

Factors Influencing the Motivation to Choose Basketball as a Sport Among Athletes at Chengdu Sport University

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Abstract

This study examined the factors associated with basketball motivation among student-athletes at Chengdu Sport University, integrating psychological, social, and environmental perspectives within a mixed-methods approach. Quantitative data were collected through questionnaires from 100 purposively selected athletes, while qualitative insights were obtained from semi-structured interviews with 10 participants and observations during training contexts. All instruments were validated through the Item-Objective Congruence method with satisfactory indices. Quantitative analyses included descriptive statistics, correlation testing, and multiple regression, where model assumptions and multicollinearity diagnostics were reviewed to ensure analytical validity. Several variables, including self-confidence, family support, coach guidance, teammate relationships, and training environment, demonstrated moderate to high bivariate correlations with motivation. In the multivariate model, only self-confidence showed a statistically significant association, whereas the remaining predictors became non-significant once shared variance was accounted for. The high overall model fit was interpreted with caution due to the sample size, possible multicollinearity, and the study's cross-sectional design. Qualitative findings highlighted the importance of psychological readiness, personal goals, and supportive social relationships, which offered explanatory depth for quantitative patterns and clarified inconsistencies in the regression outcomes. Overall, the results suggested that basketball motivation among

university athletes was influenced by an interplay of psychological and relational factors, although conclusions remained limited by nonprobability sampling and the absence of longitudinal evidence. The study underscored the practical value of strengthening athletes' psychological competence, improving training environments, and fostering supportive team dynamics while calling for broader, multi-site, and longitudinal research to substantiate these preliminary insights.

Keywords: Basketball Motivation; Self-Confidence; Social Support; Training Environment; University Athletes

Introduction

Motivation is a central construct in understanding why athletes initiate, sustain, or withdraw from sport participation. Within this domain, Self-Determination Theory (SDT) provides a foundational framework by positing that athletes' engagement is driven by the fulfilment of three basic psychological needs—competence, autonomy, and relatedness (Deci & Ryan, 1985; Ryan & Deci, 2020). When these needs are met, athletes are more likely to experience intrinsic motivation, enjoyment, and long-term commitment, whereas environments that frustrate these needs lead to disengagement. Building on this perspective, researchers have demonstrated that competence-related beliefs such as confidence (Pelletier et al., 1995), autonomy-supportive instruction (Standage et al., 2005), and relational support from peers, coaches, or families (Fredricks & Eccles, 2004; Ames, 1992) contribute significantly to athletes' persistence. These insights highlight the multidimensional nature of sport motivation and underscore the importance of integrating psychological, social, and environmental factors in university athletic contexts.

In Chinese universities, motivation is shaped by complex interactions between family expectations, coaching approaches, peer dynamics, and institutional conditions. Existing studies show that social influences strongly affect athletes' confidence and participation decisions. For example, Qi and Ali (2024) found that peer relationships and social abilities are closely linked to skill development among male university basketball players, while Lou et al. (2024) reported that family socioeconomic background and parental exercise habits shape the physical activity patterns of college students. Psychological influences also play a substantial role; Deng et al. (2023) observed that Chinese student-athletes with stronger internal motivation persist even under difficult circumstances. Environmental and institutional structures likewise matter, with research showing that pedagogical models such as the Tactical Games Model can enhance motivation by improving enjoyment and perceived competence (Wang, Chee, & Samsudin, 2024), and that team

cohesion combined with supportive leadership predicts sustained engagement in collegiate basketball settings (Wang, Xu & Liu, 2024; Li & Xing, 2025). These studies collectively suggest that university basketball players' motivation in China emerges from the interplay of their psychological readiness, social networks, and contextual opportunities.

Despite these contributions, important gaps remain. First, although prior work confirms the relevance of psychological, social, and environmental factors, there is limited empirical evidence on how these dimensions simultaneously function within sport–university environments, where academic pressures, institutional expectations, and competitive pathways intersect in unique ways. Second, few studies examine how these factors jointly predict motivation using integrated mixed–methods designs, leaving uncertainty about whether the strongest influences are psychological (e.g., self–confidence), relational (e.g., coaching and teammates), or environmental (e.g., training facilities). Third, existing research has not clearly articulated how SDT's three needs map onto basketball–specific variables such as family support, coaching guidance, team dynamics, facility conditions, and self–confidence among Chinese university athletes. Consequently, it remains unclear which factors exert direct, indirect, or reinforcing effects on motivation within this context.

To address these gaps, the present study investigates the motivational factors influencing basketball participation among student–athletes at Chengdu Sport University, drawing explicitly on SDT's competence, autonomy, and relatedness dimensions. The study examines psychological aspects (self–confidence), social influences (family support, peers, coaches), and environmental conditions (training facilities and institutional support) through a mixed–methods approach that integrates quantitative and qualitative evidence. Based on SDT and the existing literature, the following hypotheses were developed:

H1: Self–confidence (competence) is positively associated with motivation to play basketball.

H2: Family support (relatedness) is positively associated with motivation.

H3: Coach guidance (autonomy support) is positively associated with motivation.

H4: Teammate encouragement (relatedness) is positively associated with motivation.

H5: Training facilities and environmental support (contextual competence/autonomy support) are positively associated with motivation.

This framework provides a theoretically grounded basis for examining the multidimensional structure of basketball motivation in a Chinese university setting and for developing evidence–informed guidelines to enhance athlete engagement.

Research Objectives

1. To examine the associations between social, psychological, and environmental factors and the motivation to play basketball among athletes at Chengdu Sport University.
2. To test the unique contributions of these factors by analyzing their relative predictive power in a multivariate model.
3. To explore qualitative perspectives that help explain how and why these factors influence athletes' motivation.
4. To synthesize evidence-based guidelines for promoting and sustaining basketball motivation in university settings.

Literature Review

Theoretical Perspectives on Motivation

Motivation in sport has been widely examined as a psychological mechanism that explains how and why athletes initiate, maintain, or withdraw from participation. While classical theories such as Maslow's (1970) hierarchy of needs and Bandura's (1977) social learning theory provide useful background on human behavior, recent scholarship emphasizes the importance of sport-specific frameworks. Among these, Self-Determination Theory (SDT) has emerged as the most comprehensive and empirically supported model for understanding athletic motivation. SDT distinguishes between intrinsic motivation, extrinsic motivation, and amotivation, and identifies competence, autonomy, and relatedness as the psychological needs that sustain long-term engagement in physical activity (Deci & Ryan, 1985; Ryan & Deci, 2020).

Within this study, the construct of self-confidence corresponds most closely to SDT's concept of competence, referring to athletes' perceptions of their ability to perform successfully. In the broader literature, similar constructs appear as "perceived competence," "self-efficacy," or "sport-confidence." Although terminology differs, these constructs share the central idea that athletes who believe in their capabilities are more intrinsically motivated and more likely to persist. This relationship is affirmed in empirical work using the Sport Motivation Scale (SMS) developed by Pelletier et al. (1995), which operationalizes motivation across intrinsic, extrinsic, and amotivation dimensions. While the present study does not adopt the full SMS, its motivational items reflect the same underlying SDT principles, particularly by capturing enjoyment, goal orientation, and willingness to continue participation, key indicators of intrinsic motivation.

Sport-specific adaptations of SDT have been supported by research in educational and coaching contexts. Standage et al. (2005) found that competence and autonomy predicted motivation among students in physical education settings, suggesting that environments offering skill development and choice enhance long-term involvement. Fredricks and Eccles (2004) similarly noted that balanced parental involvement promotes motivation, and Ames (1992) demonstrated that mastery-oriented climates create stronger persistence than performance-focused environments. These studies highlight the importance of psychological readiness, autonomy-supportive teaching, and supportive motivational climates, all of which map directly onto SDT's three needs.

Chinese scholarship provides further insight into the social and contextual factors relevant to university athletes. Lou et al. (2024) found significant links between family socioeconomic status, parental behaviors, and students' physical activity patterns, underscoring the continuing influence of family in Chinese cultural settings. Research on basketball pedagogy shows that instructional approaches such as the Tactical Games Model enhance competence and enjoyment by making training more engaging (Wang et al., 2024a). Meanwhile, team cohesion and relational dynamics have been shown to sustain participation in collegiate basketball, with findings indicating that a cohesive team environment strengthens athletes' long-term engagement (Wang et al., 2024b). Leadership research by Li and Xing (2025) further demonstrates that autonomy-supportive coaching increases motivation and satisfaction, whereas authoritarian leadership weakens persistence. These studies highlight that coaching style, team relationships, and training environment may influence SDT's autonomy and relatedness needs in different ways—often acting as mediators or moderators rather than direct predictors.

The literature suggests that university athletes' motivation emerges from the interaction of psychological, social, and environmental factors, with SDT providing a coherent framework for integrating these dimensions. Psychological competence (self-confidence) appears foundational, but its effects are shaped by social supports from family, peers, and coaches, as well as contextual elements such as pedagogy and training facilities. While these studies offer valuable insights, they also reveal gaps: the relative predictive strength of these factors remains unclear, their influences have not been examined simultaneously within a single model, and few studies have explored how athletes themselves interpret these influences through qualitative inquiry.

These theoretical and empirical insights directly inform the present study's conceptual framework, which posits that competence (self-confidence), relatedness (family and teammates), autonomy support (coach guidance), and environmental support (training facilities) jointly influence university basketball players' motivation. This foundation leads logically to the hypotheses evaluating the associations and predictive contributions of each factor within an SDT-informed model.

Conceptual Framework

This study's conceptual framework focuses on how certain independent and dependent variables interact to cultivate motivation to play basketball among university student-athletes. Family support, coaching, teammate support, training facility adequacy, and self-efficacy are among the variables presumed to affect motivation to play basketball, the dependent variable, which is manifest in the athletes' will to practice, dedication to participation, and overall involvement in basketball. The framework posits that the student-athletes' motivation and participation in basketball will be maintained at optimal levels when the psychological, social, and physical environmental supports are robust.

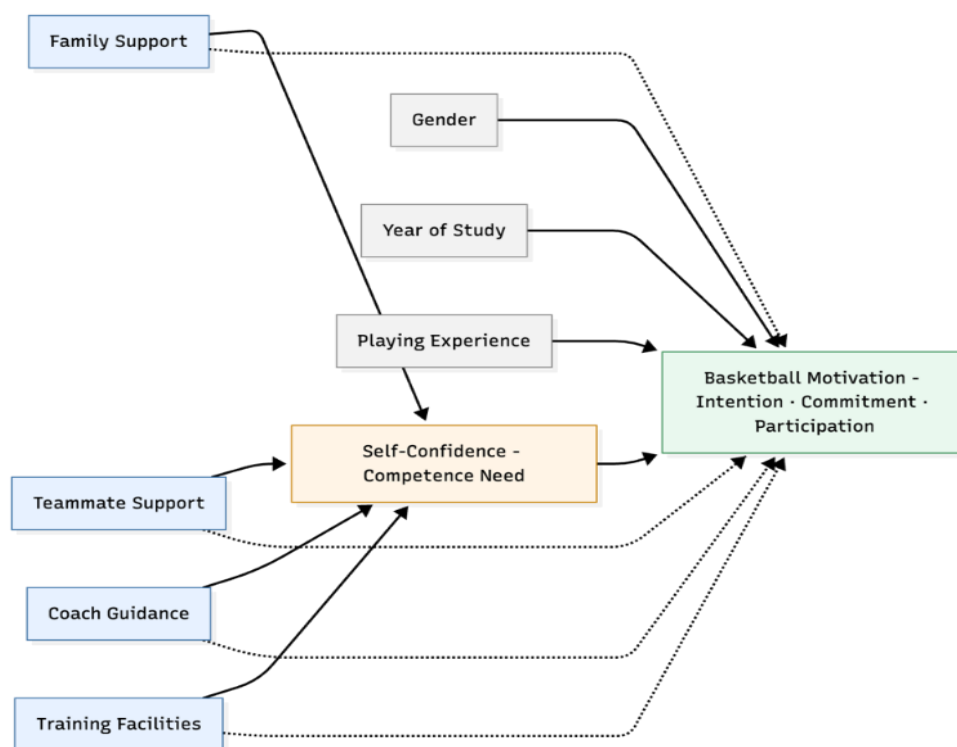


Figure 1 Conceptual Framework

Research Methodology

Research Design

This study employed a mixed methods design to obtain both statistical patterns and experiential insights regarding athletes' motivation. A convergent parallel design was adopted, in which quantitative and qualitative data were collected during the same period and given equal analytic priority. Integration occurred through side-by-side comparison of quantitative results and qualitative themes, allowing meta-inferences that explained not only the strength of associations but also the underlying reasons. This approach provided a clearer interpretation than generic triangulation alone.

Population and Sample

The population consisted of student-athletes enrolled in basketball programs at Chengdu Sport University. Purposive sampling was used to ensure representation across gender, academic year, and playing experience, all of which are relevant to motivational variation. The final sample included 100 athletes (54 male, 46 female). Questionnaires were distributed to all eligible athletes attending scheduled training sessions, yielding a high participation rate; all returned questionnaires were usable. For the qualitative component, ten interview participants were randomly selected from the pool of individuals who volunteered and met the inclusion criteria, ensuring that no systematic bias influenced the selection.

Research Instruments

Three instruments were used.

The questionnaire assessed family support, teammate support, coach guidance, facility suitability, self-confidence, and motivation using a five-point Likert scale. Each construct was developed from theoretical definitions aligned with SDT and informed by established measurement approaches such as the Sport Motivation Scale (Pelletier et al., 1995), although items were adapted to fit the university basketball context. Here, "motivation" was computed as a composite score based on the mean of its items.

The semi-structured interview guide explored athletes' goals, interpersonal experiences, challenges, and perceived influences on motivation.

The observation checklist recorded indicators such as persistence, attentiveness, teamwork, and responses to coaching, with two observers independently rating behaviors.

Validity and Reliability

Content validity was confirmed through expert review, with IOC values exceeding 0.80 for all items. A pilot test with 20 athletes produced Cronbach's alpha coefficients above 0.80, indicating internal consistency. Interview transcripts were validated through participant checking. For observational data, inter-rater agreement was confirmed, and discrepancies were discussed until consensus was achieved.

Data Collection Procedures

Data were collected during one academic semester. Questionnaires were distributed during training periods with coach approval. Interviews were conducted in private meeting rooms and recorded with consent. Observations were carried out during two training sessions and two competitive matches. Missing questionnaire data were minimal; when encountered, listwise deletion was used. Ethical standards were maintained throughout, with confidentiality, voluntary participation, and the right to withdraw ensured.

Data Analysis

Quantitative analyses were performed using SPSS. Descriptive statistics summarized participants' responses. Pearson correlation coefficients examined associations between variables, and multiple regression tested the unique predictive contributions of each motivational factor. Assumptions of linearity, normality of residuals, independence, and multicollinearity were checked to support the validity of the regression model.

Qualitative data were analyzed using thematic analysis. Codes were grouped into themes corresponding to psychological influences, social relationships, and contextual factors. Integration occurred during interpretation, with qualitative themes used to contextualize and explain the quantitative results.

Research Results

This section presents the findings of the study, organized into four parts: (1) results from the questionnaire, (2) results from the A semi-structured interviews, (3) results from the observation of behavior and environment, and (4) guidelines derived from the integration of findings.

1. Results from the questionnaire

The analysis of the questionnaire data collected from 100 basketball athletes was categorized into three main sections: Section 1 personal information such as age, gender, and sports experience; Section 2 factors affecting motivation, such as support from family, coaches, and teammates; and Section 3 the level of motivation in training and competition. The results for each section are detailed as follows.

Table 1 Results from the Questionnaire on Factors Affecting the Motivation to Play Basketball of Athletes at Chengdu Sport University

Section 1: Personal Information			
Category	Item	Number of Respondents	Percentage (%)
Gender	Male	54	54.00
	Female	46	46.00
Year of Study	Year 1	28	28.00
	Year 2	24	24.00
	Year 3	27	27.00
	Year 4	21	21.00
Basketball Experience	Less than 1 year	26	26.00
	1–3 years	23	23.00
	3–5 years	30	30.00
	More than 5 years	21	21.00
Section 2: Factors Affecting Motivation			
Questions		Mean	S.D.
My family supported me in playing basketball.		3.91	0.81
The coach gave me proper guidance and support.		3.92	0.82
Questions		Mean	S.D.
My teammates help motivate me to improve.		4.06	0.69
The facilities are suitable for training.		3.96	0.77
I have confidence in my abilities.		4.03	0.70
Section 3: Motivation			
Questions		Mean	S.D.
I am motivated to train to improve myself.		3.94	0.73
I have a long-term goal in playing basketball.		3.87	0.72
I enjoy playing basketball more than any other activity.		4.03	0.71

Note: 1 = strongly disagree, 5 = strongly agree; higher scores reflect stronger perceived support.

The questionnaire results presented in Table 1 show that basketball athletes at Chengdu Sport University report consistently high levels of motivation across all measured dimensions. In terms of personal background, the sample was balanced in gender, well distributed across academic years, and included students with varying levels of basketball experience. Regarding motivational factors, respondents expressed strong agreement on all items, with the highest ratings for teammate support (Mean = 4.06), self-confidence (Mean = 4.03), and suitability of training facilities (Mean = 3.96). These results highlight the importance of social relationships and an enabling environment in sustaining athlete motivation. Concerning overall motivation, athletes particularly emphasized their enjoyment of basketball compared to other activities (Mean = 4.03) and their determination to improve (Mean = 3.94). Additional comments reinforced these findings, with students calling for upgraded facilities, access to mental skills training, and more team-building activities, underscoring the combined role of psychological, social, and environmental supports in shaping motivation.

The analysis of factors affecting motivation revealed that social, psychological, and environmental dimensions were all rated positively by participants. Family support obtained an average score of 3.91 (SD = 0.81), while coach guidance was rated similarly at 3.92 (SD = 0.82). Teammate support was the most highly rated social factor, with a mean of 4.06 (SD = 0.69), indicating that peers were a strong motivational influence in this context. Regarding environmental factors, the suitability of training facilities received a mean of 3.96 (SD = 0.77), showing that athletes considered their physical environment to be generally supportive. For psychological factors, self-confidence stood out with a high mean score of 4.03 (SD = 0.70), reinforcing its importance as a driver of motivation.

Athletes' own motivation levels were also measured directly. Items assessing commitment to training showed relatively high averages, such as 3.94 (SD = 0.73) for the statement "I am motivated to train to improve myself." Similar results appeared in other items related to persistence and competitive ambition, reflecting that participants were generally motivated to sustain their involvement in basketball.

The consistently high means (3.9–4.1) may indicate a ceiling tendency, which is common in self-report Likert scales and may reflect social desirability or acquiescence, especially in collectivist team settings. Although this does not invalidate the findings, it suggests that the variance among predictors may have been restricted.

Correlation analysis provided further insight into the relationships between independent variables and motivation. The correlation coefficients showed that self-confidence had the strongest association with motivation, with values reaching .882, .866, and .860 across different measures. This suggests that athletes with higher confidence were consistently more motivated to participate, train, and compete. Other factors, such as teammate support, family encouragement, and coach guidance, showed moderate to high positive correlations, confirming their supportive but secondary roles. Environmental conditions such as facilities also correlated positively, suggesting that a well-prepared training environment complements social and psychological supports.

The regression model demonstrated a high level of explanatory power, with $R = .952$ and $R^2 = .905$, indicating that 90.5% of the variation in motivation could be explained by the five independent variables. The adjusted R^2 value of .900 confirmed the robustness of the model. The very high R^2 (.905) should be interpreted cautiously, as self-report data with conceptually overlapping constructs can artificially inflate model fit. The ANOVA test further showed the model to be statistically significant ($F = 180.098$, $p < .001$). Among the predictors, only self-confidence was statistically significant, with a standardized beta coefficient of 0.918 ($t = 11.456$, $p < .001$). Family support ($\beta = -0.234$, $p = 0.374$), coach guidance ($\beta = 0.198$, $p = 0.481$), teammate support ($\beta = -0.035$, $p = 0.636$), and training facilities ($\beta = 0.101$, $p = 0.383$) did not reach significance, although their positive or near-zero coefficients indicated that they contributed indirectly. The unexpected negative beta weights for family and teammate support likely reflect suppression caused by shared variance among predictors rather than true negative effects. Bivariate correlations remain positive, indicating no substantive negative influence.

The regression equation derived from the analysis was:

$$\text{Motivation (Y)} = 0.371 + (-0.190)(\text{Family support}) + 0.159(\text{Coach guidance}) + (-0.034)(\text{Teammate support}) + 0.086(\text{Training facilities}) + 0.866(\text{Self-confidence})$$

This model shows clearly that self-confidence had the greatest weight in influencing athletes' motivation, while other factors contributed less substantially. The negative coefficients for family support and teammate support may indicate contextual variations, suggesting that when self-confidence is accounted for, these social factors may not have the same direct impact on motivation. Nonetheless, their correlations suggest that they remain important in creating an enabling environment, even if their direct predictive power is weaker in the statistical model.

2. Results from the A Semi-Structured interview

Data were collected from 10 randomly selected athletes out of 100 participants through semi-structured interviews, conducted between April 22 and May 14, 2025. The details are as follows.

Table 2 Results from A Semi-Structured Interview on Motivation for Playing Basketball with 10 Students

Student	Family support	Role of coaches and teammates	Training facilities and environment	Future basketball goals	Biggest inspiration
Student 1	My parents always encouraged me to pursue basketball.	Encouragement from my captain always boosts my confidence.	Old equipment sometimes lowers my motivation.	I hope to get a scholarship through basketball.	Seeing pro players on TV drives me to work harder.
Student 2	I had little support at first, but they now appreciate my effort.	Teammates are like my second family and keep my energy high.	Having new equipment recently made training more effective.	My goal is to lead my team to win the university cup.	The joy of improving every day inspires me.
Student 3	My family watches every game I play and cheers me on.	We practice hard together and that strengthens our bond.	Old equipment sometimes lowers my motivation.	I aim to become a professional basketball coach.	The support from my friends keeps me going.
Student 4	My parents always encouraged me to pursue basketball.	Constructive feedback from the coach helps me grow.	Sometimes the court is overcrowded and reduces focus.	My goal is to lead my team to win the university cup.	Seeing pro players on TV drives me to work harder.
Student 5	My brother inspired me by playing with me since childhood.	Teammates are like my second family and keep my energy high.	Having new equipment recently made training more effective.	I hope to get a scholarship through basketball.	Winning and being part of a team motivates me.
Student 6	My parents always encouraged me to pursue basketball.	Teammates are like my second family and keep my energy high.	Old equipment sometimes lowers my motivation.	I aim to become a professional basketball coach.	I love the challenge and pushing my limits.
Student 7	My parents always encouraged me to pursue basketball.	We practice hard together and that strengthens our bond.	Sometimes the court is overcrowded and reduces focus.	I hope to get a scholarship through basketball.	Seeing pro players on TV drives me to work harder.

Student	Family support	Role of coaches and teammates	Training facilities and environment	Future basketball goals	Biggest inspiration
Student 8	I had little support at first, but they now appreciate my effort.	Constructive feedback from the coach helps me grow.	Having new equipment recently made training more effective.	I aim to become a professional basketball coach.	Seeing pro players on TV drives me to work harder.
Student 9	I had little support at first, but they now appreciate my effort.	Teammates are like my second family and keep my energy high.	The gym is well-equipped, which makes practice enjoyable.	I want to join a national-level team someday.	The joy of improving every day inspires me.
Student 10	My brother inspired me by playing with me since childhood.	We practice hard together and that strengthens our bond.	Having new equipment recently made training more effective.	I want to join a national-level team someday.	Winning and being part of a team motivates me.

From Table 2, semi-structured interviews with 10 students revealed five main motivational factors. Family support played a significant role: most students received encouragement through praise, attendance at games, or inspiration from siblings, while a few noted that initial reluctance at home turned into support after their dedication became clear. Coaches and teammates were described as central, with teammates often seen as a “second family” providing energy and emotional backing, and coaches offering feedback, discipline, and motivation that enhanced both skills and personal growth. Training facilities were mentioned frequently: modernized equipment increased enthusiasm, though limited or overcrowded courts sometimes reduced motivation. Future goals varied across individuals, ranging from scholarships and university championships to careers as professional coaches or national players, all pointing to strong personal drive. Finally, sources of inspiration included professional athletes on television, the joy of daily improvement, the thrill of competition, and the sense of accomplishment through teamwork and winning.

The interview results show that students’ motivation is driven by a combination of internal factors (personal goals and inspirations) and external influences (family, teammates, coaches, and training environment). These factors work together to keep the athletes committed to training and competition.

3. Results from the observation of behavior and environment

The data focused on three key areas: athletes' behavior during training, support from coaches and teammates, and the quality of the training environment. The results are summarized below:

Behavior During Practice

In all four observations, athletes generally demonstrated a high level of focus and attentiveness during training. Most athletes followed the coach's instructions fully, participated actively in teamwork drills, and consistently showed effort in skill development activities. These behaviors reflect strong internal motivation and discipline among the athletes.

Support from Coaches and Teammates

Across all sessions, coaches were seen providing constructive guidance and motivating feedback. Teammates also played an active role in encouraging each other, especially during difficult drills or after mistakes. The environment created by the coaching staff was supportive and not overly stressful, with friendly and constructive interactions observed between athletes and coaches, indicating a strong social support system within the team.

Quality of Facilities and Environment

The facilities were generally appropriate and well-maintained. The practice field was suitable for use, and sufficient equipment was available and ready to use during all sessions. The training environment was clean and safe, and the team atmosphere was highly positive. Athletes were observed to be more motivated in well-equipped and organized settings, especially during the two sessions where new or upgraded equipment was available.

Additional Observation Notes

Some observers noted that competitors demonstrated even greater motivation during the competition, with strong emotional support, cohesion, and teamwork observed within the groups and even on the court. The competitive environment and the audience attentiveness seemed to improve focus and effort during the competition. The results demonstrated the importance of social and environmental conditions on the fundamental and motivational maintenance of university level basketball players.

The motivators to participate in basketball observed during the site visits to Chengdu Sport University demonstrated a great deal of individual, social, and environmental, in this case, training setting and support systems. The training facilitators noted the high levels of intrinsic motivation demonstrated by the athletes through focus, determination, and persistence displayed during the

training sessions for skill enhancement. The feedback and motivation, social or otherwise, contributed by the trainers and the team members themselves in a constructive, non-pressured environment boosted the athletes' determination. The accessibility and quality of training resources also mattered as enthusiasm during training on the upgraded facilities and with training aids was notably higher. Competitions, with audience support, motivationally challenged athletes to demonstrate strong team spirit.

These findings illustrate the role of psychological, social, and environmental factors that interact to create and maintain long-term motivation in university basketball players.

4. Guidelines for promoting and enhancing motivation

Based on the integrated findings from questionnaires, semi-structured interviews, and observations, five strategic intervention areas are proposed to strengthen and sustain basketball motivation among student-athletes. Unlike the previous version, the following guidelines are presented as SMART, evidence-linked, and administratively actionable, with emphasis placed on feasibility and the differential predictive power of each motivational factor.

Competence-Building Interventions (Highest Priority)

Because self-confidence was the only significant predictor in the regression model ($\beta = .918, p < .001$).

Intervention: Implement an 8-week competence-building program incorporating goal-setting, mental imagery, task-focused feedback, and weekly progress reviews.

Owner: Head Coach + Sports Psychology Unit

Timeline: 8 weeks per semester

Cost: Low to moderate (training materials, 1–2 workshops)

Primary KPI: Improvement in self-confidence scores (measured by weekly inventory or adapted SMS items)

Secondary KPIs: Training attendance rate; reduction in dropout intentions

Rationale: Interview data and observations showed that psychological persistence, effort, and resilience were consistently tied to athletes' confidence in their own skills.

Social Support as Contextual Enablers (Not direct predictors but strong correlates)

Family, teammates, and coaches showed strong correlations ($r = .552-.641$) but nonsignificant beta weights, indicating indirect or mediated effects.

Intervention: Establish a Social Support Enhancement Plan, including structured team-building sessions, a “mentor–athlete pairing” system, and periodic parent–coach communication updates.

Owner: Coaching staff + Student Affairs

Timeline: Monthly for team-building; once per semester for parent updates

Cost: Low

Primary KPI: Team cohesion indicators; qualitative feedback

Secondary KPI: Stability of training motivation during competitive periods

Rationale: Although social factors were not statistically significant predictors, qualitative evidence showed they reinforced confidence, persistence, and satisfaction.

Training Environment Optimization (Indirect motivator)

Facilities had strong positive correlations ($r = .588$) but did not predict motivation directly ($\beta = .101$, ns), meaning they act as contextual supports rather than levers.

Intervention: Develop a Facility Readiness Checklist and a quarterly maintenance schedule to ensure cleanliness, safety, adequate lighting, and updated equipment.

Owner: University Sports Facilities Office

Timeline: Quarterly inspections and upgrades

Cost: Moderate (maintenance, replacements)

Primary KPI: Facility readiness score

Secondary KPI: Athlete satisfaction with the training environment

Rationale: Interviewees consistently stated they felt more motivated and focused in well-maintained spaces.

Academic–Athletic Integration Pathways

Qualitative data identified academic goals, scholarships, and career pathways as strong long-term motivators.

Intervention: Create an Academic–Athletic Development Framework that links basketball participation with scholarship consultations, sports career counselling, and workshops with alumni or professional players.

Owner: Academic Services + Athletics Department

Timeline: Two workshops per semester

Cost: Low to moderate

Primary KPI: Participation rate in counselling sessions

Secondary KPI: Athlete retention across academic years

Rationale: Many athletes are motivated by long-term educational or career prospects rather than only training outcomes.

Competition–Based Motivation Reinforcement

Observational data showed that games elevated effort, cohesion, and commitment.

Intervention: Organize a Structured Competitive Cycle, including friendly matches, intra-university mini tournaments, and recognition ceremonies for effort and improvement—not only performance.

Owner: Athletics Department

Timeline: Monthly scrimmages; one tournament per semester

Cost: Low

Primary KPI: Participation and attendance in competitions

Secondary KPI: Team cohesion ratings; qualitative feedback on motivation

Rationale: Competitions provide emotional intensity and recognition that reinforce engagement.

Discussions

The results of this study indicate that Chengdu Sport University basketball players' motivations are multidimensional. Additionally, motivations are a result of psychological, social, and situational contexts. For the quantitative part of the study, self-confidence the strongest predictor of motivations, explaining more than 90 percent of the variance. This was also the case for the qualitative part of the study where interviews and observations showed athletes' psychological persistence, goal-setting, and resilience were bolstered by social factors such as peer support, family encouragement, coaching, and the training resources.

An important pattern emerging from the data is the coexistence of high bivariate correlations alongside the finding that only self-confidence remained significant in the regression model. This apparent contradiction reflects shared variance and construct overlap among predictors, meaning that social and environmental factors correlate strongly with motivation but do not contribute unique predictive power once competence is included. This suggests that these factors may influence motivation indirectly rather than operating as independent drivers.

Psychological Dimensions of Motivation

Self-confidence primarily predicting motivation aligns with Self-Determination Theory (SDT), which lists competence as one of the three basic psychological needs necessary for continuous engagement (Deci & Ryan, 1985; Ryan & Deci, 2020). Higher levels of self-confidence endorsed by athletes were also associated with even greater amounts of intrinsic motivation as evidenced by enhanced enjoyment and goal-setting activities.

These findings align with Pelletier et al. (1995), who demonstrated that intrinsic motivation is closely associated with long-term persistence in sports. They also resonate with Standage et al. (2005), who confirmed that competence and autonomy enhance motivation in educational contexts. The emphasis on self-confidence in this study highlights that psychological resilience is the cornerstone of basketball motivation, particularly in the face of academic and athletic pressures.

Social Influences and Support Systems

While psychological factors were central, social influences emerged as powerful reinforcements of motivation. Peer encouragement and teamwork were highly rated, consistent with Bandura's (1977) social learning theory, which emphasizes the role of observation, modeling, and reinforcement in shaping behavior. Interviews confirmed that encouragement from teammates and mentorship from coaches sustained persistence, particularly during challenging training sessions or competitions.

These findings are in line with Fredricks & Eccles (2004), who showed that parental involvement strongly influences youth sports participation, and Ames (1992), who highlighted the role of motivational climate. Within the Chinese context, Lou et al. (2024) found that family socioeconomic background significantly affected college students' engagement in physical activity, supporting the present study's finding that family encouragement plays a vital role. These results demonstrate that social systems—family, peers, and coaches—create a motivational climate that either strengthens or weakens individual persistence.

These patterns must also be interpreted within the Chinese cultural context, where collectivist norms encourage agreement, harmony, and social conformity. Such norms may increase acquiescent responding and elevate ratings of family or teammate support, contributing to ceiling-leaning mean scores (3.9–4.1). This cultural response tendency may partially inflate correlations while masking unique predictive effects in multivariate models.

Environmental and Institutional Conditions

Environmental factors, particularly facilities and equipment, were also shown to influence motivation. Athletes consistently reported higher focus and enthusiasm in well-maintained and safe environments, while inadequate conditions reduced concentration and enjoyment. These observations support the SDT concept of relatedness and autonomy, in that athletes feel more motivated when they are situated in environments that support their needs.

The significance of environmental conditions in this study parallels findings by Wang et al. (2024a), who demonstrated that the Tactical Games Model enhanced motivation by making training more engaging and relevant. Wang et al. (2024b) similarly confirmed that team cohesion was closely tied to sustained participation in Chinese university basketball. Furthermore, Li and Xing (2025) highlighted the importance of coaching leadership styles, finding that supportive and autonomy-enhancing leadership fosters stronger motivation. The convergence of these studies underscores the role of institutional and environmental structures in shaping motivation, confirming that motivation is not solely an internal phenomenon but also an outcome of contextual conditions.

Interactions Between Psychological, Social, and Environmental Factors

The integrated patterns across quantitative and qualitative data imply that competence may serve as the proximal mechanism through which social and environmental supports shape motivation. In SDT terms, relatedness and autonomy-supportive contexts appear to strengthen motivation largely by enhancing athletes' perceived competence. This finding offers a theoretical contribution suggesting that a mediated SDT model may more accurately capture motivational processes among university basketball players.

This study shows that psychological, social, and environmental factors work together to strengthen motivation. Self-confidence remains central, but it grows when athletes receive encouragement from peers and coaches and train in supportive, well-equipped settings. Athletes who feel competent and supported persist longer, whereas academic pressure or poor facilities reduce motivation—even when initial confidence is high.

These patterns align with Self-Determination Theory and social learning theory, which view motivation as multidimensional and shaped by context. The findings point to an integrated program design: build psychological resilience, cultivate a strong sense of belonging through team and coach support, and provide safe, modern training environments. Together, these elements reinforce one another and sustain athletes' motivation over time.

Integrated Interpretation of Quantitative and Qualitative Findings

Table 3 Joint Display Integrating SDT Constructs, Quantitative Findings, and Qualitative Themes

SDT Construct	Quantitative Findings (from file)	Qualitative Themes (from Table 2)	Integrated Interpretation
Competence (Self-confidence)	$r = .882^*$ (strongest correlation) $\beta = .918$, $p < .001$ (only significant predictor)	Students emphasized confidence in skills, performance, and improvement. Example theme: <i>"Confidence keeps me motivated to train harder."</i>	Strong convergence across methods. Self-confidence is the primary mechanism driving motivation, explaining its unique predictive power in the regression model.
Relatedness (Family Support)	$r = .552^*$, $\beta = -.234$ (ns)	Family provides emotional encouragement and general support. Theme: <i>"My family supports me emotionally, but they are not directly involved in training."</i>	Positive correlation but nonsignificant beta suggests indirect influence. Qualitative data show family acts as background emotional support rather than a direct motivator of performance.
Relatedness (Teammate Support)	$r = .641^*$, $\beta = -.035$ (ns)	Teammates motivate, encourage, and create a sense of belonging. Theme: <i>"My teammates motivate me to continue even when training is tough."</i>	Strong correlations but suppressed regression effects result from overlapping variance with self-confidence. Qualitative themes confirm teammates influence motivation indirectly through emotional and social reinforcement.
Autonomy Support (Coach Guidance)	$r = .602^*$, $\beta = .198$ (ns)	Coaches guide, discipline, and structure training. Theme: <i>"The coach's feedback keeps me focused and disciplined."</i>	Qualitative insights highlight meaningful guidance, but the statistical effect is modest. Suggests coaching shapes motivation indirectly through structure and competence-building rather than direct prediction.
Environmental Support (Training Facilities)	$r = .588^*$, $\beta = .101$ (ns)	Facilities and practice environment enhance comfort and training efficiency. Theme: <i>"Good facilities make practice easier and more enjoyable."</i>	Environmental factors support participation but are not strong direct predictors. Their influence appears to operate by improving training experience rather than directly driving motivation.

The integrated analysis shows that competence, represented through self-confidence, is the central mechanism explaining basketball motivation among student-athletes. Quantitative results identified self-confidence as the only significant predictor, and qualitative themes strongly reinforced its importance by illustrating how confidence shapes persistence, effort, and enthusiasm for training. Although family support, teammate support, coach guidance, and training facilities demonstrated moderate to strong positive correlations with motivation, their nonsignificant or negative regression coefficients suggest suppression effects caused by shared variance with self-confidence rather than genuine negative relationships. Qualitative themes help clarify this pattern by revealing that social and environmental supports function primarily as indirect or background influences that enhance athletes' emotional readiness and training experience, while competence remains the proximal factor driving actual motivational commitment.

Implications for Chengdu Sport University and Chinese Higher Education

The findings have practical implications for Chengdu Sport University and similar institutions. First, the central role of self-confidence suggests integrating psychological skills training into routine practice—for example, structured goal-setting, resilience building, and mental-toughness workshops. Second, because social support is critical, programs should intentionally involve families, peers, and coaches to create a positive motivational climate through coordinated communication and team-building activities. Third, investments in facilities and training environments are not merely logistical issues but fundamental to sustaining athlete motivation.

These insights also contribute to broader debates in Chinese higher education. With increasing academic pressures, universities must create systems that integrate sports with academic and career pathways, ensuring that athletic participation is not perceived as competing with academic achievement but rather as complementary. Such integration can sustain motivation and ensure that basketball remains a vibrant part of student life.

New Knowledge from Research

The paper identifies that basketball motivation among university athletes is shaped by psychological, social, and environmental factors. Self-confidence emerged as the strongest predictor of sustained participation, supported by family, coaches, teammates, and training environments. These findings provide a multidimensional framework that informs guidelines for enhancing and sustaining basketball motivation.

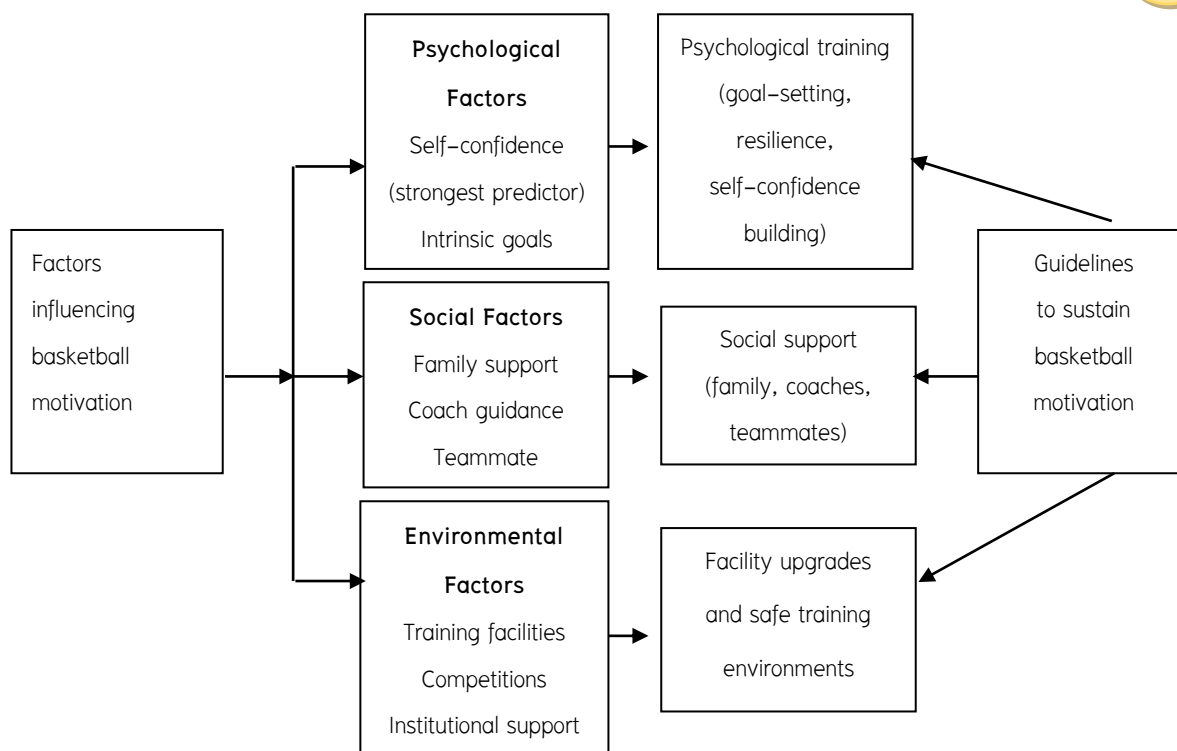


Figure 2 Flow Chart of Research Knowledge on Basketball Motivation

Conclusion

The findings of this study indicate that basketball motivation among athletes at Chengdu Sport University is shaped by an interplay of psychological, social, and environmental factors, with self-confidence emerging as the strongest and most consistent predictor across the quantitative and qualitative data. Although family support, coach guidance, teammate support, and facility suitability did not demonstrate unique predictive effects in the regression model, their moderate to high bivariate correlations suggest that they may contribute indirectly by reinforcing athletes' broader motivational climate. Qualitative insights further showed that athletes viewed personal belief, goal clarity, encouragement from significant others, and supportive training environments as central elements that sustain their engagement.

These findings should be interpreted with caution, as the study was conducted at a single sports university and relied on self-report data, which limits the generalizability of the conclusions to other institutional or cultural contexts. The cross-sectional design also prevents firm inferences about causal pathways among the measured variables.

Despite these limitations, the results offer several practical implications for stakeholders. For coaches, integrating structured goal-setting sessions, confidence-building feedback, and autonomy-supportive communication may help strengthen athletes' perceived competence and enjoyment. For program directors, designing curricula that link basketball participation with academic pathways, scholarships, or professional development may provide athletes with clearer long-term incentives. For facilities managers, ensuring that training spaces are safe, well-maintained, and adequately equipped can enhance daily engagement and create conditions that support motivation. Together, these evidence-informed strategies can help cultivate a more holistic and sustainable motivational environment for university basketball athletes.

Suggestions

1. Psychological Skills Training

Implement an 8–10 week program focusing on goal-setting, visualization, and emotional regulation, with pre/post assessments using validated scales and booster sessions later in the semester. Track improvements in confidence scores and training attendance.

2. Coaching Development

Provide training on autonomy-supportive coaching and constructive feedback. Use observational rubrics and 360-degree athlete feedback to monitor progress, with outcomes measured through athletes' perceived coach support.

3. Team Climate Enhancement

Establish peer-mentoring pairs, structured post-training debriefs, and cohesion-building drills. Evaluate effectiveness through cohesion surveys and observed cooperation during training.

4. Facility and Environment Improvements

Conduct user-informed facility audits and implement phased upgrades. Monitor facility quality via equipment uptime logs and athlete satisfaction regarding safety and usability.

5. Academic and Career Integration

Develop scholarship pipelines, alumni mentorship, and dual-career counseling. Track outcomes such as scholarship uptake, program retention, and students' perceived academic and career value.

Limitations

Several limitations should be acknowledged. First, the purposive sampling of a single institution limits generalizability, as the motivational dynamics of Chengdu Sport University may not reflect those of other Chinese universities. Second, the cross-sectional design prevents causal inference, making it unclear whether self-confidence increases motivation or improves as a result of participation. Third, the exclusive use of self-report surveys raises concerns about common-method variance and social desirability, particularly in collectivist cultural settings. The unusually high R^2 also suggests possible construct overlap or measurement inflation. Finally, qualitative data were limited to ten interviewees, which may not fully capture the diversity of motivational experiences among student-athletes.

Future Research

Future studies should address these limitations through multi-site sampling across different regions and institutional types, allowing for broader comparisons. Longitudinal designs would help clarify causal pathways between competence, social support, and sustained motivation. Structural equation modeling (SEM) is recommended to formally test mediated SDT models and evaluate indirect pathways suggested by the present findings. Experimental or quasi-experimental interventions, such as coaching style modifications, competence-building programs, and facility enhancements, could provide stronger evidence for practical strategies that enhance athlete motivation. Additionally, incorporating objective performance metrics, behavioral indicators, and digital training logs may reduce sole reliance on self-report measures.

References

- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology*, 84(3), 261–271. <https://doi.org/10.1037/0022-0663.84.3.261>
- Bandura, A. (1977). *Social learning theory*. Prentice Hall.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum.
- Deng, S., Zhan, X., Lyu, C., & Jamalsafri, B. (2023). Sports motivation in Chinese college students: A systematic review. *Heliyon*, 9(12), e22518. <https://doi.org/10.1016/j.heliyon.2023.e22518>

- Fredricks, J. A., & Eccles, J. S. (2004). Parental influences on youth involvement in sports. In M. R. Weiss (Ed.), *Developmental sport and exercise psychology: A lifespan perspective* (pp. 145–164). Fitness Information Technology.
- Guan, W., & Xuan, W. (2025). Investigation on the development of three person basketball match in Chengdu colleges and universities. *International Journal of Education and Humanities*, 5(4), 819–828. Retrieved from <https://i-jeh.com/index.php/ijeh/article/view/381>
- Li, J., & Xing, S. (2025). Direct and indirect effects of coaching leadership style on athlete engagement. *Frontiers in Psychology*, 16, 1531049. <https://doi.org/10.3389/fpsyg.2025.1531049>
- Lou, L., Zhu, Z., Huang, Y., Liang, L., & Li, H. (2024). *Effects of family socioeconomic status on college students' physical activity and the mediating effects of parental exercise habits*. Critical Public Health. Advance online publication. <https://doi.org/10.1080/09581596.2024.2438655>
- Maslow, A. H. (1970). *Motivation and personality* (2nd ed.). Harper & Row.
- Morris, A. (2004). *Marrow of the nation: A history of sport and physical culture in Republican China*. University of California Press.
- Pelletier, L. G., Fortier, M. S., Vallerand, R. J., Tuson, K. M., Brière, N. M., & Blais, M. R. (1995). Toward a new measure of intrinsic motivation, extrinsic motivation, and amotivation in sports: The Sport Motivation Scale (SMS). *Journal of Sport and Exercise Psychology*, 17(1), 35–53. <https://doi.org/10.1123/jsep.17.1.35>
- Qi, L., & Ali, H. H. B. M. (2024). Research on relationship between basketball skills and social ability among male university students in Jiangxi, China. *International Journal of Academic Research in Business and Social Sciences*, 14(12), 3827–3836. <https://doi.org/10.6007/IJARBS/v14-i12/24347>
- Ryan, R. M., & Deci, E. L. (2020). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Press.
- Standage, M., Duda, J. L., & Ntoumanis, N. (2005). A test of self-determination theory in school physical education. *British Journal of Educational Psychology*, 75(3), 411–433. <https://doi.org/10.1348/000709904X22359>
- Wang, J., Chee, C. S., & Samsudin, S. (2024a). Enhancing university students' motivation in basketball courses through Tactical Games Model. *Behavioral Sciences*, 14(7), 515. <https://doi.org/10.3390/bs14070515>

Wang, L., Xu, J., & Liu, Y. (2024b). The impact of team cohesion on athlete engagement in collegiate basketball leagues: The moderating role of paternalistic leadership. *Frontiers in Psychology, 15*, 1473506. <https://doi.org/10.3389/fpsyg.2024.1473506>