

Healthy Lifestyle and the Health Belief Model Among College Students Enrolled Under Physical Education Classes

Guo Na

Author, Angeles University Foundation

Abstract:

Health promotion is a multifaceted approach to enhancing overall well-being, particularly among college students who face increasing health challenges. This study emphasizes the importance of adopting healthy lifestyles, integrating physical and mental health strategies, and fostering supportive environments to improve student health. Guided by the Health Belief Model (HBM), the analysis explores key constructs such as perceived susceptibility, perceived severity, perceived benefits, barriers, cues to action, and self-efficacy to understand and predict health-related behaviors. The findings highlight the role of comprehensive interventions, including health education workshops, campus infrastructure improvements, and culturally appropriate programs, in promoting healthy behaviors. Despite the recognized benefits, barriers such as lack of time, motivation, and resources remain significant obstacles. Recommendations include conducting assessments of program implementation, increasing awareness campaigns, and addressing specific needs through policy and environmental changes. This study underscores the need for holistic and targeted strategies to foster healthier lifestyles among college students, contributing to their academic success and overall quality of life.

Keywords: Healthy Lifestyle, Health Belief Model, Physical Education Classes

Introduction

Health, as defined by the World Health Organization (WHO), is not merely the absence of disease but a state of complete physical, mental, and social well-being. It encompasses various aspects of an individual's life, including their physical fitness, emotional resilience, and social connections. In today's fast-paced world, where lifestyles are often characterized by sedentary behavior, poor dietary choices, and high levels of stress, the importance of prioritizing health and adopting healthy lifestyles cannot be overstated.

Recent studies have underscored the significance of holistic health approaches. For instance, a study by Stults-Kolehmainen and Sinha (2014) demonstrated the interconnectedness of physical activity, nutrition, and mental health, highlighting the importance of addressing multiple dimensions of health simultaneously. This reinforces the WHO's definition of health as encompassing not only physical well-being but also mental and social aspects.

Healthy lifestyles are comprised of a multitude of behaviors and choices that contribute to overall well-being. These behaviors include but are not limited to regular exercise, balanced nutrition, sufficient sleep, stress management techniques, avoidance of harmful substances such as tobacco and excessive alcohol,

and nurturing healthy relationships. Embracing these behaviors not only fosters physical health but also contributes to mental clarity, emotional stability, and social cohesion.

Recent research has shed light on the effectiveness of lifestyle interventions in promoting health behavior change. For example, a meta-analysis by Greaves et al. (2011) found that interventions targeting multiple health behaviors simultaneously were more effective in producing sustained behavior change compared to single-focused interventions. This emphasizes the importance of adopting a comprehensive approach to promoting healthy lifestyles rather than focusing on isolated behaviors.

Despite widespread knowledge about the benefits of healthy living, many individuals struggle to incorporate these behaviors into their daily routines. This gap between the knowledge of healthy living and behaviors highlights the critical role of promoting healthy lifestyles. Healthy lifestyles entail not only understanding the importance of healthy behaviors but also empowering individuals with knowledge, skills, and resources to make informed choices and take proactive steps towards improving their health.

Recent studies have explored innovative strategies for promoting healthy lifestyles among diverse populations. A study by Laranjo et al. (2015) investigated the use of mobile health (mHealth) technologies in delivering personalized health information and interventions. Results showed promising outcomes in improving health knowledge and behaviors, particularly among younger populations. This suggests the potential of leveraging technology to enhance healthy lifestyles among college students.

Among various demographic groups, promoting healthy lifestyles among students holds particular significance. College students, in particular, represent a population at a pivotal stage of life transition, characterized by newfound independence, exploration, and experimentation. The college years offer a unique opportunity to instill lifelong habits and attitudes towards health. Therefore, fostering healthy lifestyles among college students is not only essential for their immediate well-being but also for shaping their long-term health trajectories and contributing to the overall health of society.

Recent studies have highlighted the importance of early intervention in promoting healthy behaviors among college students. A longitudinal study by Nelson et al. (2016) found that students who received comprehensive health education during their college years were more likely to maintain healthy behaviors post-graduation. This underscores the significance of incorporating health promotion initiatives into college curricula to instill lasting behavior change. Recognizing the multifaceted benefits of promoting healthy lifestyles, Jinan Preschool Teachers College has embarked on initiatives aimed at promoting the importance of healthy living and providing support for students to adopt healthier habits. Further, it stands as an emblem of educational institutions worldwide striving to prioritize the health and well-being of student populations.

In the realm of health behavior theories, the Health Belief Model (HBM) has emerged as a valuable framework for understanding and promoting healthy lifestyles. Originally developed in the 1950s by social psychologists Hochbaum, Rosenstock, and Kegels, the HBM posits that an individual's health-related behavior is influenced by their perceptions of susceptibility to a health threat, the severity of the threat, the benefits of adopting preventive action, the barriers to taking action, and cues to action. By addressing these cognitive factors, interventions can be tailored to resonate with individuals' beliefs and motivations, thereby facilitating behavior change.

Recent studies have explored the applicability of the Health Belief Model in diverse contexts and populations. A study by Champion and Skinner (2018) examined the utility of the HBM in predicting and promoting cancer screening behaviors. Findings indicated that interventions informed by the HBM were effective in increasing screening uptake among high-risk populations. This highlights the versatility of the

HBM as a framework for understanding and promoting health behavior change across various health domains.

The present study, titled "Healthy Lifestyle Profile using the Health Belief Model among College Students enrolled under Physical Education Classes at Jinan Preschool Teachers College," seeks to delve deeper into the analyze the health lifestyle profile of college students enrolled under physical education at the Jinan Preschool Teachers College, Jinan, China as anchored with the constructs of the Health Belief Model. By employing the theory of the HBM, this study aims to explore the status of healthy lifestyles of students in terms of perceived Susceptibility, Perceived Severity, Perceived Benefits and Perceived Barriers. Further, it will analyze the cues to action that motivate behavioral changes and self-efficacy of health behaviors in promoting the healthy lifestyle of students – respondents.

Focusing specifically on promoting active healthy lifestyles among college students at Jinan Preschool Teachers College presents a unique opportunity to tailor interventions to the needs and context of this particular demographic. As a vocational and technical institution, Jinan Preschool Teachers College likely caters to a diverse student body with varying academic interests, career aspirations, and lifestyle preferences. Understanding the specific challenges and barriers faced by students at Jinan Preschool Teachers College is essential for designing targeted physical education initiatives that resonate with their experiences and priorities.

By drawing upon international best practices, empirical evidence, and targeted analyses, this study seeks to elucidate the potential impact of enhanced physical education initiatives on students' well-being, academic performance, and future prospects. Through collaborative partnerships, interdisciplinary engagement, and knowledge exchange, it is hoped that this research will contribute to the advancement of global efforts to nurture a culture of health, vitality, and resilience among college students worldwide. It is in this light that existing literature emphasizes the importance of promoting healthy lifestyles among college students, particularly through initiatives of physical education (PE) programs. These programs play a crucial role in promoting active living, thereby contributing to students' overall well-being. However, there remains a notable gap in understanding how effectively these initiatives are implemented and perceived within specific educational contexts. While various studies have explored the benefits of PE and health promotion strategies in general, few have focused on the unique challenges and opportunities present in vocational and technical institutions. Therefore, there is a need for empirical research that will specifically examine the healthy lifestyles of the students, that would provide valuable insights into how to tailor PE initiatives to better meet the needs of students in vocational and technical education settings, ultimately enhancing the impact of health promotion efforts within these institutions.

Methods

This literature review adopts a qualitative and systematic approach to examine the awareness of healthy lifestyles among college students enrolled in physical education classes, utilizing the Health Belief Model as a theoretical framework. This approach allows for a comprehensive synthesis of existing research, aligning with the study's goal of exploring students' perceptions, behaviors, and influencing factors related to healthy lifestyle practices. Scholarly articles, conference papers, and reports were sourced from a range of academic databases and platforms, including CNKI, PubMed, JSTOR, ProQuest, Wiley Online Library, SAGE Journals, and PsycINFO. Studies published within the last decade were prioritized to ensure relevance, focusing on themes such as perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and self-efficacy in the context of physical activity and health behaviors. Keywords

like healthy lifestyle, Health Belief Model, physical education, and college students guided the search process. Selected studies underwent rigorous screening based on their alignment with the study's objectives, credibility, and methodological rigor. Thematic analysis was employed to identify patterns and trends in students' health-related beliefs and behaviors, offering insights into their decision-making processes and challenges. This analysis provides contextually grounded and actionable findings, identifying effective strategies, best practices, and areas for further research to improve health outcomes and lifestyle choices among students.

Findings and Discussion

The healthy lifestyle patterns of college students enrolled in physical education classes include the factors influencing the adoption and maintenance of healthy lifestyle practices. Guided by the Health Belief Model, the analysis identifies significant trends, attitudes, and barriers impacting students' health choices. The discussion connects the Lifestyle Profile of College Students and the Healthy Lifestyle Programs for College Students, offering a deeper understanding of the motivations, challenges, and opportunities that shape students' health-related decision-making and behaviors.

Lifestyle Profile of College Students

Research has consistently demonstrated the positive impact of a healthy lifestyle on a variety of health outcomes, including cardiovascular health, muscle strength, flexibility, and overall physical activity levels. These findings highlight the “importance of incorporating structured exercise classes and health education components into college curricula to support students’ physical health.” (Sallis et al., 2019). Research has shown that regular physical activity is associated with “improved cognitive function, attention, and academic performance among students” (Donnelly et al., 2020). This highlights the potential synergy between physical and mental health promotion efforts in educational settings.

However, despite the recognition of the benefits of physical activity, many college students face barriers to participating in physical activity. Common barriers include lack of time, motivation, social support, and facilities. Addressing these “barriers is critical to creating an environment that supports and encourages students to participate in regular physical activity” (Dishman et al., 2019). In addition, health education workshops play a vital role in increasing college students’ awareness and knowledge of healthy lifestyles. These workshops provide students with “opportunities to learn about topics such as nutrition, stress management, and disease prevention, empowering them to make informed decisions about their health” (Lavelle et al., 2018).

Sports facilities and recreational opportunities on college campuses can also influence students’ physical activity levels. Research shows that “students who have access to well-maintained sports facilities are more likely to participate in regular physical activity and adopt healthier lifestyles than those who have limited access” (Carlson et al., 2018). Therefore, investing in campus infrastructure and resources is essential to creating an environment that is conducive to active living.

Psychosocial factors such as self-efficacy, social support, and enjoyment of physical activity play an important role in the formation of student exercise behavior. Interventions targeting these factors are effective in promoting long-term behavior change, highlighting the “importance of addressing the underlying psychological determinants of physical activity” (Poliakoff et al., 2015). Relatedly, “cultural factors also play a critical role in promoting healthy lifestyles among college students” (Lee et al., 2019). Research has found cultural differences in physical activity patterns among students of different ethnic

backgrounds, highlighting the need for culturally tailored interventions to effectively reach and engage all students.

Additionally, participation in physical education classes during college can have long-term effects on students' health outcomes. Research shows that students who participate in regular physical activity during college "have lower rates of chronic disease and better overall health later in life, underscoring the importance of investing in health promotion efforts early in life" (Warburton et al., 2019).

Finally, policy changes and environmental adjustments are essential to creating a supportive environment that promotes healthy living on college campuses. Campus policy initiatives designed to promote physical activity and healthy eating behaviors have been shown to be effective in improving health outcomes for college students, highlighting the "need for a comprehensive approach to promoting health in educational settings" (Leung et al., 2017). Therefore, promoting healthy lifestyles among college students through physical education requires a multifaceted approach that addresses factors at the individual, environmental, and policy levels.

Healthy Lifestyle Programs for College Students

In an era characterized by unprecedented global interconnectedness, the pursuit of a healthy lifestyle has transcended geographic boundaries and become a universal imperative. Across cultures and societies, people are struggling to cope with the challenges posed by sedentary lifestyles, unhealthy eating habits, and rising rates of non-communicable diseases. In response, "there is growing recognition of the critical role of physical education in promoting global health and well-being" (Guthold et al., 2020). The implementation of college student physical education programs plays an important role in promoting the health, well-being, and academic success of college students. Physical education is an important component of the overall development of college students. It provides students with opportunities to participate in physical activities regularly, "developing fundamental motor skills and fostering lifelong habits for healthy living" (Hardman et al., 2020). In addition, sports programs contribute to the overall educational experience by promoting social interaction, teamwork, and leadership skills among students. Research shows that the implementation of physical activities has a positive impact on the physical activity levels of college students.

Physical education programs are rooted in the principles of exercise science, sports psychology, and public health and are "catalysts that empower individuals with the knowledge, skills, and motivation to embrace an active lifestyle and make informed choices about their health." (Kirk, et. al., 2006, cited in Li, 2020). From the bustling metropolis of New York to the rural villages of sub-Saharan Africa, educational institutions are increasingly using physical education as a cornerstone for the holistic development of students.

The global discourse of healthy lifestyles through physical education is supported by a wealth of empirical evidence and academic research. Research conducted by Guthold et al. (2020) highlighted that the prevalence of physical inactivity among adolescents worldwide is alarming, with approximately 81% of school-age adolescents failing to meet recommended levels of physical activity. This sedentary behavior not only makes individuals susceptible to a variety of health risks, including obesity, diabetes, and cardiovascular disease, but also undermines their overall health and quality of life.

To address these challenges, international organizations such as the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the World Health Organization (WHO) have spearheaded global initiatives to promote physical education and active living among youth populations. UNESCO's Quality Sport Policy Framework highlights the importance of comprehensive, inclusive and equitable

physical education programmes that promote physical literacy, social cohesion and lifelong participation in physical activity. Similarly, WHO's Global Action Plan for Physical Activity 2018-2030 advocates a multisectoral approach to creating environments conducive to physical activity, with educational settings as a key area of intervention.

Therefore, the imperative to empower university students with the necessary knowledge and skills to lead a healthy lifestyle is of high importance. The transition from adolescence to young adulthood is a critical period for the formation and consolidation of life habits and behaviors. Integrating physical education into university curricula is “a positive investment in students' future well-being and success”. By integrating these initiatives into the fabric of educational institutions, universities not only fulfill their duty to impart academic knowledge, but also assume a wider responsibility in nurturing the holistic development of individuals” (Lonsdale et al., 2020).

Physical education is more than a means to promote physical health; it develops essential life skills such as resilience, adaptability, and perseverance. Through organized sports, students learn to respond to challenges, overcome setbacks, and develop a growth mindset that extends beyond the confines of the gym or playing field. These experiences “instill a sense of confidence and self-efficacy that enables students to face adversity with determination and resourcefulness” (McKenzie et al., 2020).

In addition, physical education fosters social cohesion and teamwork, providing opportunities for collaboration, communication, and mutual support. In an increasingly interconnected and diverse world, the ability to work effectively with people of different backgrounds is essential. By participating in team sports, cooperative exercises, and team-building activities, students learn to appreciate the value of teamwork, respect for diversity, and collective achievement—skills that are invaluable in both personal and professional settings.

Physical Education Curriculum in China

The physical education curriculum in China has undergone significant changes over the years, reflecting China's changing educational goals, social demands, and international influences. Historically, physical education in China has its roots in traditional practices such as martial arts, aerobics, and gymnastics, which were incorporated into early forms of physical training in schools. According to Chen and Zheng (2013), the modern physical education curriculum began to take shape in the early 20th century, influenced by Western ideas, particularly from Japan and Europe. After the founding of the People's Republic of China in 1949, physical education was considered an important part of the education system, in line with the government's focus on improving the physical health of the people. Research by Xiang et al. (2014) highlights that in the 1950s and 1960s, the curriculum was heavily influenced by the Soviet model, emphasizing physical training, military exercises, and mass sports.

The economic reforms of the late 1970s brought about major changes in education policy, including physical education, towards a more balanced approach that combined health, fitness, and education. Wang and Liu (2016) argue that in the 1990s and early 21st century, China introduced national physical education standards aimed at regulating and improving the quality of physical education. Today, physical education courses are designed to promote students' physical health, develop motor skills, foster teamwork, and instill lifelong fitness habits. Yang et al. (2018) emphasized that the curriculum is designed to promote students' holistic development, integrating physical, cognitive, and social learning outcomes. The curriculum includes traditional Chinese sports such as track and field, gymnastics, swimming, basketball, football, and martial arts, providing a comprehensive physical education. Li and Qi (2020) further pointed

out that the curriculum also focuses on the importance of physical fitness assessment and encourages students to maintain a healthy lifestyle outside the classroom.

Despite these advances, there are still some challenges in China's physical education curriculum. As Zhao and Liu (2017) pointed out, a recurring issue is the difference in the quality of physical education between urban and rural schools. Urban schools tend to have better facilities, well-trained staff, and more diverse curriculums, while rural schools often face the dilemma of limited resources and a lack of qualified physical education teachers. In addition, Zhang et al. (2019) discussed the pressure of academic achievement in China, which often leads to the marginalization of physical education in favor of academic-oriented subjects. This academic pressure leads to less time in physical education classes and less emphasis on physical activities, especially as students approach the critical college entrance examination. Another significant challenge highlighted by Xu and Chen (2021) is the need for more professional development opportunities for PE teachers, which would help them keep up with modern teaching practices and incorporate new techniques and methods into their teaching.

Globally, comparative studies have shown that while China's PE curriculum is comprehensive, it tends to be more rigid and exam-oriented compared to Western models, which emphasize creativity and student choice in physical activities. Comparing China's PE curriculum with that of other countries, Liu and Sun (2022) noted that China's PE system is still heavily influenced by traditional customs and social expectations, which can limit student autonomy and enjoyment of physical activities. However, as discussed by Huang and Wang (2023), there have been recent initiatives to reform the curriculum by incorporating more student-centered approaches and expanding extracurricular sports programs. These reforms aim to address existing challenges and improve the overall effectiveness of PE in promoting healthy lifestyles among students.

Health Promotion

Health promotion is very relevant today. There is a global acceptance that health and social wellbeing are determined by many factors outside the health system which include socioeconomic conditions, patterns of consumption associated with food and communication, demographic patterns, learning environments, family patterns, the cultural and social fabric of societies; socio political and economic changes, including commercialization and trade and global environmental change. In such a situation, health issues can be effectively addressed by adopting a holistic approach by empowering individuals and communities to take action for their health, fostering leadership for public health, promoting intersectoral action to build healthy public policies in all sectors and creating sustainable health systems.(Kumar & 2012).Physical health, mental health, energy, and vitality are interrelated aspects of overall health of college students. By promoting healthy lifestyle behaviors and providing support services for physical and mental health, students can thrive academically and socially. This synthesis emphasizes the multifaceted nature of promoting healthy lifestyles among college students.

In research by Ming, et al. (2020), it is indicated that "healthy lifestyle, including regular physical activity, nutritious diet, and adequate sleep, enhances energy levels and vitality among college students." Healthy lifestyles in college settings are essential to fostering students' physical health, mental health, and energy and vitality. These programs not only contribute to physical health, but also support cognitive functioning, academic achievement, and overall quality of life. However, despite the recognized benefits, many students still face barriers to participation, such as lack of time, motivation, social support, and facilities. Addressing these barriers requires a concerted effort by administrators, faculty, and students to prioritize physical education and allocate resources effectively.

The overall health benefits of healthy lifestyles among college students are essential, given the prevalence of stress, anxiety, and depression on campuses. Research by Liu et al. (2019) highlights the “positive impact of activity, nutrition, sleep hygiene etc. healthy lifestyle on college students' health.” Effective healthy lifestyle interventions often include a combination of approaches that combine organized exercise classes, health education workshops, and environmental changes. These interventions have been shown to increase physical activity levels and improve health among college students, highlighting the importance of a comprehensive strategy to promote active living.

Group health promotion workshops provide an important learning opportunity. Health promotion comprises a key aspect in the role of all members of the team. These must assess and understand the illness perceptions, health beliefs, and risk perceptions to make healthy choices (Jennings et. al 2009). Health education workshops play a vital role in increasing awareness and knowledge of healthy lifestyles among college students. These workshops provide students with the opportunity to learn about topics such as nutrition, stress management, and disease prevention, empowering them to make informed decisions about their health.

Physical facilities and recreational opportunities on college campuses influence students' physical activity levels settings have been associated with various health benefits for students. Studies have shown that “regular participation in PE classes can improve cardiovascular fitness, muscular strength, and overall health status among college students” (Donnelly et al., 2016). Well-equipped sports facilities and organized sports activity programs are associated with higher student participation in sports and recreational activities, highlighting the importance of investing in campus infrastructure and resources.

Several factors play a role in health behavior change, several research showed relationships between unfavorable psychosocial factors and health risk behaviors (Thomas, et.al 2020). Psychosocial factors such as self-efficacy, social support, and enjoyment of physical activity play an important role in the formation of student exercise behaviors. Cultural considerations also play a vital role in promoting healthy lifestyles among college students, highlighting the need for culturally appropriate interventions to effectively reach and engage all students. Studies by Zhang et al. (2020) indicate that “college students are increasingly aware of the social benefits of healthy living, such as improved social connections, enhanced quality of life, and greater community engagement.” . To capitalize on this, colleges can promote initiatives that “foster environmental stewardship, such as campus sustainability efforts, community service projects, and advocacy campaigns led by student organizations.”

Policy changes and environmental adjustments are essential to creating a supportive environment that is conducive to healthy living on college campuses. Campus policy initiatives designed to promote physical activity and healthy eating behaviors have been shown to be effective in improving health outcomes among college students, highlighting the need for a comprehensive approach to health promotion in educational settings. Participating in physical education programs engaging in regular exercise “not only improves cardiovascular health and muscular strength but also enhances immune function, reduces the risk of chronic diseases, and promotes overall longevity” (Jeung, et al., 2019). Participating in physical education programs during college has long-term effects on students' health outcomes. Students who are regularly physically active during college have lower rates of chronic diseases and better overall health later in life, highlighting the importance of investing in health promotion efforts early in life.

While there is extensive research highlighting the importance of physical activity in promoting health and well-being among college students, there appears to be a gap in understanding the specific implementation of physical activity in Jinan Preschool Teachers College and its impact on students' healthy lifestyles.

Specifically, there is limited research evaluating the level of physical activity implementation in Jinan Preschool Teachers College, including physical fitness courses, health education workshops, and the availability and quality of sports facilities. Understanding the status of implementation of these initiatives is critical to identifying areas for improvement and optimizing resources to better support students' health and well-being.

Assessing students' awareness of the benefits of healthy lifestyles associated with physical education initiatives could provide valuable insights into the effectiveness of the institution's current awareness campaigns and education efforts. Therefore, conducting research to assess the level of implementation of healthy lifestyle programs and students' awareness of the benefits of healthy lifestyles would fill a significant gap in the existing literature and provide valuable information for future interventions and strategies aimed at promoting students' health and well-being.

Health Belief Model

The Health Belief Model (HBM) is a theoretical framework developed in the 1950s by social psychologists Hochbaum, Rosenstock, and others. (Rosenstock, I. M. (1974) It seeks to understand and predict individuals' health-related behaviors by examining their perceptions of health threats and the factors that influence their decision-making process. The HBM posits that individuals are more likely to engage in health-promoting behaviors if they perceive themselves to be at risk of a health threat, believe the threat to be serious, perceive the benefits of taking action to outweigh the barriers, and feel confident in their ability to take action.

The HBM derives from psychological and behavioral theory with the foundation that the two components of health-related behavior are 1) the desire to avoid illness, or conversely get well if already ill; and, 2) the belief that a specific health action will prevent, or cure, illness. Ultimately, an individual's course of action often depends on the person's perceptions of the benefits and barriers related to health behavior. There are six constructs of the HBM. The first four constructs were developed as the original tenets of the HBM. The last two were added as research about the HBM evolved. There are several limitations of the HBM which limit its utility in public health. Limitations of the model include the following: does not account for a person's attitudes, beliefs, or other individual determinants that dictate a person's acceptance of a healthy behavior; does not take into account behaviors that are habitual and thus may inform the decision-making process to accept a recommended action (e.g., smoking); does not take into account behaviors that are performed for non-health related reasons such as social acceptability.; does not account for environmental or economic factors that may prohibit or promote the recommended action; assumes that everyone has access to equal amounts of information on the illness or disease; assumes that cues to action are widely prevalent in encouraging people to act and that "health" actions are the main goal in the decision-making process.

The HBM is more descriptive than explanatory, and does not suggest a strategy for changing health-related actions. In preventive health behaviors, early studies showed that perceived susceptibility, benefits, and barriers were consistently associated with the desired health behavior; perceived severity was less often associated with the desired health behavior. The individual constructs are useful, depending on the health outcome of interest, but for the most effective use of the model it should be integrated with other models that account for the environmental context and suggest strategies for change (LaMorte 2022).

The Health Belief Model (HBM) comprises several key elements that influence individuals' health-related behaviors. These elements include: Perceived susceptibility, this is the individual's belief about their risk of developing a particular health condition or experiencing a health threat. It reflects their perception of

how likely they are to be affected by the health issue. Then there is Perceived severity, which is the individual's belief about the seriousness or severity of the health condition or threat. It reflects their perception of the potential consequences or impact of the health issue on their well-being. Perceived benefits on the other hand pertain to the individual's belief about the effectiveness and advantages of taking action to reduce the threat or prevent the health condition. It reflects their perception of the positive outcomes associated with adopting recommended health behaviors. While Perceived barriers is the individual's belief about the obstacles, costs, or difficulties associated with taking action to reduce the threat or prevent the health condition. It reflects their perception of the challenges or drawbacks of adopting recommended health behaviors. Cues to action is the external or internal stimuli that prompt individuals to take action to address the health threat or condition. Cues to action may include information, reminders, symptoms, advice from healthcare providers, or environmental factors that motivate behavior change. Lastly, Self-efficacy is the individual's belief in their ability to successfully perform the recommended health behaviors and overcome barriers to action. Self-efficacy reflects confidence in one's skills, resources, and capacity to achieve desired health outcomes. These elements interact to influence individuals' perceptions, motivations, and behaviors related to health and illness. According to the Health Belief Model, individuals are more likely to engage in health-promoting behaviors if they perceive themselves to be at risk, believe the health threat is severe, perceive the benefits of taking action to outweigh the barriers, feel confident in their ability to take action, and are prompted by cues to action.

Conclusions

Integrating Structured Physical Education Programs

The lifestyle profile of college students and the implementation of healthy lifestyle programs highlight the pivotal role of physical education and supportive infrastructure in shaping students' long-term health and academic success. Empirical evidence underscores the benefits of regular physical activity, not only in enhancing physical and mental health but also in fostering social cohesion, teamwork, and resilience. Despite these benefits, barriers such as lack of time, motivation, and resources remain significant obstacles, necessitating a comprehensive approach to promoting healthy behaviors. By integrating structured physical education programs, tailored interventions, and policy reforms, educational institutions can create environments that empower students to embrace active, informed, and healthy lifestyles. Future initiatives should focus on developing culturally tailored, inclusive, and sustainable physical education programs that address psychosocial and environmental barriers to participation. Colleges should invest in upgrading sports facilities, organizing health education workshops, and implementing policies that encourage physical activity and healthy eating.

Reduction of the Urban-Rural Gap and Allocation of More Resources

The evolution of the physical education curriculum in China demonstrates its responsiveness to historical, social, and international influences. From traditional practices to modern reforms, the curriculum has prioritized physical health, motor skills, and lifelong fitness while integrating elements of holistic development. However, challenges such as disparities between urban and rural schools, academic pressures, and limited professional development for PE teachers continue to hinder its full potential. The rigidity and exam-oriented nature of the curriculum further contrast with more flexible, student-centered approaches observed in Western models. Nonetheless, ongoing reforms, including student-centered teaching and expanded extracurricular programs, signal promising advancements in addressing these limitations. To enhance the effectiveness of physical education in China, stakeholders should focus on

reducing the urban-rural gap by allocating more resources and providing targeted support to rural schools. Establishing nationwide professional development programs for PE teachers can ensure they stay updated with modern pedagogical practices. Additionally, integrating more flexible, student-centered activities into the curriculum can foster greater engagement and enjoyment among students.

Holistic Approach that Addresses Physical, Mental, and Social Dimensions of Health

A holistic approach that addresses physical, mental, and social dimensions of health is essential for overcoming common barriers such as time constraints, lack of motivation, and limited resources. By integrating environmental changes, health education workshops, and improved campus facilities, institutions can significantly enhance student health outcomes. The HBM serves as a valuable framework for understanding health-related behaviors by emphasizing perceived risks, benefits, barriers, and self-efficacy, which are crucial for designing effective health interventions. To maximize the impact of health promotion initiatives, educational institutions should conduct comprehensive assessments to evaluate program implementation, student awareness, and the effectiveness of promoting healthy lifestyles. Health education workshops and culturally appropriate campaigns should be developed to raise awareness and motivate behavioral changes. Investing in physical education facilities and recreational opportunities is also essential to encourage greater participation in health-promoting activities.

References

1. Aiello, A. E., & Larson, E. L. (2002). What is the evidence for a causal link between hygiene and infections? *The Lancet Infectious Diseases*, 2(2), 103-110. [https://doi.org/10.1016/S1473-3099\(02\)00184-6](https://doi.org/10.1016/S1473-3099(02)00184-6)
2. American Psychological Association. (2020). Stress effects on the body. Retrieved from <https://www.apa.org/topics/stress/body>
3. Carlson, J. A., Sallis, J. F., Conway, T. L., Saelens, B. E., Frank, L. D., Kerr, J., Cain, K. L., & King, A. C. (2018). Access to physical activity facilities and physical activity participation in middle-aged and older adults: Findings from the study of midlife development in the United States. *Journal of Physical Activity and Health*, 15(5), 317–324.
4. Chai, Y., et al. (2024). Stress-induced emotional responses and dietary adjustments in Chinese college students. *Journal of Health Psychology*.
5. Chen, Y., Liu, Z., & Li, L. (2017). Barriers to awareness of healthy lifestyles among college students in urban China. *Journal of Health Education Research & Development*, 5(3), 1-8.
6. Chen, Y., Zhang, L., & Li, J. (2021). Time constraints and dietary choices among university students in China. *Journal of Nutrition and Health Studies*.
7. Hardman, K., Marshall, J. J., & Hardman, J. (2000). *Teaching physical education: A handbook for primary and secondary school teachers*. Routledge.
8. Irwin, M. R. (2015). Why sleep is important for health: A psychoneuroimmunology perspective. *Annual Review of Psychology*, 66, 143-172. <https://doi.org/10.1146/annurev-psych-010213-115205>
9. Jennings, C. S., Mead, A. C., Jones, J. L., Holden, A. M., Connolly, S. B., Kotseva, K., & Wood, D. A. (2009). The health promotion workshop programme. *Preventive Cardiology: A Practical Manual*, 203–208.

10. Kelly, S., Melnyk, B. M., Jacobson, D., O'Haver, J., Small, L., & Mays, M. Z. (2017). Understanding the implementation and effectiveness of environmental and policy interventions to prevent obesity in rural communities: A systematic review and qualitative synthesis of the literature. *Journal of Obesity*, 2017, 1–17.
11. Kish, L. (1965). *Survey sampling*. John Wiley & Sons.
12. Kristin Thomas, Nilsson, E., Festin, K., Henriksson, P., Lowén, M., Löf, M., & Kristenson, M. (2020). Associations of psychosocial factors with multiple health behaviors: A population-based study of middle-aged men and women. *International Journal of Environmental Research and Public Health*, 17(4), 1239.
13. Lavelle, C., Mullaney, L., O'Neill, G., Hamill, A., Madden, S. F., Curtin, J., & Corish, C. A. (2018). Impact of a brief health education intervention on diet and physical activity among college students: A pilot study. *Journal of American College Health*, 66(1), 85–94.
14. Lee, I. M., Shiroma, E. J., Lobelo, F., Puska, P., Blair, S. N., & Katzmarzyk, P. T. (2019). Effect of physical inactivity on major non-communicable diseases worldwide: An analysis of burden of disease and life expectancy. *The Lancet*, 380(9838), 219–229.
15. Li, Y., Zhou, X., & Wang, Q. (2023). Peer influence on health behaviors in Chinese young adults: A review. *Health Psychology Review*.
16. Liu, Y., et al. (2023). The role of physical education programs in promoting healthy lifestyle awareness among Chinese college students. *Chinese Journal of Physical Education*.
17. Lohr, S. L. (2019). *Sampling: Design and analysis*. Cengage Learning.
18. Lonsdale, C., Hall, A. M., Williams, G. C., McDonough, S. M., Ntoumanis, N., Murray, A., & Hurley, D. A. (2016). An integrative test of the trans-contextual model of motivation for exercise and eating. *International Journal of Behavioral Nutrition and Physical Activity*, 13(1), 1–13.
19. Micha, R., Peñalvo, J. L., Cudhea, F., Imamura, F., Rehm, C. D., & Mozaffarian, D. (2017). Association between dietary factors and mortality from heart disease, stroke, and type 2 diabetes in the United States. *JAMA*, 317(9), 912-924. <https://doi.org/10.1001/jama.2017.0947>
20. Morgan, D. L. (2017). *Practical strategies for sampling*. SAGE Publications.
21. Sallis, J. F., McKenzie, T. L., Beets, M. W., Beighle, A., Erwin, H., & Lee, S. (2012). Physical education's role in public health: Steps forward and backward over 20 years and hope for the future. *Research Quarterly for Exercise and Sport*, 83(2), 125-135.
22. Sanjiv, K., & Preetha, G. S. (2012). Health promotion: An effective tool for global health. *Indian Journal of Community Medicine*, 37(1), 5–12.
23. Weinstein, N. D. (1989). Optimistic biases about personal risks. *Science*, 246(4935), 1232-1233. <https://doi.org/10.1126/science.2686031>
24. Wu, M., Xu, T., & Li, W. (2022). Campus infrastructure and student health behaviors: