

Investigation on The Development of Three Person Basketball Match In Chengdu Colleges and Universities

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Abstract

Basketball is one of the most popular sports among college students, valued not only for its recreational and fitness benefits but also for its educational and social dimensions. In particular, three-player basketball, which is played on a half-court, represents a growing form of leisure sport that emphasizes participation, entertainment, and personal expression. Despite its increasing popularity in Chengdu, the development of three-player basketball in universities still encounters several problems, such as limited publicity, insufficient professional guidance, and uneven student participation. The purpose of this study is to investigate the current status, opportunities, and challenges of three-player basketball in colleges and universities in Chengdu, as well as to analyze students' perceptions and level of involvement. This study adopts a combination of research methods, including literature review, questionnaire survey, and mathematical statistics. Data were collected and analyzed to examine students' understanding of basketball, their interest in three-player basketball, and the organizational structure of related activities within campus settings. The findings of the study indicate that basketball is highly popular among Chengdu college students, with three-player basketball showing rapid development and promising market prospects. Male students tend to show greater enthusiasm and participation than female students, while most activities are organized by student associations rather than by the universities themselves. The main obstacles identified include insufficient awareness, a lack of systematic promotion, and the absence of professional coaching support. This study implies that universities should further promote and institutionalize three-player basketball as part of their sports programs. Strengthening publicity, providing professional guidance, and organizing more formal competitions will enhance students' physical fitness, enrich campus sports culture, and foster sustainable interest in basketball.

Keywords: *Three-player basketball, College students, Sports development, Chengdu universities, Student participation.*

A. Introduction

The “three-on-three basketball tournament” originated from street basketball activities in the United States, first gaining popularity in densely populated urban areas such as New York and Washington, D.C.—particularly within African American and youth communities (Red Bull, n.d.; Urban Movement, 2019). This unique format of “3v3” played on half-courts gradually gained popularity, with early organized tournaments like the Original Gus Macker beginning in 1974 in Michigan, later evolving into widely known events such as Hoopfest in Spokane (Gus Macker Tournament, 2025; Spokane Hoopfest, 2025). The informal “3x3” format was later standardized in the late 2000s through Adidas-sponsored streetball competitions, and FIBA officially introduced rules for the game by 2007, paving the way for international recognition, including inclusion in the Youth Olympic Games (2010) and full Olympic debut at Tokyo 2020 (Wikipedia, 2025; Seumelhorjogo, 2024).

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The NBA is revered as the “Dream Land” for countless players, embodying aspirations of fame and excellence. Street basketball has become a crucial talent pipeline feeding into the NBA system. With the league’s global expansion—particularly in China—its influence has significantly boosted basketball participation nationwide (Scientific Origin, 2024; How Popular Is Basketball in China, 2025). The NBA’s presence acted as a catalyst: its broadcasts, NBA China operations, and iconic players like Yao Ming galvanized mass interest in the sport (Long Advisory, 2024; Scientific Origin, 2024). Today, basketball enjoys exceptional popularity across China, becoming a leading choice for daily exercise. This societal embrace contributes to the sport’s thriving development.

In Chengdu—a city officially designated as a “National Basketball City” by China’s General Administration of Sport—basketball enjoys strong grassroots popularity, especially among university students. Actively promoting 3x3 basketball tournaments across higher education institutions can foster a vibrant campus sports culture, enrich student life, support nationwide fitness initiatives, and help students form lifelong exercise habits.

The 3x3 basketball format is an optimized adaptation of traditional five-a-side basketball, maintaining core characteristics while simplifying participation. Key distinctions include: (1) straightforward rules and fewer players, enabling easy organization; (2) reduced technical complexity, yet high entertainment value, fitness benefits, and moderate intensity, suitable for students of diverse abilities; and (3) minimal equipment requirements, facilitating promotion and development (Britannica, 2024; Rockstar Academy, 2024).

Three-on-three basketball, as a student-oriented sport, merges competitive and recreational aspects. It enriches extracurricular life, enhances learning efficiency, balances study and leisure, and cultivates regular exercise habits—making its promotion in universities particularly meaningful. Consequently, investigating the status of 3x3 tournaments in higher education becomes essential to support implementation of China’s National Fitness Program and foster students’ physical fitness and sportsmanship.

Chengdu’s dense population and economic development present both opportunities and challenges for expanding 3x3 basketball. This study investigates the current state of collegiate 3x3 basketball in Chengdu, identifies influencing factors, and offers recommendations to advance its development city-wide.

China has strongly promoted basketball via commercial tournaments—such as Hupu Roadman Wang Challenge and Anta University 3x3 Tournament—as well as school leagues (e.g., CUBA and municipal junior/senior high school competitions). These initiatives have fueled the sport’s popularity by combining competitive, recreational, and fitness elements, thereby supporting the sports industry, enriching campus athletic culture, and encouraging lifelong habits. Compared to five-a-side basketball, the simplified 3x3 format addresses participation limitations, making the sport more accessible.

Significance: 3x3 basketball holds substantial developmental value for college students. It supports psychological well-being—mitigating anxiety, regulating emotions, and promoting self-awareness and confidence. Its moderate intensity facilitates optimal physical conditioning for most individuals, while its high entertainment factor enhances mental and physical wellness. The format encourages expression of individuality, creativity, and athletic awareness. Overall, it positively influences campus sports culture and bolsters the sports industry.

Three-on-three basketball enhances physical attributes such as speed, endurance, agility, and jumping ability due to its dynamic, high-intensity gameplay. The compact court and rapid transitions demand coordination, situational awareness, decision-making, and cardiovascular strength. The sport’s appeal—dribbling flair, precise passing, shooting, steals, dunks, tactical

teamwork, and dramatic transitions—creates a compelling spectacle for both players and spectators.

As a team-based sport adapted for fewer players, 3x3 basketball still requires coordination, collective spirit, and mental resilience. It cultivates character traits like confidence, proactivity, discipline, respect, and perseverance—serving both athletic and educational purposes.

Globally, many countries vie to host the Olympic Games for cultural exchange. Similarly, 3x3 basketball acts as a cultural conduit, facilitating communication and mutual learning among individuals, teams, institutions, and nations. Through tournaments, students develop technical skills, teamwork, and intercultural understanding, enjoying competition while building shared interests and relationships. As university-level 3x3 basketball gains traction, its commercial potential becomes clear. Tournaments enable businesses to engage student audiences, boost brand visibility, enrich campus culture, and promote wellness. Additionally, they generate revenue for institutions, supporting both athletic and academic growth.

B. Methods

This study employed a quantitative descriptive research design using a survey approach. This design was chosen as it is appropriate for objectively describing the actual conditions regarding students' perceptions, participation levels, and factors influencing their engagement in three-on-three basketball across universities in Chengdu. The quantitative approach enabled the collection of measurable data, while the descriptive nature of the study provided a comprehensive overview of the phenomenon without direct intervention in the variables under investigation.

The research procedure was carried out in several stages. The first stage was a literature review aimed at building a strong theoretical foundation. Relevant references were collected through various academic sources, including CNKI, Chinese academic journals, the Wanfang database, and the Chengdu Library. The second stage involved the development of a questionnaire under the supervision of the academic advisor to ensure alignment with the research objectives. A limited pilot test was conducted to examine the reliability and clarity of the questions. Subsequently, the questionnaire was distributed directly to students from ten universities in Chengdu to maintain the authenticity of the data. In total, 500 questionnaires were distributed, all of which were collected, with 400 deemed valid, resulting in an effective response rate of 80%.

Table 1. Statistical table of questionnaire survey

Respondent	Number Of Questionnaires Distributed	Number Of Questionnaires Returned	Questionnaire Validity	Questionnaire Recovery Rate (%)	Effective Recovery Rate (%)
college students	500	500	400	100	80

Two main techniques were employed for data collection. First, the literature review method was used to enrich the conceptual framework and provide theoretical support for the analysis. Second, the survey method utilized a structured questionnaire administered to respondents drawn from ten major universities in Chengdu: Chengdu University, Chengdu University of Technology, Sichuan Normal University (Chenglong and Lions Mountain Campuses), Sichuan University (Wangjiang and Huaxi Campuses), Southwest Petroleum University, Chengdu University of Traditional Chinese Medicine, Southwest Minzu University, and Southwest Jiaotong University (Xipu Campus). This diverse sample selection was intended to represent the broader characteristics of university students in Chengdu more comprehensively.

The collected data were analyzed using quantitative descriptive techniques. The first step involved screening the questionnaires to assess the completeness and consistency of responses, thereby ensuring data validity. Following this, the data were tabulated and processed using descriptive statistics, including percentages, frequency distributions, and mean values, to illustrate overall patterns and trends. Finally, the findings were interpreted by comparing the survey results with theoretical perspectives and previous studies identified in the literature review. This process allowed the study to present not only empirical data but also deeper academic insights into the development of three-on-three basketball within Chengdu universities.

C. Results and Discussion

1. Students' Understanding of Three-Man Basketball Knowledge

As shown in Table 3.1, the survey data reveal distinct student demographics: 96 participants (24%) reported being "very familiar" with the subject matter, while 132 students (33%) indicated they were "somewhat familiar." The remaining 144 individuals (36%) described themselves as "moderately familiar," with only 28 respondents (7%) indicating they had "little to no familiarity" with the topic.

The combined percentage of students with both high awareness and basic understanding stands at 57%, indicating that most students demonstrate significant interest in three-on-three basketball. However, the combined percentage of students with limited or no prior knowledge reaches 43%, suggesting their understanding remains superficial without deeper engagement with the sport. Therefore, universities in Chengdu should intensify efforts to guide student participation in basketball activities. By incorporating three-on-three basketball into physical education courses and extracurricular sports programs, increasing student involvement through greater frequency and diversity will enhance their comprehension of the game. Concurrently, schools must strengthen promotional initiatives by providing specialized training, tactical instruction, and officiating certifications for three-on-three basketball, thereby fostering student participation and advancing the sport's development.

Table 2. Knowledge of three-man basketball games among college students (n=400)

Option	Number of Participants (Person)	The Proportion of (%)	Sort
Very Familiar With	96	24	3
Understand	132	33	2
Same As	144	36	1
Don't Know Much	28	7	4

2. The number of times college students participate in three-man basketball games per week

As shown in Table 3.2, the weekly participation frequency of college students in three-on-three basketball tournaments reveals the following patterns: 66 students (16.5%) do not participate, while 172 students (43%) attend 1-2 matches per week. The number of students participating 3-4 times weekly stands at 82 (20.5%), and those attending 4 or more matches weekly totals 80 (20%). The frequency of college students participating in 3x3 basketball tournaments each week reflects their passion for the sport. Most students remain enthusiastic about the game, actively engaging in it.

Through surveys and interviews, we found that among those who choose not to participate, most opt for other sports activities. A smaller group lacks regular exercise routines, showing little awareness of physical fitness and insufficient attention to their health condition.

Table 3. Number of times college students participate in three-on-three basketball games per week (n = 400)

Option	Number Of Participants (Person)	The Proportion Of (%)	Sort
Non-Participation	66	16.5	4
1-2 Times	172	43	1
3-4 Times	82	20.5	2
Four Times Or More	80	20	3

3. Time spent by college students in three man basketball each time

As shown in Table 3.3, 134 college students (33.5% of the surveyed group) participated in three-on-three basketball for over two hours per session. Another 130 students (32.5%) engaged in games lasting 1-2 hours, while 70 participants (17.5%) played for 30-60 minutes. Notably, 66 students (16.5%) spent under 30 minutes on each session.

The data reveal that students participating in 3x3 basketball tournaments typically engage in activities lasting 1-2 hours or longer. Those who play for 1-2 hours or 30-60 minutes aim to improve physical fitness, pass the time during breaks, relax their minds and bodies, and enhance study efficiency. Students who play over two hours demonstrate genuine passion for basketball, focusing on developing technical skills and tactical awareness. Meanwhile, those choosing shorter sessions—typically under 30 minutes—are often homebodies or introverts who prioritize academic performance.

Table 4. Time spent per game by university students in 3x3 basketball (n = 400)

Option	Number Of Participants (Person)	The Proportion Of (%)	Sort
More Than Two Hours	134	33.5	1
1-2 Hours	130	32.5	2
30-60 Minutes	70	17.5	3
Within 30 Minutes	66	16.5	4

4. College students' attitude towards the development of three-man basketball games in schools

As shown in Table 3.4, 106 students (26.5%) selected "strongly support," ranking third. The second choice was "somewhat support" (120 students, 30%). First came "neutral" (122 students, 30.5%), followed by "moderate support" (28 students, 7%). Only 24 students (6% of the surveyed group) chose "disapprove" of the school's three-on-three basketball tournament.

Most students at the university support, accept, and enjoy the three-on-three basketball tournament. Those who dislike it cite concerns about technical difficulties, physical coordination issues, fear of ridicule, and injuries from intense competition. Notably, female students make up a

significant portion of this group. Analysis reveals that gender-specific preferences explain this trend: women generally prefer graceful sports like aerobics and jogging over basketball. The perceived excessive physical contact and competitive intensity among male players are key reasons for their reluctance to participate. This situation highlights the underdeveloped grassroots foundation of women's basketball in Chengdu universities, resulting in gender imbalance in talent reserves that hinders the sport's growth. To address this, the university should enhance promotional efforts for the three-on-three tournament and provide extracurricular sports guidance to help female students reshape their perceptions of basketball.

Table 5. Attitudes of university students towards the implementation of three-man basketball games in schools (n = 400)

Option	Number Of Participants (Person)	The Proportion Of (%)	Sort
Very Supportive	106	26.5	3
Comparative Support	120	30	2
Same As	122	30.5	1
Not Too Supportive	28	7	4
Nonsupport	24	6	5

5. Motivation of college students to participate in three-man basketball

Students participate in any sport they like, which covers a variety of behavioral motivations. Although students who participate in three-on-three basketball have different starting points and purposes, they all want to meet their own needs.

Leisure and Recreation: In today's fast-paced society, universities serve as miniature societies where campus life mirrors this rhythm. Students must learn to adapt to the accelerated lifestyle. The pervasive pressures and anxieties among students reflect common challenges in modern campus living. To address these emotional burdens, students seek outlets for stress relief. 3x3 basketball tournaments, being a simple-to-implement sport, perfectly meet this recreational need. This explains why 160 out of 200 surveyed students chose this option, accounting for 40% of all participants.

Technical and Tactical Improvement: Among the surveyed college students, 252 individuals (63%) chose to enhance their technical skills and tactical awareness. To improve their basketball techniques and tactical proficiency, they participate in three-on-three basketball tournaments during leisure time. In university sports programs, basketball classes are only offered as general education courses or electives. Given the limited class hours available for passionate students, these athletes prioritize refining their skills. Many aim to boost ball-handling ability, passing awareness, shooting accuracy, team coordination, and overall teamwork through participating in three-on-three tournaments. This competitive format proves crucial for developing students' technical and tactical capabilities.

Building Social Connections: In today's society, personal development requires harmonious interpersonal relationships, which demand multifaceted coordination. Participating in sports fosters social interaction and cultivates positive connections. The team-oriented nature of 3x3 basketball demands students to collaborate seamlessly during activities. Through this sport, college students can make diverse friends. The game provides an ideal platform for building deep friendships, forming athletic partners and like-minded companions. This helps them expand their social networks and cultivate professional connections. Consequently, 232 university students chose the "make friends" option, accounting for 58% of all surveyed students.

Enhancing Physical Fitness: Most students utilize their spare time during campus activities to participate in sports. As shown in Table 3.5, 216 surveyed students (54% of the total respondents) chose "improving physical fitness" as their preferred activity. This highlights contemporary college students' strong emphasis on physical health, recognizing that "health is the capital of revolution." While engaging in 3x3 basketball, participants experience the unique charm of this sport. Compared to traditional 5x5 basketball, 3x3 basketball offers lower physical exertion and intensity levels while maintaining comparable fitness benefits. These advantages make 3x3 basketball a popular choice among students.

Alleviating academic stress: As widely recognized, balancing work and rest enhances productivity. Among the surveyed students, 120 participants (30% of the total) selected this option. Medical research confirms that moderate exercise effectively reduces stress and improves mental well-being. Regular participation in physical activities over time strengthens heart function, boosts blood circulation, enhances respiratory capacity, and ultimately elevates cognitive efficiency.

Other reasons: In addition to the five aforementioned options, 40 students (10% of the total surveyed) participated in three-on-three basketball games for other purposes. These included passing time, playing with roommates or classmates, and developing competitive spirit and teamwork awareness through sports. Regardless of the motivation, all participants aimed to achieve physical and mental growth through these activities.

Table 6. Number of times college students participate in three-on-three basketball games per week (n = 400)

Option	Number Of Participants (Person)	The Proportion Of (%)	Sort
Leisure And Recreation	160	40	4
Improve Your Skills	252	63	1
Make Friends	232	58	2
Improve Your Physical Fitness	216	54	3
Relieve Study Pressure	120	30	5
Other	40	10	6

6. Influencing factors of three-man basketball games in Chengdu high schools

As shown in Table 3.6, the survey on factors influencing three-on-three basketball tournaments in Chengdu universities reveals key influences. The top factor was insufficient institutional support (248 participants, 62%). Next came inadequate promotion efforts (236 participants, 59%). Fewer games and limited scale ranked third (172 participants, 43%). Lack of professional guidance and knowledge followed (156 participants, 39%). Insufficient extracurricular time came fifth (112 participants, 28%), while inadequate facilities for basketball ranked sixth (84 participants, 21%). Other factors concluded the list (24 participants, 6%).

The main factors hindering the development of 3x3 basketball in Chengdu universities can be summarized into three key aspects: First, insufficient emphasis on promoting the sport among university communities, particularly evident in inadequate publicity and organizational efforts. Second, the lack of regular, organized competitions with a limited scale, compounded by inadequate facilities and infrastructure. Third, systemic challenges include a shortage of

professional coaches, limited knowledge dissemination, and insufficient talent reserves in the field.

Table 7. Factors influencing the development of three-man basketball games in Chengdu high schools (n=400)

Option	Number of Participants (Person)	The Proportion of (%)	Sort
Schools do not pay enough attention and support	248	62	1
Social and school publicity is insufficient	236	59	2
Fewer games and smaller scale	172	43	3
Lack of professional guidance and lack of relevant knowledge	156	39	4
Insufficient leisure time	112	28	5
Basketball facilities are inadequate	84	21	6
other	24	6	7

D. Conclusion

The study highlights that three-on-three basketball in Chengdu has developed rapidly, enjoying a solid mass foundation and wide acceptance among college students. Most students demonstrate strong awareness, enthusiasm, and support for the sport, contributing to its growing participation rates across universities. However, several challenges hinder its sustainable development, including insufficient promotion, limited institutional support from some university leaders, and inadequacies in sports facilities and infrastructure. These issues, if left unaddressed, may restrict the long-term potential of three-on-three basketball, despite its proven value in enhancing students' physical fitness, mental well-being, and campus life.

To ensure the healthy growth of collegiate three-on-three basketball, it is essential that universities and relevant departments prioritize its development. This requires strengthening promotional efforts, organizing regular tournaments, improving facilities, and securing sufficient funding, including sponsorship from external partners. Moreover, universities should adapt best practices from other regions while tailoring programs to local conditions, ensuring inclusive opportunities for all students. By doing so, three-on-three basketball can be more effectively integrated into campus culture, enriching student experiences, fostering lifelong exercise habits, and contributing to the broader goals of national fitness and sports development.

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