St. Dev: 4.64		

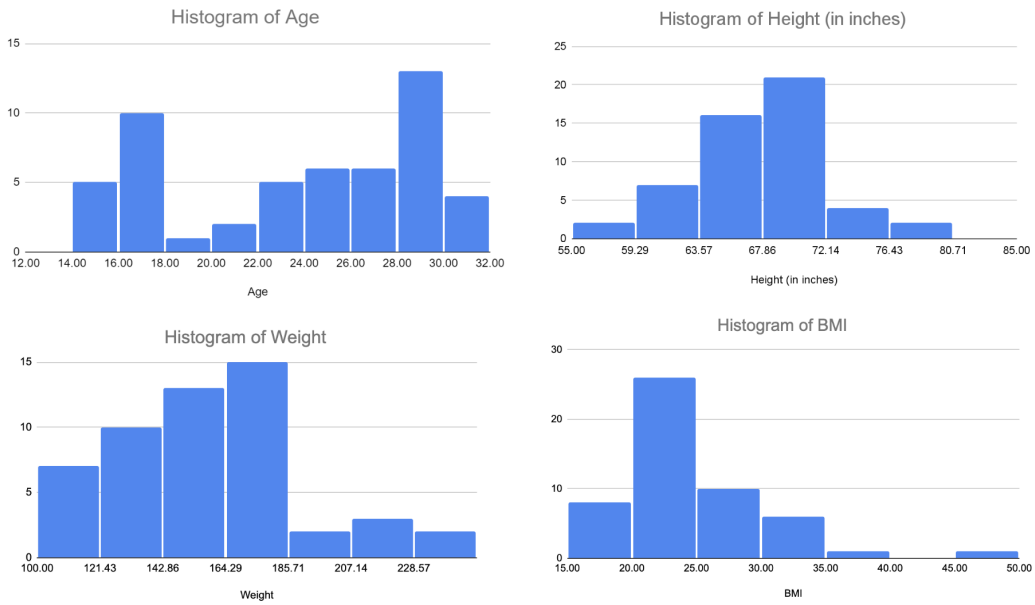

Figure 1. Descriptive Statistics of the Sample

Motivators of Physical Activity

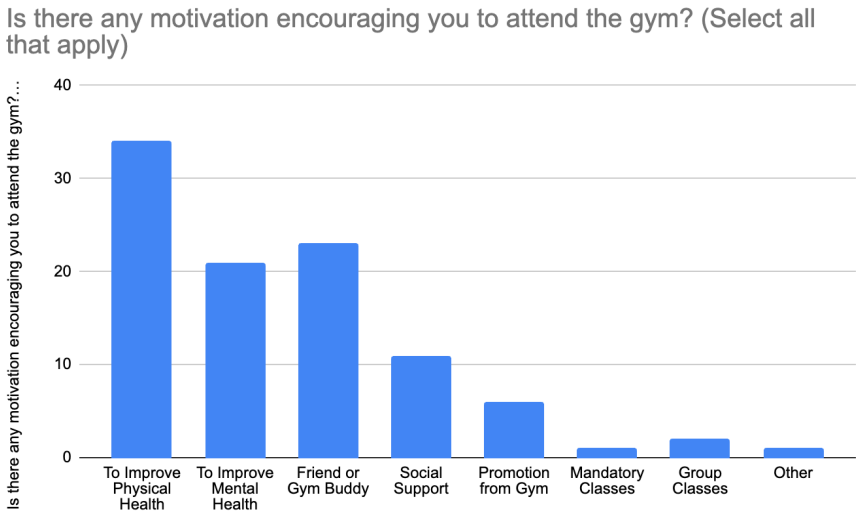

Figure 2. Motivations for Physical Activity and Gym Participation

Survey responses reveal several key motivators driving gym attendance. Most participants prioritize improving physical health, citing goals like weight loss, strength building, and better cardiovascular fitness. Mental health benefits are also significant, with respondents highlighting the gym as a space to reduce stress and enhance emotional well-being. Social factors play a crucial role; many are motivated by the support of friends, gym buddies, or being part of a community through group activities. Promotions, discounts, and financial incentives further encourage participation, making gym memberships more accessible. Additionally, some participants have performance-specific goals, such as improving sports skills, which suggests an interest in targeted training programs. Convenience and enjoyment are recurring themes, with boutique fitness options and engaging classes appealing to those seeking variety in their workouts. These findings suggest that gyms can enhance attendance by focusing on health outcomes, fostering community, offering incentives, and providing diverse and enjoyable workout options.

Barriers of Physical Activity

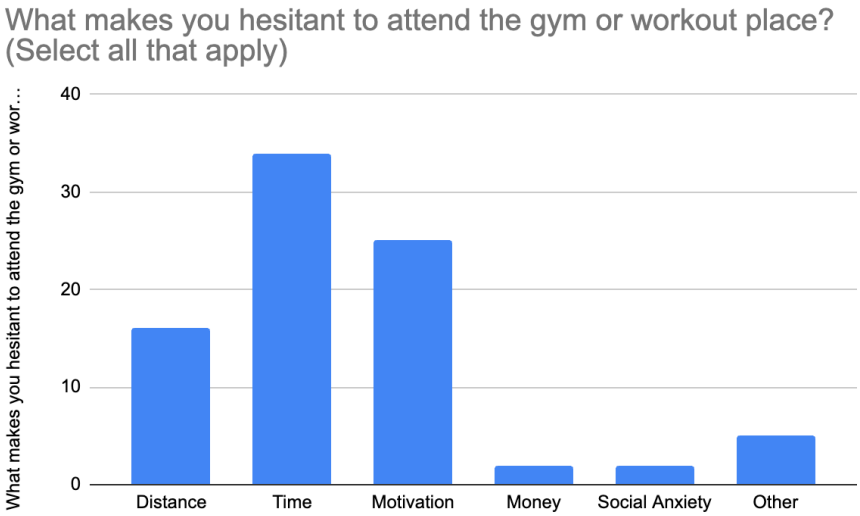

Figure 3. Barriers and Challenges in Physical Activity and Gym Participation

The survey reveals insights into the barriers to gym attendance, showing several critical themes. Time constraints emerged as the most frequently cited obstacle, with many participants needing help to balance gym visits alongside work, studies, and personal responsibilities. This highlights the need for gyms to offer flexible hours or promote shorter, more efficient workout options. Motivation challenges were another significant factor, as many individuals lack the intrinsic drive to exercise. This underscores the importance of fostering accountability through engaging environments, group classes, personal trainers, or fitness challenges. Proximity to the gym also played a crucial role; participants preferred gyms within 5–10 miles of their homes, indicating that gyms farther away may need to offer incentives like transport services or online classes to attract attendance. Many participants faced a mix of barriers, such as time, motivation, and distance, further complicating their ability to maintain a gym routine. Addressing multiple barriers simultaneously, such as engaging local programs, could enhance participation. Social and psychological factors, though less common, included issues like negative body image, social anxiety, and perceived intimidation of gym culture, emphasizing the importance of creating inclusive and judgment-free environments, such as women-only or beginner-friendly spaces. Finally, unique contextual barriers, including job pressures, weather, and mistrust of gym practices, reflect the need for gyms to understand and address individual and local concerns. Addressing these challenges while fostering a supportive and inclusive environment can significantly reduce barriers and encourage more consistent gym attendance.

Conclusion

The findings of this study further emphasize the crucial role that wellness center accessibility, such as gyms play in public health. The survey revealed that time and motivation are key factors influencing public activity levels and gym attendance. Time constraints were identified as the most significant barrier, with 68% of participants citing it as a major deterrent. This result indicates the need for conveniently located sports facilities to minimize travel time and encourage regular attendance. Motivation was the second most influential factor, with 50% of respondents acknowledging its importance. This aligns with existing research that recognizes community engagement and support as critical for fostering physical activity. Financial challenges and social anxiety were less prominent, mentioned by only

4% of participants, suggesting that accessibility and motivation are more decisive factors in determining gym attendance.

The study's findings are consistent with existing literature, providing a strong basis for actionable insights. Accessible sports facilities and programs that foster motivation significantly increase participation in physical activity. For example, participants indicated that shorter travel distances to gyms improve attendance, while 68% expressed that improving physical health was a primary motivator. These results demonstrate the importance of addressing accessibility and motivation to increase gym participation and support public health initiatives.

Several strategies can be implemented to reduce barriers and improve gym attendance. Flexible hours or 24/7 access can accommodate busy schedules, while short, high-intensity workouts offer practical options for those with limited time. Motivation can be enhanced through fitness challenges, progress tracking, and rewards for consistent participation. Improving accessibility by placing gyms closer to residential areas, offering virtual options, or partnering with rideshare services can help reduce logistical challenges. Inclusive environments, such as beginner-friendly zones and women-only areas, along with staff trained to foster a supportive and judgment-free atmosphere, can address social anxieties. Financial barriers can be eased with discounts, free trials, and flexible payment plans. Workshops focusing on mental health benefits and resources that build confidence can address psychological challenges. At the same time, diverse programming and technology for personalized goal-setting and progress tracking can further engage members. Regular feedback surveys and locally tailored solutions ensure that gyms meet the specific needs of their communities.

This research demonstrates the significant impact that addressing barriers such as time constraints and motivation can have on gym attendance and physical activity. By implementing these targeted strategies, gyms and activity centers can create environments that are accessible, inclusive, and responsive to individual and community needs. These efforts can contribute to higher physical activity levels and improved public health outcomes, aligning with established research and providing a clear path for actionable change.

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