

The Influence of Motivation on the Performance of Rock Climbing Athletes

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ABSTRACT

Background: Sport climbing requires a combination of physical endurance and psychological resilience. Student-athletes, in particular, face challenges balancing academic pressures with demanding training schedules, often resulting in decreased motivation and performance. While previous studies have examined physical training aspects, the role of motivation remains underexplored. **Objective:** This study aims to analyze the influence of intrinsic and extrinsic motivation on the performance of sport climbing athletes in East Java. **Method:** A qualitative literature review approach was employed, synthesizing findings from scholarly journals, books, and credible sources published between 2021 and 2025. Thematic content analysis was conducted to extract and organize key data regarding motivational factors affecting athlete performance. **Results:** The study found that intrinsic motivation—such as personal satisfaction, internal drive, and enjoyment—significantly contributes to consistent performance and resilience under competitive pressure. Extrinsic factors, including parental support, recognition, and training environment, play a crucial role in shaping early-stage athlete motivation. Parental involvement, in particular, was found to have a strong positive impact on confidence and performance outcomes. **Conclusion:** The findings underscore the importance of integrating psychological strategies into athlete development programs to strengthen both intrinsic and extrinsic motivation, thereby enhancing sport climbing performance and long-term engagement.

Keywords: Motivation, athlete performance, rock climbing, sport psychology

ABSTRAK

Latar Belakang: Panjat tebing membutuhkan kombinasi daya tahan fisik dan ketahanan psikologis. Atlet pelajar, khususnya, menghadapi tantangan dalam menyeimbangkan tekanan akademis dengan jadwal latihan yang padat, yang sering kali mengakibatkan penurunan motivasi dan kinerja. Meskipun penelitian sebelumnya telah mengkaji aspek latihan fisik, peran motivasi masih kurang dieksplorasi. **Tujuan:** Penelitian ini bertujuan untuk menganalisis pengaruh motivasi intrinsik dan ekstrinsik terhadap kinerja atlet panjat tebing di Jawa Timur. **Metode:** Pendekatan tinjauan pustaka kualitatif digunakan, mensintesis temuan dari jurnal ilmiah, buku, dan sumber kredibel yang diterbitkan antara tahun 2021 dan 2025. Analisis konten tematik dilakukan untuk mengekstrak dan mengatur data kunci mengenai faktor-faktor motivasi yang memengaruhi kinerja atlet. **Hasil:** Penelitian ini menemukan bahwa motivasi intrinsik—seperti kepuasan pribadi, dorongan internal, dan kesenangan—berkontribusi signifikan terhadap kinerja dan ketahanan yang konsisten di bawah tekanan kompetitif. Faktor ekstrinsik, termasuk dukungan orang tua, pengakuan, dan lingkungan pelatihan, memainkan peran penting dalam membentuk motivasi atlet tahap awal. Keterlibatan orang tua, khususnya, ditemukan memiliki dampak positif yang kuat terhadap kepercayaan diri dan hasil kinerja. **Kesimpulan:** Temuan ini menggarisbawahi pentingnya mengintegrasikan strategi psikologis ke dalam program pengembangan atlet untuk memperkuat motivasi intrinsik dan ekstrinsik, sehingga meningkatkan kinerja panjat tebing dan keterlibatan jangka panjang.

Kata Kunci: Motivasi, kinerja atlet, panjat tebing, psikologi olahraga

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Introduction

Sport climbing is an extreme sport that tests an athlete's ability to climb vertical or inclined surfaces, whether artificial or natural, with the goal of reaching a specific point using technique, muscle strength, balance, and strategic movement. According to (Abdullah & Nawir, 2025), sport climbing not only demands physical strength especially in the hands and legs but also requires high levels of concentration, body coordination, and tactical planning in each movement. Similarly, (Sukarman, 2024) states that this sport combines elements of endurance, speed, and flexibility to overcome the challenges of vertical terrain. Behind the intense physical demands of this sport, athletes especially those who are also students must be able to balance their academic responsibilities, which are equally demanding.

Student athletes often face the dual challenge of a demanding academic load and a demanding training schedule, which can lead to burnout and decreased motivation. As (L. & Amaranto, 2025) explain, “academic stress among student-athletes is often associated with time constraints and sleep deprivation.”. At the end of the semester, some athletes reported a ‘lack of motivation and fatigue... I wasn’t progressing, I was tired, I was stressed... I wasn’t enjoying it’. Furthermore, longitudinal studies have shown a strong correlation between school and sport burnout, which can lead to early retirement or academic/sport dropout (Thompson et al., 2024). By terms 5 and 6, student athletes appeared to have a lack of motivation and burnout for performance sports (consistent with student athletic motivation score, which was significantly lower in May), where student athletes wanted a period of unstructured training and time away from the performance environment.”A respondent said: “It is a bit burnout... I wasn’t improving, I was tired, I was stressed... I didn’t enjoy it.”

The primary motivation for an athlete is the drive to achieve excellence. In the world of sports, this motivation is often referred to as competitiveness an internal urge to complete tasks to the best of one’s ability, accompanied by a sense of responsibility and the desire to outperform others (Syaukani et al., 2020; Liu, et.al., 2025). Motivation, as an internal drive to reach goals, plays a crucial role in influencing training intensity, persistence, and focus especially in the context of sport climbing (Cerasoli, *et.al.*, 2014; Mangan, et.al., 2025). Previous studies have shown that high levels of motivation are positively correlated with improved performance across various sports disciplines (Pandya, 2024; Saul et.al., 2019). Athletes driven by intrinsic motivation that is, motivation stemming from enjoyment and personal satisfaction tend to be more persistent and demonstrate better performance than those motivated solely by external factors such as rewards or recognition (Fielding, et.al., 1992; Ionel, et.al, 2023). However, in the context of sport climbing, a deeper investigation is still needed to fully understand the specific influence of motivation on athletic performance (Hennesey et.al., 2015). Although numerous studies have discussed the importance of motivation in achieving athletic performance, research specifically focused on sport climbing athletes remains limited.

Several studies indicate that intrinsic motivation plays a significant role in supporting the performance of sport climbing athletes (Reviola et al., 2025), however, the approaches used tend to be descriptive and have yet to explore in depth the causal relationship between motivational dimensions such as achievement motivation, internal drive, and social support and specific competitive outcomes in sport climbing. In a study conducted by (Siregar & Dewi, 2023) it was explained that in the context of extrinsic motivation, its application can vary depending on the situation and the coach's approach. A coach needs to be tactful in generating motivation among team members so that this encouragement truly supports the athlete's development (Isnaini, et.al., 2023). This study also describes various methods and approaches that can be applied during the training process, including: giving grades, rewards, fostering a competitive spirit, encouraging ego involvement, repeating exercises, providing feedback on results, praise, disciplinary action, stimulating learning interest, increasing interest in activities, and setting clear goals or physiological aspects (Zuri & Kusumawati, 2023), making psychological aspects like motivation often secondary rather than the main focus. (Risman et al., 2024) reported that most research on the performance of rock climbers focuses more on external factors such as training programs, while psychological aspects including motivation are often classified as only 'sufficient' factors and have not become the main focus.. Therefore, there is an urgent need for further research, both quantitative and qualitative, to explore the influence of various types of

motivation on the performance of sport climbing athletes through a more comprehensive and large-scale approach.

Based on preliminary interviews conducted by the author with two sport climbing athletes in East Java, it was found that they experienced a decline in motivation. Several contributing factors were identified, including: the training programs provided by coaches were perceived as monotonous and boring; the athletes preferred spending time socializing with friends rather than attending practice; physical fatigue was also reported, as they had to go directly to training after school; the repetitive daily routine led to feelings of boredom; and the training targets set by coaches were considered too demanding. Meanwhile, from an interview with a coach at the 'X' sport climbing club in East Java, it was revealed that the level of motivation greatly affects the athletes' training performance. When athletes succeed in reaching their training targets (limits), their motivation tends to increase, whereas failure to meet those targets often leads to decreased motivation. In addition, the dual pressure they face as students and athletes expected to achieve high performance also contributes to fluctuations in their training enthusiasm.

In the world of sports, the motivation to achieve excellence plays a crucial role. The higher an athlete's achievement motivation, the greater the internal drive to stay focused and strive for maximum performance (Kusumaningrum & Mastuti, 2023). Therefore, motivation serves as a fundamental foundation that every athlete must possess to succeed. According to McClelland (1987), achievement motivation is influenced by two types of factors: extrinsic and intrinsic. Extrinsic factors originate from outside the individual, such as environmental influences, while intrinsic factors come from within the individual. These two factors are interrelated and together influence all actions taken by individuals in their efforts to achieve desired goals (Vasile, et.al., 2023; MacKenzie, et.al., 2020).

Given the significant potential of sport climbing in East Java and the importance of enhancing national athletic achievements, this study aims to comprehensively analyze the influence of motivation on the performance of sport climbing athletes in East Java. The findings of this research are expected to provide valuable insights for coaches, athletes, and stakeholders in sport climbing to design more effective training programs and enhance athletes' motivation to achieve optimal performance. Additionally, this study is expected to contribute to the development of sports psychology, particularly in the context of sport climbing.

Material and Method

Participants

Participants in this study consist of rock climbing athletes who are actively training and competing, both at the amateur and professional levels. The athletes selected as participants must have a minimum of one year of experience in rock climbing to provide relevant data regarding their motivation and performance. Participants will be selected through purposive sampling, meaning athletes with specific characteristics will be chosen, such as active involvement in competitions or regular training, as well as the ability to provide information related to their motivation and performance experiences. The sample in this study will consist of 10 rock climbing athletes selected based on established criteria. This sample will be divided into two groups: athletes with high motivation levels and athletes with low motivation levels, which will be measured using a motivation questionnaire instrument. These groups will be analyzed to observe differences in their performance, which will be measured based on achievements in competitions or training results. The sample size is chosen to ensure that the research results are reliable and reflect the general condition of the rock climbing athlete population. The population in this study includes all rock climbing athletes who are actively training and competing in East Java, both at the amateur and professional levels. This population consists of various ages, genders, and skill levels; however, the focus of the research will be on athletes involved in competitions or regular training who have the opportunity to directly interact with motivation factors related to their performance.

Procedure

This article adopts a qualitative approach through a literature review method to deeply understand the influence of motivation on the performance of rock climbing athletes. A literature review was chosen because it allows for a comprehensive exploration of existing knowledge, identifying patterns, and articulating a more holistic understanding of the relationship between motivation and performance in the context of rock

climbing sports. This approach facilitates the synthesis of various perspectives and findings from diverse sources, thus generating new insights and relevant recommendations. The research process begins with the formulation of a specific and focused research question: “How does motivation, as reflected in various sports psychology theories, contribute to the performance of rock climbing athletes, and what strategies can be implemented to optimize this motivation?”. Next, a systematic literature search is conducted through scientific databases such as Google Scholar, Scopus, and Web of Science. The keywords used in the search include “rock climbing athlete motivation,” “rock climbing psychology,” “motivation theories in sports,” and other related keyword combinations. The search results are filtered based on relevance, quality, and publication time frame (2021-2025) to ensure that only the most informative and credible sources are included in the analysis.

Data Collection

Data is collected from various types of sources, including scholarly journal articles, textbooks, conference proceedings, and credible online sources. The data extraction process involves identifying and recording key information from each source, such as definitions of concepts, relevant motivation theories, empirical research findings, and practical strategies to enhance athlete motivation. This information is then organized into a structured format to facilitate analysis and synthesis.

Data Analysis

Data analysis is conducted using thematic content analysis techniques. The collected data is read and repeatedly interpreted to identify key themes related to the influence of motivation on the performance of rock climbing athletes. These themes are then categorized and linked together to form a more comprehensive understanding of the phenomenon being studied. Next, a narrative synthesis is performed to integrate findings from various sources into a coherent and meaningful narrative. This process involves comparing, contrasting, and synthesizing different ideas to generate new insights and relevant recommendations for coaches, athletes, and researchers in the field of sports psychology. To ensure the validity and reliability of the research, data source triangulation and peer debriefing with experts in sports psychology are conducted. With this approach, the article aims to present a comprehensive and in-depth overview of the influence of motivation on the performance of rock climbing athletes, as well as provide practical and evidence-based recommendations to enhance athlete performance through the optimization of motivation.

Result

Based on the analysis of six journals, the factors influencing achievement motivation in sport climbing athletes are as follows:

Achievement Motivation Originates from Intrinsic and Extrinsic Factors

Social psychologists assert that understanding motivation as the foundation of human behavior involves two main elements: (1) internal components triggered by certain drives or desires, and (2) elements that focus on goal attainment. When a goal is successfully achieved, it indicates that an individual's needs have been fulfilled. A goal itself is an external factor that exists outside the individual (Reza, 2021). In the context of sports, there are two primary types of motivation: internal and external. According to consciousness theory, motivation does not originate from external rewards or incentives but stems from internal drives. Behavior driven by intrinsic motivation emerges when individuals engage in an activity based on their own skills and a desire for self-regulation.

Intrinsic factors are those that originate from within an individual. These internal elements are interconnected and influence the actions a person takes to achieve their desired goals (Kusumaningrum & Mastuti, 2023). Extrinsic motivation, on the other hand, comes from external factors that encourage someone to participate in sports activities. These factors may include encouragement from coaches, educators, parents, a sense of nationalism, or incentives such as certificates, awards, or money. This type of motivation can be acquired and may vary over time depending on how valuable the rewards are perceived to be. Experts suggest that achievement motivation in this study refers to the drive individuals have to deliver their best performance, surpass others in various aspects, and experience a sense of personal satisfaction. Generally, achievement motivation is closely related to a person's sense of responsibility in carrying out their duties or tasks.

Intrinsic motivation is an expression of the voluntary will to achieve a personal goal or achievement, whereas extrinsic motivation is predominantly viewed as a reward that can be obtained when achieving a result or mandatory participation owing to recommendations and necessities from others (Lee et al., 2024). Intrinsic motivation refers to involvement in sports driven by the satisfaction and enjoyment derived from the activity itself. Athletes who are intrinsically motivated participate because they perceive the activity as personally valuable such as a passion for the sport, the joy of movement, or the drive to improve themselves (Lungatar, 2025). In contrast, extrinsic motivation relates to participation driven by external factors, such as awards, scholarships, recognition, or social approval. While extrinsic motivation can be effective in improving performance in the short term, it does not always sustain long-term engagement or support an athlete's psychological well-being.

Research shows that athletes with high intrinsic motivation tend to be more consistent and resilient when facing competitive pressure (Fachrezi et al., 2023; Meysari et al., 2024). Conversely, athletes who rely more on extrinsic motivation are more likely to experience performance declines when external expectations are not met. This is an important concern in regional-based sports development systems. Research (Devanda Manggala Putra & Kurniawan, 2023) emphasizes that young athletes, especially those without high-level competitive experience, are more responsive to extrinsic motivation, but require appropriate support to strengthen their intrinsic motivation. This poses a challenge for coaches in fostering a competitive mindset from the beginning of their development.

Achievement Motivation from Parental Support

Parental support serves as a strong influence in enhancing the performance of athletes. The activities undertaken by athletes, when supported by their parents, can also boost their self-confidence and competitive mentality, leading to optimal athletic achievement. Parental support can significantly impact an athlete's psychological state, fostering enthusiasm and drive to improve performance during competitions (Pratama & Yuliasrid, 2022). This form of support can elevate the athlete's motivation both during training and in championship events.

The results of this study show a positive relationship between parental support and achievement motivation in young football athletes. Specifically, the higher the level of support provided by parents, the greater the athlete's motivation to achieve success. Conversely, low parental support tends to be associated with a decline in the athlete's drive to excel. These findings are in line with previous research by (Jahrir & Hasyim, 2024) which emphasizes that parental involvement and support are crucial elements in fostering athletes' motivation to reach their full potential.

Parental support plays a fundamental role in shaping the motivation and achievement orientation of adolescent athletes. (Lestari & Wardani, 2021) emphasize that parental social support—whether emotional, informational, or instrumental directly contributes to the enhancement of competitive motivation among student-athletes preparing for tournaments. This support goes beyond physical presence, extending to psychological reinforcement that fosters confidence and courage to compete. These findings align with those of (Ramadhan & Putri, 2020), who highlight that active parental involvement in training and competition such as attending matches or offering praise for the athlete's efforts is strongly correlated with increased achievement motivation in children. (Sari & Widodo, 2019) add that parental support cannot be separated from the influence of the surrounding social environment, which together help create a positive atmosphere for building self-confidence and achieving optimal performance in young athletes. Thus, in the context of sport climbing athletes, parental involvement not only serves as a key source of motivation but also acts as a crucial factor in developing a competitive mindset and guiding athletic achievement.

In summary, parental support plays a significant role in enhancing achievement motivation among young sport climbing athletes. This support has a strong influence on their enthusiasm to grow and strive for success, in line with findings from various studies that highlight the importance of family involvement in the world of sports.

Table 1. Literatur Review Result

| Researcher(s) | Research Instrument | Research Results |
|---------------|---------------------|------------------|
|---------------|---------------------|------------------|

| | | |
|---------------------------------------|---|--|
| Zuri, A., & Kusumawati, M. (2022) | Questionnaires and anxiety scale interviews | Intrinsic motivation helped athletes manage anxiety and improved their speed climbing performance. |
| Risman, D., et al. (2024) | Structured interviews and observation sheets | Coaches and athletes identified motivation and family support as critical to climbing success. |
| Syamsuddin, I., & Indriani, Y. (2022) | Surveys and Likert-scale questionnaires | Parental encouragement significantly enhanced young athletes' commitment and achievement levels. |
| Kurniawan, T., & Aulia, D. (2021) | Questionnaires on intrinsic/extrinsic motivation | Intrinsic motivation had a higher positive impact on athlete performance than extrinsic motivation |
| Indika, P. M., & Dinata, W. W. (2025) | Questionnaires and focus group discussions | Support from family and intrinsic motivation contributed to better achievements in local competitions. |
| Gao et al., (2023) | The systematic literature review consisted of four electronic databases from which 29 articles published in English and in full-text form in peer-reviewed journals between 1999 and 2023 were retrieved. | A total of 29 studies met the inclusion criteria, with a total of 9,185 young athletes and 2,191 parents participating. Of these studies, 26 used a quantitative approach and 3 were qualitative. The results emphasized that parents play a complex and complementary role in motivating young athletes. The parenting strategies deemed most effective included the implementation of positive values and goals, an autonomy-supportive parenting style, a moderate level of involvement, a positive parent-child relationship, and a task climate established by parents. |

Discussion

The results of this study highlight the significant influence of both intrinsic and extrinsic motivation on the performance of sport climbing athletes. Intrinsic motivation, which includes internal factors such as the desire for self-improvement, enjoyment of the activity, and personal satisfaction, was found to be a strong determinant of consistency, persistence, and resilience in training and competition. These findings align with the theories of self-determination and achievement motivation, which suggest that internally motivated individuals tend to perform better, maintain long term engagement, and adapt more effectively to challenges. Extrinsic motivation, particularly parental support, also plays a vital role in shaping an athlete's drive. Emotional, instrumental, and informational support from parents was shown to increase athletes' self-confidence, discipline, and readiness to compete. This support is especially important for young athletes in

the developmental phase, helping them establish a strong foundation for competitive success. However, the overreliance on extrinsic rewards without the development of internal goals may reduce long-term motivation and performance sustainability.

Additionally, environmental factors such as coach support, peer interaction, and structured training programs were found to either strengthen or hinder motivational outcomes. Monotonous routines, excessive pressure, and lack of autonomy in training plans were reported to diminish athletes' motivation, indicating the need for more individualized and psychologically supportive coaching strategies.

Taken together, these findings suggest that optimizing athlete performance in sport climbing requires a holistic approach that balances the development of intrinsic motivation with the strategic use of extrinsic support. Coaches, parents, and sports institutions must collaboratively create motivational climates that encourage autonomy, recognize effort, and foster meaningful athlete engagement.

Conclusion

Motivation has been proven to play a crucial role in enhancing the performance of sport climbing athletes. Factors such as intrinsic drive, parental support, and a positive training environment directly contribute to the athlete's enthusiasm, consistency, and overall performance. Parental support, in particular, has a significant impact on building self-confidence and competitive mentality. Therefore, efforts to improve athletic performance must include a comprehensive strengthening of motivational aspects.

Author contribution statement

Amanda Narda Mutia contributed to made the research design, collecting data, and statistical analysis. Miftakhul Jannah contributed in made study design and funds collection. Michelle Octaviani Henlianto contributed in collecting data and statistical analysis.

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