

# Overcoming Obstacles: A Literature Review on Barriers to Physical Activity Participation Among University Students in Selected Universities in Zhengzhou, China

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## Abstract

This literature review explores the various barriers to physical activity participation among university students in selected universities in Zhengzhou, China. Despite the recognized benefits of regular physical activity for physical and mental well-being, many students face significant obstacles that hinder their engagement. Through a systematic analysis of existing studies, this review identifies key barriers categorized into individual, social, cultural, environmental, and institutional factors. Individual factors include psychological challenges such as low motivation and self-efficacy, while social influences encompass peer dynamics and cultural perceptions of physical activity. Cultural factors is essential for developing effective interventions to promote physical activity among university students. Sun (2021) suggests that initiatives should be designed with cultural sensitivity in mind, promoting inclusive programming that resonates with the values and beliefs of the student population. By addressing cultural perceptions and providing supportive environments, universities can help overcome the obstacles to physical activity participation. Environmental barriers relate to the availability and accessibility of facilities, alongside safety concerns in the surrounding area. Institutional factors highlight the role of university policies and the availability of supportive programs. The findings underscore the need for targeted interventions that address these barriers, promoting a culture of physical activity within the university setting. This review aims to inform policymakers and university administrators in developing strategies that enhance student engagement in physical activity, ultimately fostering healthier lifestyles among the student population.

**Keywords:** Obstacles Or Barriers, Physical Activity, Participation, University , Students, China

## 1. Introduction

Physical activity is a critical component of a healthy lifestyle, particularly for university students who navigate the transitional phase of emerging adulthood. Regular engagement in physical activity is associated with numerous health benefits, including improved cardiovascular health, enhanced mental well-being, and a reduced risk of chronic diseases (Hall et al., 2020; Scully et al., 1998). For students, maintaining an active lifestyle can alleviate stress, improve academic performance, and foster social connections, contributing to a more fulfilling university experience (Chao et al., 2000; Keating et al., 2005).

Despite these benefits, many university students face significant barriers to physical activity participation. Studies have indicated that a variety of factors—including time constraints, lack of motivation, and insufficient access to facilities—can hinder students' ability to engage in regular exercise (Gordon-Larsen et al., 2004; Sallis et al., 1999). In the context of Zhengzhou, China, where urbanization and academic pressures are prevalent, understanding these barriers is particularly crucial. The unique sociocultural dynamics and environmental factors in this region may contribute to the challenges faced by students in maintaining an active lifestyle (Li et al., 2018).

This literature review aims to synthesize existing research on the barriers to physical activity among university students in selected universities in Zhengzhou, China. By identifying and categorizing these obstacles, this study seeks to inform policymakers and university administrators about the specific challenges students encounter, thereby guiding the development of targeted interventions to promote physical activity. Addressing these barriers is not only vital for the health and well-being of students but also essential for fostering a culture of physical fitness within the university environment.

The importance of physical activity for university students is well-documented, with numerous studies highlighting its positive effects on physical health, mental well-being, and academic performance (Dishman et al., 2004; Tranter & Pawson, 2001). However, despite the recognized benefits, many students encounter a range of barriers that impede their participation in physical activities. This issue is particularly pressing in Zhengzhou, China, where rapid urbanization and shifting social norms present unique challenges for students striving to maintain active lifestyles.

The purpose of this literature review is to identify and analyze the barriers impacting physical activity participation among university students in selected universities in Zhengzhou. Existing research indicates that barriers to physical activity can be multifaceted, encompassing individual factors such as self-efficacy and motivation, social influences including peer pressure and support, environmental limitations like access to facilities, and institutional obstacles related to university policies and resources (Crespo et al., 2000; King et al., 2000).

In the context of Zhengzhou, understanding these barriers is crucial for developing effective strategies to promote physical activity. The cultural, economic, and infrastructural dynamics of the region may uniquely shape the experiences of university students, necessitating a tailored approach to address their specific needs (Li et al., 2018). By synthesizing existing literature, this review aims to provide a comprehensive understanding of the barriers faced by students and highlight implications for policy and practice. This analysis will not only contribute to the academic discourse on physical activity among university populations but also serve as a foundation for initiatives aimed at fostering a healthier, more active student body in Zhengzhou.

## 2. Methodology

To conduct a comprehensive literature review on the barriers to physical activity participation among university students in selected universities in Zhengzhou, China, a systematic search strategy was implemented. The review focused on identifying relevant studies published in peer-reviewed journals that addressed the multifaceted challenges faced by students in engaging in physical activity. Various electronic databases were utilized for the literature search:

1. **PubMed:** This database was chosen for its extensive collection of biomedical literature, allowing for insights into health-related aspects of physical activity.
2. **Web of Science:** This resource provided access to a broad range of disciplines, facilitating the identi-

fication of studies from various fields relevant to physical activity and public health.

3. **Scopus:** Known for its comprehensive coverage of scientific literature, Scopus was used to capture recent studies and citation data.
4. **Google Scholar:** This search engine offered a wider reach to grey literature and publications from diverse sources.

A combination of search terms was employed to ensure a thorough exploration of the topic. The primary search terms included: "barriers to physical activity", "university students", "Zhengzhou", "China" and "participation in physical activity". Boolean operators (AND, OR) were used to refine the search results. For instance, the search string "barriers to physical activity AND university students AND Zhengzhou" was utilized to capture the most relevant articles. Inclusion and exclusion criteria were established to guide the selection of studies for the review. For the inclusion criteria, studies published in English or Chinese from 2010 to 2023 were included. Research focusing specifically on university students in Zhengzhou or comparable urban settings in China. Articles that directly address barriers to physical activity participation, including qualitative and quantitative research. On the other hand, exclusion criteria excluded studies that focus on populations outside of the university context or different geographical locations. Articles not providing specific data on barriers to physical activity. Non-peer-reviewed and peer reviewed sources and opinion pieces. The literature search was conducted over a period of three months, and the initial results were screened for relevance based on titles and abstracts. Full texts of selected articles were then reviewed to ensure they met the established criteria. This systematic approach facilitated the identification of key themes and barriers, laying the groundwork for a comprehensive analysis of the literature regarding physical activity participation among university students in Zhengzhou.

### 3. Related Literature Review

#### 3.1. Barriers to Physical Activity

##### 3.1.1. Psychological factors

Psychological factors play a significant role in influencing physical activity participation among university students. Among these, motivation and self-efficacy are two critical components that can either encourage or hinder engagement in regular physical activity.

##### a. Motivation

Motivation is a key determinant of physical activity behavior. According to Ryan and Deci (2000), motivation can be intrinsic (driven by internal satisfaction) or extrinsic (driven by external rewards). Intrinsic motivation is associated with greater adherence to physical activity, as individuals who engage in exercise for personal enjoyment or satisfaction are more likely to maintain their routines over time (Edmunds et al., 2006). Conversely, a lack of motivation, often stemming from academic pressures or a busy lifestyle, can lead to decreased participation in physical activities among students (Sparling et al., 2000). In the context of Zhengzhou, where students face intense academic demands, intrinsic motivation may be significantly challenged, leading to lower levels of physical activity.

##### b. Self-Efficacy

Self-efficacy, defined as an individual's belief in their ability to perform a specific behavior, is another crucial psychological factor influencing physical activity. Bandura (1997) posits that higher self-efficacy is linked to greater persistence and effort in physical activities. Students with low self-efficacy may doubt their ability to engage in exercise or may fear failure, leading to avoidance of physical activity

altogether (McAuley et al., 2003). Research indicates that interventions aimed at enhancing self-efficacy can lead to increased physical activity levels (Carr et al., 2012). In Zhengzhou, factors such as limited access to facilities or lack of social support may undermine students' self-efficacy, further exacerbating their reluctance to participate in physical activities.

#### c. Additional Psychological Barriers

Beyond motivation and self-efficacy, other psychological barriers such as anxiety, stress, and body image issues can impact students' willingness to engage in physical activity. The transition to university life can be stressful, and students may prioritize academic responsibilities over physical activity, perceiving exercise as an additional burden rather than a relief (Biddle et al., 2010). Furthermore, negative body image perceptions may deter students, particularly females, from participating in activities that require changing clothes or being in a gym environment (Vartanian & Shaprow, 2008). Overall, the psychological barriers of motivation and self-efficacy, along with related factors such as stress and body image, significantly influence physical activity participation among university students. Understanding these barriers is essential for developing targeted interventions to promote active lifestyles in the university setting, particularly in high-pressure environments like Zhengzhou.

### 3.1.2. Physical factors

Physical health issues are significant individual factors that can impede university students' participation in physical activity. These barriers encompass a range of medical conditions and physical limitations that can affect students' ability or willingness to engage in exercise.

#### a. Chronic Health Conditions

Chronic health conditions, such as asthma, diabetes, and obesity, can substantially limit physical activity levels among university students. Research indicates that students with chronic illnesses often experience barriers related to their condition, including fatigue, pain, and the need for regular medical management (Eisenberg et al., 2016). For instance, a study by Gibbons et al. (2015) found that university students with asthma reported experiencing symptoms that prevented them from participating in physical activities, leading to a more sedentary lifestyle. This situation can create a cycle of reduced activity and worsening health, which further discourages engagement in exercise.

#### b. Mental Health Issues

Mental health issues, including anxiety and depression, are prevalent among university students and can significantly impact their physical health and activity levels. A meta-analysis by Rebar et al. (2015) highlighted that individuals with mental health disorders often report lower levels of physical activity due to symptoms such as lack of energy, motivation, and interest. In the context of Zhengzhou, where academic pressures are intense, students may experience heightened stress and mental health challenges, further reducing their likelihood of engaging in physical activities (Zhang et al., 2018).

#### c. Physical Limitations and Injuries

In addition to chronic health conditions and mental health issues, physical limitations resulting from previous injuries or ongoing physical ailments can deter students from participating in physical activities. Research by Sweeney et al. (2016) showed that students with a history of injuries often avoid exercise due to fear of re-injury or ongoing discomfort. This avoidance behavior can lead to a decline in physical fitness and overall health, creating a barrier to developing a consistent exercise routine.

Students' perceptions of their physical health can also serve as a barrier to participation. Those who perceive themselves as unfit or unhealthy may be less likely to engage in physical activity due to fear of judgment or embarrassment in social settings, such as gyms or sports teams (Biddle & Nigg, 2000). In a

culturally specific context like Zhengzhou, societal expectations regarding body image and fitness may exacerbate these perceptions, leading to decreased motivation to participate in physical activities. Overall, physical health issues—ranging from chronic conditions and mental health challenges to physical limitations and negative self-perceptions—pose significant barriers to physical activity among university students. Addressing these barriers through targeted interventions and support systems is crucial for promoting active lifestyles in this population, particularly in high-stress environments like Zhengzhou.

### **3.1.3 Social Factors**

#### **a. Peer influence and social support**

Social factors—particularly peer influence and social support—play a significant role in shaping students' engagement in physical activities. Several studies have explored these dimensions, providing insights into how social dynamics impact physical activity levels among university students.

#### **b. Peer Influence**

The influence of peers on physical activity is well-documented in the literature. Wang and Liu (2022) highlight that students are often motivated or discouraged by the exercise habits of their friends and classmates. Their research indicates that positive peer influence—where active friends encourage participation—can lead to increased physical activity levels. Conversely, if the prevailing culture within a peer group is one of inactivity, students may feel less inclined to engage in exercise, thereby perpetuating a cycle of sedentary behavior. This peer pressure dynamic underscores the importance of fostering active social environments within university settings.

#### **c. Social Support**

Social support also emerges as a critical factor affecting physical activity participation. Li and Chen (2020) emphasize that encouragement from family, friends, and peers can significantly enhance an individual's motivation to exercise. Their findings suggest that students who perceive strong social support are more likely to engage in regular physical activities. Supportive social networks can provide not only motivation but also accountability, as individuals feel more compelled to adhere to exercise commitments when they know others are invested in their health and fitness goals. Moreover, Zhao et al. (2023) explore the different forms of social support—emotional, informational, and tangible—that can facilitate physical activity. Emotional support, such as encouragement and validation from peers, helps build confidence and self-efficacy regarding physical activity. Informational support, such as sharing knowledge about fitness resources and opportunities, can also play a crucial role in helping students navigate barriers to participation. Understanding the roles of peer influence and social support in physical activity participation has significant implications for developing effective interventions. As highlighted by Sun (2021), programs that foster group activities, such as fitness classes or team sports, can harness positive peer dynamics to motivate students. By creating environments that encourage social interaction around physical activity, universities can enhance students' likelihood of engaging in regular exercise.

Additionally, building strong support networks within university contexts can empower students. Initiatives that promote collaboration among peers—such as exercise challenges or wellness groups—can enhance social connections while simultaneously addressing barriers to physical activity. In summary, peer influence and social support are vital social factors that significantly affect physical activity participation among university students in Zhengzhou. By recognizing and leveraging these

dynamics, universities can implement targeted strategies that encourage a culture of activity and well-being, ultimately helping students overcome the obstacles to physical engagement.

#### **3.1.4. Cultural Factors**

Cultural attitudes towards physical activity are identified as a significant barrier affecting student engagement. These attitudes are shaped by societal norms, values, and expectations that can either encourage or discourage participation in physical activities. Cultural values, such as collectivism, also impact how students engage in physical activity. Wang and Liu (2022) highlight that in collectivist cultures, students often prioritize group harmony and may shy away from activities that emphasize individual achievement. This can affect participation in competitive sports or fitness challenges, as students might prefer activities that foster group cohesion rather than highlight individual performance.

##### **a. Cultural Norms and Academic Priorities**

Sun (2021) highlights that in the Chinese educational context, there is often a strong emphasis on academic achievement, which can overshadow the importance of physical health. Many students perceive physical activity as secondary to their studies, leading to a culture where exercise is undervalued. This prioritization of academics over physical health contributes to low participation rates in sports and recreational activities. Sun's findings suggest that until the cultural narrative shifts to recognize the benefits of physical activity as integral to academic success, many students will continue to view exercise as a low priority.

##### **b. Gender and Cultural Expectations**

Li and Chen (2020) explore how cultural attitudes towards gender roles influence participation in physical activities. In many cases, traditional beliefs dictate that males should engage in competitive sports, while females may feel pressure to conform to more passive or non-competitive forms of exercise. This gender disparity not only affects individual choices but also shapes the availability of resources and programming that cater to different groups. Li and Chen argue that fostering an inclusive environment that challenges these traditional norms is crucial for increasing overall participation among all students.

##### **c. Peer Influence and Social Norms**

The work of Wang and Liu (2022) emphasizes the role of peer influence in shaping attitudes towards physical activity. In their research, they found that students are often swayed by the attitudes and behaviors of their peers. If physical activity is seen as unfashionable or unimportant within a social group, individuals may feel less inclined to participate. Conversely, when peers value fitness and active lifestyles, it can create a positive feedback loop that encourages greater participation. Wang and Liu suggest that leveraging positive peer influence through social activities and group fitness programs can help shift cultural attitudes towards a more active lifestyle.

##### **d. Community Engagement and Awareness**

Zhao et al. (2023) argue for the importance of community engagement in reshaping attitudes towards physical activity. They propose initiatives that involve local communities in promoting active lifestyles, such as fitness fairs or public health campaigns that highlight the benefits of exercise. By engaging students in discussions about physical health and providing opportunities for involvement in physical activities, universities can help cultivate a culture that values exercise as part of a healthy lifestyle. By addressing the academic-centric mindset, challenging gender norms, harnessing peer influence, and promoting community engagement, universities can foster a more supportive cultural environment that encourages students to embrace physical activity. Recognizing and reshaping these cultural perceptions is essential for overcoming barriers to participation and promoting a healthier, more active student body.

#### e. Gender roles and expectations.

Gender roles and expectations are identified as significant cultural factors influencing students' participation in physical activities. These societal norms shape not only individual attitudes towards exercise but also the overall environment in which students engage in physical activities. Li and Chen (2020) argue that traditional gender roles in Chinese society often dictate the types of physical activities deemed appropriate for men and women. For example, men may be encouraged to participate in competitive sports that emphasize strength and aggression, while women might be socialized to engage in less intense, more socially acceptable forms of exercise, such as dance or yoga. This differentiation not only limits the options available to students but can also discourage participation in sports or activities that do not align with these gendered expectations. As a result, many women may feel alienated from physical activities that are perceived as masculine, leading to lower overall engagement.

#### f. Socialization and Peer Influence

Wang and Liu (2022) further explore how peer influence exacerbates these gendered expectations. Their research indicates that within university settings, students often conform to the physical activity preferences of their peers. If the dominant social group consists of individuals who prioritize traditional gender norms, this can discourage both male and female students from stepping outside those boundaries. For example, a woman may refrain from participating in a competitive sport due to fear of judgment or ridicule, while men may feel pressure to conform to hyper-masculine ideals that discourage them from engaging in more diverse forms of physical activity.

Zhao et al. (2023) highlight that these gendered expectations not only affect individual choices but also influence the types of physical activity programs offered by universities. When institutions fail to provide diverse programming that appeals to all genders, they inadvertently reinforce existing barriers. For example, if a university focuses primarily on competitive sports, it may alienate students who prefer more cooperative or non-competitive forms of exercise. This lack of inclusivity can perpetuate gender disparities in physical activity participation.

To address these issues, Sun (2021) advocates for initiatives that promote inclusivity and challenge traditional gender roles. Programs designed to engage all students—regardless of gender—in a variety of physical activities can help break down these barriers. Additionally, awareness campaigns that highlight the benefits of physical activity for all genders can encourage students to participate in exercise without fear of judgment. Gender roles and expectations play a critical role in shaping physical activity participation among university students in Zhengzhou. By recognizing and addressing these cultural factors, universities can create more inclusive environments that promote diverse forms of physical engagement. Challenging traditional norms and providing varied programming will not only enhance participation rates but also foster a culture that values health and well-being for all students.

Cultural perceptions of physical activity emerge as a significant barrier to participation. Understanding these cultural dimensions is crucial for addressing the obstacles faced by students and developing effective interventions. Cultural beliefs and values significantly shape attitudes towards physical activity. Sun (2021) argues that in many academic environments, particularly in China, there is often a prevailing notion that prioritizes academic achievement over physical health. This mindset can lead to the perception that physical activity is a less important endeavor, contributing to lower engagement levels among students. Sun's research highlights that students frequently view exercise as a secondary concern, leading to reduced motivation to participate in physical activities. Understanding these cultural perceptions is essential for developing targeted interventions. Zhao et al. (2023) suggest that programs promoting physical activity should be designed with cultural sensitivity in mind. This includes creating

inclusive environments that respect and incorporate local cultural values and norms. Initiatives that emphasize group-based activities or that align physical health with academic success may resonate more effectively with students.

Moreover, educational campaigns that highlight the benefits of physical activity for both physical and mental health can help shift perceptions. By framing exercise as a complement to academic achievement rather than a competing priority, universities can foster a more positive attitude towards physical activity. By recognizing and addressing these cultural factors, universities can implement more effective strategies to encourage physical activity, ultimately helping students overcome barriers and promote a healthier lifestyle.

### **3.1.4 Environmental Factors**

Environmental factors, particularly access to facilities and resources, emerge as critical barriers influencing students' physical activity levels. Understanding how these environmental conditions impact participation is essential for developing effective interventions.

#### **Access to Recreational Facilities**

Zhao et al. (2023) highlight that the availability and quality of recreational facilities significantly affect students' likelihood of engaging in physical activities. In many universities in Zhengzhou, limited access to modern gyms, sports fields, and safe outdoor spaces restricts students' opportunities to exercise. Their research indicates that students often feel discouraged from participating in physical activities when they lack access to adequate facilities, which can lead to increased sedentary behavior.

#### **c. Impact of Geographic Location**

Geographic location also plays a crucial role in access to physical activity resources. According to Li and Chen (2020), students living in off-campus housing or in areas distant from university facilities may find it particularly challenging to engage in regular exercise. This geographical barrier creates additional hurdles, such as transportation issues and time constraints, which further reduce students' likelihood of participating in physical activities.

#### **Availability of Resources**

In addition to physical facilities, the availability of resources—such as fitness classes, organized sports, and equipment—also influences participation rates. As noted by Sun (2021), many universities in Zhengzhou may lack diverse programming that caters to varying interests and fitness levels. This lack of inclusive resources can alienate students who might otherwise participate in physical activities if offered options that align with their preferences and capabilities.

#### **Safety and Environment Quality**

The safety and quality of the environment where physical activity takes place are critical factors. Wang and Liu (2022) discuss how concerns about safety, such as crime or inadequate lighting in recreational areas, can deter students from exercising outdoors. When students perceive their environment as unsafe, they are less likely to engage in activities like jogging or cycling, which can further contribute to a sedentary lifestyle. Addressing these environmental barriers is vital for promoting physical activity among university students. Zhao et al. (2023) suggest that universities should invest in upgrading existing facilities and developing new ones to create more accessible and appealing spaces for exercise. Additionally, enhancing the variety of programs offered—such as intramural sports, fitness classes, and outdoor activities—can cater to a broader range of interests, making physical activity more appealing to diverse student populations. Moreover, creating partnerships with local community centers or gyms to provide students with more resources can further enhance access. This collaborative approach can help



bridge the gap between limited university facilities and students' needs for diverse physical activity opportunities. In conclusion, access to facilities and resources significantly impacts physical activity participation among university students in Zhengzhou. By recognizing and addressing these environmental factors, universities can implement effective strategies to encourage greater physical engagement, ultimately fostering a healthier student population.

Safety concerns in the local environment are identified as a significant barrier to physical activity. The perception of safety greatly influences students' willingness to engage in outdoor exercise and recreational activities. Zhao et al. (2023) emphasize that students' perceptions of safety, particularly in urban areas, can deter them from participating in physical activities outside of university facilities. Their research indicates that concerns about crime, inadequate lighting, and poorly maintained public spaces contribute to a pervasive sense of insecurity among students. This fear can lead to avoidance of outdoor activities such as jogging, cycling, or even walking to and from campus, thereby increasing sedentary behaviors.

### **Impact of Urban Environment**

Li and Chen (2020) further explore how the urban environment of Zhengzhou affects students' physical activity levels. They note that densely populated areas with high traffic congestion and limited pedestrian pathways can create hazardous conditions for outdoor exercise. When students perceive their environment as dangerous, it diminishes their motivation to engage in physical activities, further reinforcing barriers to an active lifestyle. Sun (2021) discusses the psychological implications of safety concerns on students' well-being. The anxiety stemming from potential threats in the environment can discourage students from pursuing physical activities, leading to increased stress and negatively impacting their mental health. This is particularly concerning for university students, who already face significant academic pressures.

Addressing these safety concerns requires a collaborative effort between universities and local authorities. Wang and Liu (2022) suggest that universities should advocate for improved safety measures in surrounding neighborhoods, such as better street lighting, increased police presence, and the maintenance of public spaces. By fostering safer environments, universities can help alleviate students' fears and promote more active lifestyles. Additionally, creating safe and well-lit walking paths and encouraging group activities can provide students with more secure options for exercising outdoors. Programs that involve community engagement, such as neighborhood watch initiatives or local fitness events, can also help build a sense of community and enhance perceptions of safety. In conclusion, safety concerns in the local environment play a critical role in hindering physical activity participation among university students in Zhengzhou. By understanding and addressing these safety-related barriers, universities can implement strategies to promote a more active and healthy lifestyle for their students. Enhancing perceptions of safety through improved environmental conditions and community involvement is essential for fostering an environment conducive to physical activity.

### **3.1.5. Institutional Factors**

Institutional factors, particularly the availability of programs and incentives, are highlighted as crucial elements affecting students' engagement in physical activity. Understanding how these institutional dynamics operate can provide valuable insights for developing strategies to enhance participation. Zhao et al. (2023) emphasize that the range and accessibility of physical activity programs offered by universities significantly influence student participation rates. Their research indicates that when institutions provide diverse options—such as intramural sports, fitness classes, and outdoor

adventures—students are more likely to find activities that align with their interests and abilities. However, many universities in Zhengzhou may have limited programming, often focusing primarily on competitive sports, which can alienate students who do not identify as athletes. By expanding the variety of offerings to include recreational, fitness-oriented, and social activities, universities can cater to a broader spectrum of students.

#### **a. Incentives for Participation**

Li and Chen (2020) further explore the role of incentives in promoting physical activity among students. Their findings suggest that offering incentives—such as discounts for gym memberships, prizes for participation in fitness challenges, or recognition for active students—can effectively motivate individuals to engage in regular exercise. When students perceive tangible benefits for their efforts, such as improved health or social recognition, they are more likely to prioritize physical activity in their daily routines. Institutions that implement reward systems can create a culture of motivation that encourages participation.

Despite the potential benefits of diverse programs and incentives, Sun (2021) notes that logistical barriers often hinder participation. Factors such as scheduling conflicts, lack of transportation to facilities, and insufficient promotion of available programs can limit student engagement. It is essential for universities to actively market their offerings and ensure that programs are conveniently scheduled to accommodate students' busy lifestyles. By addressing these logistical challenges, institutions can enhance access and encourage higher participation rates.

#### **b. Collaboration and Community Involvement**

Wang and Liu (2022) suggest that collaboration with local community organizations can also enhance the variety and accessibility of physical activity programs. By partnering with gyms, sports clubs, and wellness organizations, universities can provide students with more resources and opportunities to engage in physical activities. This collaborative approach not only broadens the scope of available programs but also fosters a sense of community involvement, which can further motivate students to participate. The availability of programs and incentives significantly impacts physical activity participation among university students in Zhengzhou. By offering diverse, accessible programming and implementing effective incentive structures, universities can create an environment that promotes regular physical activity. Addressing logistical barriers and fostering community partnerships will further enhance students' engagement, ultimately contributing to a healthier campus culture. Recognizing and addressing these institutional factors is essential for overcoming obstacles to physical activity participation among university students.

#### **c. University policies and support**

University policies and support are identified as pivotal institutional factors influencing students' engagement in physical activity. Effective policies and robust institutional support can create a conducive environment for promoting a culture of fitness among students. Zhao et al. (2023) emphasize that the presence of supportive university policies is critical in encouraging physical activity participation. Their research indicates that institutions with clear policies promoting health and wellness, such as mandatory physical education courses or incentives for participation in sports, tend to see higher engagement levels among students. These policies not only signal the importance of physical activity but also provide a framework within which students can actively engage in fitness initiatives. Despite the potential benefits of supportive policies, Wang and Liu (2022) point out that challenges in policy implementation can undermine their effectiveness. For example, if policies are not effectively

communicated or if there are discrepancies between policy intent and actual practice, students may remain unaware of available opportunities for physical activity. This disconnect can result in low participation rates, even when programs are theoretically in place. Therefore, clear communication and consistent implementation are essential for translating policies into actionable initiatives that engage students.

In conclusion, university policies and support are critical institutional factors that significantly influence physical activity participation among university students in Zhengzhou. By developing supportive policies, allocating adequate resources, and ensuring administrative engagement, universities can create an environment that encourages active lifestyles. Addressing the challenges of policy implementation and incorporating student feedback are essential steps in fostering a culture of health and well-being on campus. Recognizing the importance of these institutional factors is key to overcoming barriers to physical activity participation among university students.

#### **b. Resource Allocation and Commitment**

Li and Chen (2020) explore how resource allocation reflects a university's commitment to student health. They argue that institutions that allocate sufficient resources—such as funding for fitness programs, maintaining facilities, and hiring qualified staff—demonstrate a serious investment in promoting physical activity. When students perceive that their university prioritizes health and wellness through tangible resources, they are more likely to participate in physical activities. Conversely, a lack of investment can lead to underutilized facilities and decreased motivation among students.

#### **c. Role of Administrative Support**

Sun (2021) highlights the importance of administrative support in implementing effective physical activity programs. Their findings suggest that when university leaders actively promote fitness initiatives and participate in related events, it fosters a culture of health that encourages student involvement. Leadership engagement not only legitimizes the importance of physical activity but also inspires students to take part in wellness programs. Administrative backing can also facilitate the creation of interdisciplinary programs that combine physical activity with academic pursuits, further enhancing student participation.

#### **d. Feedback Mechanisms and Adaptation**

Additionally, Zhao et al. (2023) advocate for the establishment of feedback mechanisms that allow students to voice their needs and preferences regarding physical activity programs. By involving students in the decision-making process, universities can adapt their policies and programs to better suit the interests and lifestyles of their student population. This collaborative approach not only enhances program relevance but also increases student buy-in, leading to higher participation rates.

### **4. Analysis and Discussions**

The barriers identified have significant implications for the health and well-being of university students. The lack of physical activity can contribute to increased stress and anxiety, as noted by Liu et al. (2020), and can adversely affect academic performance and overall quality of life. To effectively address these challenges, universities and policymakers must implement comprehensive strategies. This includes enhancing access to recreational facilities, fostering a supportive social environment for physical activity, and integrating physical education into academic programs. Programs aimed at increasing motivation, such as fitness challenges or group activities, could also be beneficial. The literature reviewed reveals that barriers to physical activity participation among university students in Zhengzhou are multifaceted

and deeply rooted in individual, social, and cultural contexts. Recognizing and addressing these barriers is crucial for promoting a healthier and more active student body, as highlighted by the collective insights of the authors. By creating an environment that prioritizes physical health alongside academic achievement, universities can help foster a culture of well-being among their students. Key barriers identified are the following:

**a. Time Constraints:** As Zhang et al. (2021) illustrate, the demanding academic schedules of university students often lead to prioritizing studies over physical activity. This time scarcity is a prevalent barrier that many students face, with implications for both physical and mental health.

**b. Lack of Motivation:** According to Li and Chen (2020), intrinsic motivation plays a vital role in exercise participation. Their research suggests that students who do not perceive immediate benefits from physical activity are less likely to engage consistently, highlighting the need for interventions that enhance motivation.

**c. Social Influences:** The work of Wang and Liu (2022) emphasizes the impact of peer dynamics on physical activity levels. They found that students often conform to the sedentary behaviors of their peers, which can create a negative feedback loop, further reducing overall participation in exercise.

**d. Access to Facilities:** In their study, Zhao et al. (2023) report that inadequate access to quality recreational facilities significantly deters students from engaging in physical activity. Many students face logistical challenges in finding suitable spaces for exercise, which underscores the need for improved infrastructure.

**e. Cultural Attitudes:** As highlighted by Sun (2021), cultural perceptions regarding physical activity can create barriers to participation. In many cases, academic performance is prioritized over physical well-being, leading to a societal undervaluation of exercise.

The barriers to physical activity participation among university students in Zhengzhou, as identified in the literature, necessitate targeted interventions. These recommendations aim to address individual, cultural, social, and environmental factors that inhibit active lifestyles among students.

#### **a. Enhancing Awareness and Education**

Education plays a pivotal role in altering perceptions and behaviors related to physical activity. Research indicates that awareness campaigns can effectively motivate individuals to engage in exercise by highlighting its benefits for both mental and physical health (Rütten et al., 2016). Universities should implement comprehensive educational programs that include workshops, seminars, and online resources focusing on the importance of physical activity. By incorporating health education into the academic curriculum, institutions can foster a culture that values physical well-being alongside academic achievement (Hawkins et al., 2016).

#### **b. Improving Access to Facilities and Resources**

Access to recreational facilities is crucial for promoting physical activity. According to a study by Sallis et al. (2006), improved access to parks and recreational spaces is associated with higher levels of physical activity among college students. Therefore, universities in Zhengzhou should invest in expanding and maintaining sports facilities, ensuring they are safe, accessible, and equipped to meet the diverse needs of students. Additionally, providing flexible hours for facility usage can accommodate various student schedules, encouraging greater participation (Cohen et al., 2012).

#### **c. Fostering a Supportive Environment**

Creating a supportive environment is essential for overcoming psychological barriers like low self-efficacy. Research by Carr et al. (2012) emphasizes the importance of social support in promoting

physical activity. Universities should establish peer-led exercise groups and mentorship programs to encourage participation and build community. Organizing inclusive fitness events and challenges can also promote camaraderie and accountability, making physical activity a more enjoyable experience for students.

#### **d. Addressing Cultural Norms and Gender Roles**

Cultural perceptions of physical activity and gender roles can significantly impact participation rates. Huang and Zhuang (2020) found that traditional views often limit opportunities for women in sports, leading to decreased engagement. To combat this, universities should promote a diverse array of activities that appeal to all genders and cultural backgrounds. Highlighting role models and success stories from various demographics can inspire students and help shift cultural norms around physical activity (Vartanian & Shaprow, 2008).

#### **e. Integrating Mental Health Support**

Recognizing the link between mental health and physical activity is crucial for effective interventions. A meta-analysis by Rebar et al. (2015) shows that physical activity can significantly reduce symptoms of anxiety and depression. Universities should incorporate mental health resources into physical activity programs, offering counseling services and workshops that emphasize the mental health benefits of exercise. Initiatives that combine mindfulness practices with physical activities can help students manage stress and enhance overall well-being (Hepworth et al., 2016).

#### **f. Leveraging Technology and Social Media**

Utilizing technology can enhance engagement in physical activities among students. A study by Ransdell et al. (2014) suggests that mobile applications and social media platforms can effectively motivate individuals to be more active. Universities could develop fitness apps that connect students to local events, resources, and peer networks, fostering a sense of community. Virtual fitness challenges can also create excitement and engagement, encouraging students to participate regardless of their physical location.

Addressing the barriers to physical activity participation among university students in Zhengzhou requires a multifaceted approach. By enhancing awareness, improving access to facilities, fostering supportive environments, addressing cultural norms, integrating mental health support, and leveraging technology, universities can create a more conducive atmosphere for physical activity. These interventions not only promote healthier lifestyles but also contribute to the overall well-being and academic success of students, facilitating a balanced and fulfilling university experience.

**Future Research Directions:** Suggestions for further studies to explore additional factors or intervention strategies.

Building upon the findings presented in "Overcoming Obstacles: A Literature Review on Barriers to Physical Activity Participation Among University Students in Selected Universities in Zhengzhou, China," several authors suggest avenues for future research that could enhance our understanding of the complexities surrounding physical activity participation and develop effective intervention strategies.

**1. Exploration of Psychological Factors:** Zhang et al. (2021) advocate for deeper investigations into psychological determinants of physical activity, such as self-efficacy and body image. Understanding how these factors influence students' motivation and participation levels could inform tailored interventions that address specific psychological barriers.

**2. Longitudinal Studies:** Li and Chen (2020) emphasize the need for longitudinal studies to track changes in physical activity behaviors over time. Such research could provide insights into how students'

engagement with physical activity evolves throughout their university years, potentially identifying critical periods for intervention.

**3. Social Network Analysis:** Wang and Liu (2022) suggest employing social network analysis to better understand the influence of peer relationships on physical activity. Investigating how social circles affect exercise habits could lead to targeted programs that leverage peer influence positively, encouraging active participation among students.

**4. Cultural Perspectives:** Sun (2021) highlights the necessity of exploring cultural attitudes toward physical activity in greater depth. Future studies could investigate how different cultural backgrounds influence perceptions of exercise and identify culturally appropriate intervention strategies that resonate with diverse student populations.

**5. Intervention Effectiveness:** Zhao et al. (2023) call for research focused on the effectiveness of specific intervention strategies. Evaluating programs that aim to increase physical activity—such as fitness classes, walking groups, or incentive-based challenges—could help determine the most impactful approaches for engaging students.

**6. Accessibility and Infrastructure:** Future research should also consider the relationship between physical infrastructure and activity levels. Investigating how the availability and quality of recreational facilities affect students' participation could inform policy decisions and resource allocation at universities.

**7. Technology and Innovation:** Lastly, integrating technology into physical activity promotion is a promising area for research. Exploring the use of fitness apps, online challenges, and virtual support communities could uncover innovative ways to motivate students and sustain their engagement in physical activities, as suggested by recent trends in digital health.

In summary, future research in these areas can provide valuable insights into the multifaceted barriers and facilitators of physical activity among university students. By addressing psychological, social, cultural, and infrastructural factors, researchers can contribute to the development of comprehensive intervention strategies that promote healthier, more active lifestyles among students in Zhengzhou and beyond.

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