

# Exploration on the Deep-rooted Reasons and Countermeasures for the Low Participation of College Students with Obesity

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## Abstract

In contemporary society, obesity has emerged as a global public health challenge, particularly with its rising prevalence among younger populations. As the backbone of youth demographics, college students' health directly impacts national development. However, many obese students demonstrate low engagement in physical activities, which not only jeopardizes their physical well-being but may also adversely affect psychological resilience and social adaptability. Therefore, it is imperative to investigate the root causes behind this low exercise participation among obese college students and develop effective countermeasures.

## Keywords

obese college students  
low exercise participation  
deep reasons  
coping strategies

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## 1. Introduction

With the rapid development of the social economy and significant improvement in living standards, college students' lifestyles and dietary habits have undergone tremendous changes. While these transformations bring greater convenience and comfort, they also trigger a series of health issues, with obesity standing out as particularly prominent. In recent years, the incidence of obesity among college students has been rising year by year, becoming a critical factor affecting their physical and mental health. Students with obesity generally face challenges in maintaining exercise participation, which stem from complex and varied underlying causes. Through in-depth research, we can gain a more

comprehensive understanding of the psychological and physiological needs of obese students, revealing the obstacles and challenges they encounter during exercise participation. This also helps us develop more targeted and effective intervention measures to assist obese students in overcoming psychological barriers, enhancing physical fitness, and improving overall health.

## 2. The deep-rooted reasons for the low participation of obese college students in sports

### 2.1. Psychological barriers

Obese college students often face triple pressures from society, family, and personal challenges. Body-related

stigmatization, ridicule, or exclusion may damage their self-esteem, leading to feelings of inferiority and depression. These emotional burdens further diminish their motivation to exercise, creating a vicious cycle. Meanwhile, some students develop a fear of physical activity, fearing injuries or social stigma during workouts, which ultimately drives them to avoid exercise altogether <sup>[1]</sup>.

## **2.2. Physiological limitations**

Obese college students often face physical limitations that restrict their exercise capacity. Their weight-related challenges can lead to breathing difficulties, joint pain, and fatigue during workouts. These physical discomforts not only diminish the enjoyment of exercise but may also foster resistance toward physical activity. Furthermore, some obese students exhibit physiological traits like low basal metabolic rate and easy fatigue, which make it difficult for them to achieve noticeable results during workouts, further diminishing their motivation to engage in physical activities.

## **2.3. The impact of social environment**

Modern university life is fast-paced with intense academic pressure, compounded by the allure of social and recreational activities that make it challenging for overweight students to balance exercise with time and energy. Compounding these issues are inadequate campus sports facilities, a lack of athletic culture, and insufficient professional guidance—all factors hindering physical activity participation among obese students. Furthermore, family environment, parental attitudes, and sociocultural factors also play significant roles in shaping exercise habits among overweight college students.

# **3. Strategies to deal with low exercise participation of obese college students**

## **3.1. Build a multi-level mental health education curriculum system**

Higher education institutions should deeply integrate core components of body image, sports psychology, and stress management into the framework of mandatory mental health courses. Course design must transcend fragmented knowledge dissemination, focusing instead on guiding students to scientifically deconstruct the

socially constructed notion of “ideal body type” and profoundly understand the value and dignity inherent in bodily diversity. Building on this foundation, systematic instruction should cover cognitive restructuring strategies (such as identifying and challenging automatic negative thoughts like “I’m too fat for exercise”), emotional regulation techniques (including mindfulness-based stress reduction and basic acceptance-commitment therapy), and practical stress management tools (such as problem-solving training and time management). Additionally, specialized elective modules or workshops targeting obese student groups should be developed, creating safe spaces for expression where participants can explore unique challenges like body image anxiety and exercise phobia within an atmosphere of understanding and empathy. This enables learners to apply acquired psychological skills in real-world sports scenarios and establish positive identity with physical activity. Such tiered educational provision aims to dismantle restrictive beliefs at their cognitive roots, laying a solid psychological foundation for proactive participation in sports <sup>[2]</sup>.

## **3.2. Improve personalized and group psychological support network**

To address individuals’ deep-seated psychological needs, school counseling centers should employ instructors with expertise in body acceptance counseling to provide stable and confidential individual consultations. Counselors should skillfully apply cognitive behavioral therapy (CBT) to accurately identify and correct distorted perceptions about physical abilities and body value. By utilizing Acceptance-Commitment Therapy (ACT), they can guide clients to accept their current body shape, clarify personal exercise values, and take action for health improvement despite discomfort. When necessary, motivational interview (MI) techniques should be introduced to effectively resolve conflicting mindsets and stimulate intrinsic motivation for sustained exercise commitment. Concurrently developing structured group counseling programs is crucial. Well-designed group scenarios can harness the powerful healing effects of collective dynamics and peer support. Under professional guidance, members can significantly reduce feelings of isolation and shame through sharing shared experiences, challenging negative exercise-related thoughts,

practicing behaviors (such as simulating gym entry in safe environments), and learning strategies to handle anticipated or real-life interpersonal pressures. This not only reduces isolation but also enables mutual witnessing of progress, collectively building a “exercise-acceptable” group belief and supportive community.

### **3.3. Deepen cognitive reconstruction and empower oriented psychological intervention**

The core objective of psychological work is to facilitate a fundamental transformation in the inner dialogue of obese students. This requires professional interventions to consistently guide them in shifting their focus from short-term, unchangeable weight numbers and appearance judgments to measurable, controllable health behaviors and functional improvements (such as “I can walk longer today” or “I feel more energetic after exercising”). Systematic training should help them replace self-deprecation with positive self-talk (e.g., transforming “I’m clumsy” into “I’m persisting – that’s brave”), while consciously capturing and reinforcing every small effort and progress through methods like maintaining an exercise success diary, regardless of its direct correlation with weight changes. Empowerment serves as the key component: By collaboratively setting progressive exercise goals aligned with individual circumstances (rather than outcome-oriented targets), students gain a sense of control through “I can do it.” Teaching self-determination strategies enhances autonomy in choosing exercise types, timing, and intensity, significantly boosting intrinsic motivation. This transforms exercise into an active choice rooted in self-worth recognition, rather than a passive burden driven by external pressure<sup>[3]</sup>.

### **3.4. Create a systematic campus environment with collaborative support**

The effectiveness of mental health education depends critically on coordinated school-wide initiatives and resource integration. The Mental Health Center, Physical Education Department, Student Affairs Office, and counseling teams must establish regular cross-departmental collaboration mechanisms and information-sharing channels. It is essential to provide specialized training for counselors, PE teachers, and student leaders, equipping them with the sensitivity to identify

psychological distress in obese students, basic inclusive communication skills (such as using neutral language, avoiding weight-related teasing, focusing on effort and health), and knowledge of how to appropriately refer cases to professional psychological services. Encourage trained peer mentors to serve as “Sports Support Partners” during physical education classes and campus sports activities, offering initial companionship, encouragement, and experience sharing to effectively reduce social anxiety and uncertainty among new participants. Only when the entire campus environment conveys consistent, non-judgmental support signals can obese students truly shed their psychological burdens, gradually try out sports activities, and ultimately integrate into athletic lifestyles.

The core mission of college psychological support lies in illuminating the inner flame of courage for students grappling with obesity. When cognitive barriers are dismantled through science and emotional resilience is strengthened, every step toward sports fields becomes not merely physical movement, but a declaration of self-worth reconstruction. This systematic psychological empowerment program will ultimately guide them to rediscover their physical strength and dignity through sweat and perseverance, transforming sports into authentic testimonies of self-acceptance and vibrant vitality.

## **4. Optimize the campus sports environment and cultural atmosphere**

### **4.1. Build a barrier-free and psychologically safe physical environment for sports**

The planning and configuration of sports facilities in universities must deeply implement universal design principles and inclusivity, effectively addressing the unique physiological and psychological needs of obese students. The key lies in creating “pressure-free” dedicated exercise spaces, such as establishing mirror-free training zones within gyms separate from mainstream areas, equipped with heavier-duty equipment and spacious, comfortable exercise chairs to eliminate embarrassment and anxiety caused by equipment limitations or exposure. Sports venue designs should prioritize privacy protection and comfort: locker rooms should feature well-sealed, spacious changing areas with anti-slip flooring and load-

bearing benches; bathrooms require sufficient hot water supply and private compartments. Extended opening hours for specific venues (such as indoor swimming pools and fitness centers) with off-peak reservation channels can reduce social exposure anxiety. Additionally, establishing equipment borrowing and adaptation services, along with supportive tools like oversized athletic gear (e.g., knee pads, waist belts) and heart rate monitoring devices, removes barriers to participation caused by equipment discomfort. The inclusive transformation of physical environments aims to send clear acceptance signals to obese students: campus sports space designs that consider their presence and needs form the material foundation and safety commitment for their first step into physical activity.

#### **4.2. Reshaping the non-competitive and process-oriented campus sports culture**

The current sports culture in higher education excessively emphasizes athletic performance and body aesthetics, inadvertently raising barriers for obese students. The solution lies in dismantling the dominance of “competition-centric” ideology and establishing a diversified value evaluation system. Sports authorities should systematically design tiered sports activity portfolios, significantly increasing participation in non-competitive, fun, and low-threshold activities (such as campus walking events, fitness challenge camps, dance workshops, and adaptive yoga classes). Traditional evaluation metrics like speed, strength, and rankings should be downplayed, while emphasizing participation persistence, personal progress, teamwork, and health satisfaction. At major sporting events (like school sports meets), create non-competitive honors such as “Health Trend Award,” “Persistence Progress Award,” and “Team Integration Award,” with campus media featuring in-depth narratives about winners’ health improvement stories. Strictly prohibit any form of body teasing or weight-related derogatory remarks, and avoid using implicit body-shaming rhetoric in event promotional materials and live commentary. The core of cultural restructuring is shifting sports from “elite performances” to “public health practices,” helping obese students break free from self-imposed labels of “incompetence” and gain cultural legitimacy through diverse value recognition <sup>[4]</sup>.

#### **4.3. Build a supportive sports community and professional guidance system**

Higher education institutions should actively support homogeneous student organizations catering to fitness beginners, such as “Health Journey Clubs” and “Adaptive Sports Alliances.” These clubs should focus on experience sharing, mutual encouragement, and collaborative practice rather than skill competitions. Systematic training programs for student leaders and volunteers in sports support roles should equip them with foundational sports science knowledge, inclusive communication skills, and motivational strategies to provide initial companionship, movement guidance, and emotional support for obese peers. The Physical Education Department must develop a specialized sports guidance resource library for obese students, including adaptive training video tutorials (covering low-impact aerobic exercises, strength training, and flexibility drills) co-created by rehabilitation therapists and fitness coaches, personalized exercise prescription guidelines, and sports risk prevention manuals. More importantly, curriculum reforms should introduce “Fundamentals of Health Fitness” courses in general physical education classes. These courses should prioritize functional movement pattern learning, basic endurance development, and building sports confidence, using absolute progress metrics (rather than horizontal comparisons) as primary evaluation criteria, taught by instructors qualified to teach special populations. Collaboration between community resources and professional expertise aims to weave a safety net that combines emotional connection and knowledge support, ensuring obese students’ fitness journey begins with companionship, succeeds through scientific principles, and endures through belonging.

#### **4.4. Implement environment-friendly policies and a mechanism for full participation**

The inclusive transformation of campus sports ecosystems requires dual drivers: institutional safeguards and cultural mobilization across all stakeholders. School administrators should integrate student sports support into health promotion strategies, allocating dedicated budgets for facility upgrades, curriculum development, and club incubation. Establish cross-departmental task forces (comprising the Physical Education Department, Student

Affairs Office, Logistics Group, and University Hospital) to regularly assess and optimize sports infrastructure barriers. Implement the “Faculty Health Leadership Initiative” by encouraging staff participation in non-competitive sports activities as role models, promoting the value of “health through exercise”. Freshmen orientation programs should include campus sports resource guides and inclusive sports culture workshops to foster proactive awareness. Furthermore, digital platforms should create virtual support communities and develop campus sports social apps featuring anonymous check-ins, online support groups, expert Q&A, and personalized progress tracking – extending support networks’ temporal-spatial reach. Only when policy frameworks, technological tools, and human engagement synergize can this inclusive sports ecosystem evolve from theoretical concepts into tangible daily practices on campus<sup>[5]</sup>.

When physical barriers are removed in sports spaces, when athletic honors genuinely honor diverse growth, and when every attempt receives professional guidance and peer encouragement, students with obesity can finally find their place in campus sports. This goes beyond facility upgrades or activity additions—it represents a profound cultural transformation about bodily rights and health equity——. Ultimately, it proclaims: On the journey of pursuing vitality, every body deserves an unjudged starting point and a journey worthy of applause.

## **5. Strengthening family and social support**

### **5.1. Deepen the scientific guidance and emotional empowerment of family support system**

As the primary shaping environment for individual health behaviors, families’ attitudes and interaction patterns profoundly influence physical activity recognition among obese students. Universities should develop systematic parent education programs through online workshops, school-family communication manuals, and targeted lectures to guide parents in achieving three key cognitive shifts: breaking the “weight stigmatization” communication inertia by moving beyond simplistic equating exercise with weight loss or body correction tools, and avoiding pressure-laden phrases like “You

need to lose weight”; understanding the multifaceted health benefits of physical activity (such as stress relief, metabolic improvement, and emotional regulation) to shift focus from weight numbers to positive indicators like energy enhancement and sleep quality; mastering supportive communication techniques by using concrete, process-oriented expressions like “I noticed you feel better after walking recently” instead of result-focused evaluations to reinforce children’s incremental progress. Additionally, establishing family health behavior co-construction mechanisms encourages parents to extend support from verbal encouragement to behavioral demonstration through remote synchronized workouts (e.g., shared fitness app check-ins), holiday outdoor activity planning, and collaborative healthy meal preparation. For economically disadvantaged families, universities could partner with alumni funds to create “Exercise Participation Support Grants” subsidizing sports equipment purchases or off-campus professional coaching fees, thereby eliminating material constraints<sup>[6]</sup>.

### **5.2. Reconstruct the inclusive orientation of public narrative and institutional environment**

The stigmatization of obesity in social culture creates invisible barriers to physical activity participation. Universities should collaborate with media, public sectors, and academic institutions to drive narrative transformation: At the communication level, campus media should partner with local mainstream platforms to launch “Body Narrative Reconstruction” columns, showcasing health improvement journeys of obese individuals (emphasizing functional enhancement over weight loss), while inviting sports science experts to debunk the cognitive fallacy that “weight determines health”; At the academic level, support public health disciplines in conducting research on the social costs of obesity discrimination, publish white papers on student participation in sports among obese students, and use empirical data to reveal institutional barriers for policy advocacy; At the policy advocacy level, urge National People’s Congress deputies and CPPCC members to submit special proposals to mandate explicit prohibitions against body-based service discrimination in public sports venues, and require commercial fitness institutions to disclose service standards for special groups<sup>[7]</sup>.



### 5.3. Build a three-in-one communication and feedback mechanism among universities, families and society

Higher education institutions should establish digital platforms for home-school collaboration. While safeguarding student privacy, these platforms should regularly provide parents with data analytics on campus sports participation (including effective exercise duration and physical fitness improvement trends), health behavior recommendations, and family support guidelines, while maintaining dedicated feedback channels. An electronic map of social support resources should be created to integrate information about nearby sports-medical integration service points, adaptive course venues, and public welfare assistance programs, enabling one-click navigation and appointment booking. Each semester, a “Health Support Alliance Roundtable Meeting” should be convened, inviting parent representatives, partner organizations, student associations, and public health departments to jointly discuss service optimization strategies and release collaborative support effectiveness

evaluation reports. This mechanism aims to weave fragmented support resources into an organic network, creating synergistic effects where family emotional care, professional social services, and universities’ pivotal functions resonate as a cohesive system<sup>[8]</sup>.

## 6. Conclusion

In conclusion, the low exercise participation among obese college students represents a complex social phenomenon involving psychological, physiological, and societal factors. To address this issue, we must adopt comprehensive strategies through multiple approaches. By enhancing mental health education, developing personalized exercise plans, improving campus sports facilities and cultural environment, and strengthening family and community support, we are confident that these measures will effectively boost physical activity levels among obese students. This will lay a solid foundation for their overall well-being and holistic development.

### Disclosure statement

The author declares no conflict of interest.

## References

- [1] Lingfan Wen, Hungchao Yuan, Xingwen Wang et al. Effects of exercise intervention and dietary control on body composition and fitness in weight loss cases [J]. *Journal of Physical Therapy Society*, 2018,43(4):319-320.
- [2] Fengrui Cao. Experimental comparative study on the effects of obesity on cardiopulmonary function and physical fitness of college students [J]. *Sichuan Sports Science*, 2011(3):5.
- [3] Wu Sixian, Fu Aili. Analysis of Physical Health Characteristics and Correlations of Overweight and Obese College Students: A Case Study of Maoming Health Vocational College in Guangdong Province [J]. *Journal of Guangdong Vocational Education and Research*, 2025(01):142-147.
- [4] Liu Yukang. Study on the dose-response relationship between interval training and body composition, muscle strength and exercise ability in overweight and obese college students [D]. *Wuhan Institute of Physical Education*, 2025.
- [5] Li Yaolu, Tang Dongyang. A Study on Weight Loss Effects of Multi-path Interventions Centered on Exercise for Overweight College Students [C]. *Abstract Collection of the Second Hubei Provincial Sports Science Conference and Fifth Academic Forum on Modern Sports and Military Training Development*. School of Physical Education, Wuhan Institute of Physical Education; 2024:841-842.
- [6] Xu Jinhua. A Study on the Effects of Roller Skating on Body Composition, Lower Limb Strength, and Balance in Overweight Male College Students [C]. *Abstracts from the Joint Academic Conference of the Exercise Physiology Committee and Physical Fitness Research Committee of the Chinese Physiological Society*. School of Physical Education

Science, South China Normal University; 2024:68-69.

- [7] Xu Shanshan, Hu Liang. Effects of Multicomponent Mobile Health Intervention on Physical Activity, Social Cognition, and Mental Health Among Overweight and Obese College Students [C]. Journal of the Chinese Society of Sports Science. Proceedings of the Ninth China Sports Doctoral Forum. Department of Physical Education, School of Education, Zhejiang University; 2024:471-473.
- [8] Yang Tiance, Guo Xinrui, Bai Shuang. Effects of Aerobic Exercise Combined with Resistance Training on Autonomic Nervous Function and Cardiovascular Endurance in Overweight College Students [C]. Chinese Society of Sports Science. Proceedings of the 5th National Fitness Science Conference— Special Report (II). Capital University of Physical Education and Sports; 2024:321-322.

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