

## The Influence of Motivation, Family Factors, and Environment on the Sports Performance of Track and Field Athletes at the Central Java PPLP

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### Abstract

Student achievement is influenced by various internal and external factors, among which motivation, family, and environment play significant roles. This study aims to examine the effect of these three factors on student achievement, specifically focusing on athletic performance in track and field athletes of PPLP Central Java. The research employed a quantitative approach using multiple linear regression analysis to assess the relationship between motivation, family support, and learning environment with student achievement. The findings show that motivation has a positive and significant effect on achievement, as indicated by a t-value of 4.942 with Sig. 0.000 < 0.05, meaning that higher motivation leads to better performance. Family support also demonstrates a positive and significant influence, with a t-value of 2.659 and Sig. 0.018 < 0.05, suggesting that stronger family support contributes to improved achievement. Furthermore, the learning environment has a positive and significant effect, with a t-value of 2.287 and Sig. 0.037 < 0.05, indicating that a conducive environment enhances student performance. Overall, the study highlights the importance of motivation, family involvement, and a supportive environment in improving sports achievement among PPLP Central Java athletic athletes, implying that interventions should focus on strengthening these factors to optimize student outcomes

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## INTRODUCTION

Sports achievement is one of the main indicators of success for athletes, especially student-athletes who are undergoing training programs. In Indonesia, the development of young athletes is managed through the Student Education and Training Center (PPLP), which is established in various provinces. PPLP Central Java is recognized as one of the leading centers that consistently produces athletes who excel at national and international levels. However, in the highly competitive world of sports, achieving success is not an easy task and requires the support of various factors. This indicates that athlete development should not only emphasize technical and physical aspects but also psychological and social dimensions.

Athletes at PPLP Central Java are selected through a rigorous process based on talent, potential, and prior achievements at the regional or school level. Those who are admitted into this system are expected to develop into professional athletes with stable performance. However, in reality, many athletes face challenges related to motivation, family support, and training environments. These obstacles can affect the consistency of their achievements in the long term. According to Kurniyawan and Susanto (2019), the success of young athletes is not only determined by intensive training but also by supportive family environments and personal motivation.

Motivation is one of the most influential factors in an athlete's ability to achieve success. Strong motivation serves as a powerful driver for athletes to train consistently despite various challenges

However, external pressures, such as expectations from family and coaches, often burden athletes. Some athletes at PPLP Central Java admitted to losing enthusiasm because of overwhelming demands. Findings from Buulolo et al. (2024) reveal that intrinsic motivation is more effective in

maintaining training consistency compared to motivation driven by external pressure.

In addition to motivation, family plays an important role in the development of athletic performance. Emotional, moral, and financial support from family can enhance athletes' confidence and focus during training and competition. However, not all families are able to provide full support due to other demands, such as academics or economic burdens. Some athletes admitted feeling pressured because their families demanded constant success without considering their psychological conditions. Saleh (2014) emphasizes that harmonious family support is crucial for athletes' mental development, while excessive pressure can reduce performance.

The training environment is also a critical factor that can either support or hinder athlete achievement. PPLP Central Java provides adequate facilities, but the high intensity of training sometimes causes fatigue among athletes. Tight training schedules often clash with the need for sufficient rest, which negatively impacts both physical and psychological conditions. This can reduce training effectiveness and competitive performance. According to Winarni et al. (2021), a conducive training environment is more effective when balanced with proper time management and recovery.

Beyond internal and family factors, social support from peers also significantly influences athlete performance. Athletes who receive encouragement from teammates tend to feel more confident and motivated to train harder. Conversely, lack of social support can create feelings of isolation that weaken their spirit. A study by Ramadhani and Putra (2020) shows that a positive social environment helps athletes maintain emotional stability and improve resilience in competitions. Therefore, the role of sports communities should not be overlooked in athlete development.

A major challenge faced by PPLP Central Java athletes is the misalignment

between external expectations and athletes' internal needs. Pressure from families and coaches often conflicts with athletes' personal desire to enjoy the sporting process. As a result, there is a risk of mental fatigue that reduces motivation to achieve. Nugroho (2022) found that balancing external expectations with personal needs is a key factor in long-term success. This highlights that athlete development should focus not only on performance achievement but also on mental well-being.

Moreover, lack of recognition from external parties, such as sponsors or government institutions, poses another challenge in maintaining athlete motivation. Some athletes at PPLP Central Java feel that their struggles are not fully appreciated despite contributing achievements at the national level. Limited external support can foster feelings of underappreciation, which ultimately weakens their motivation to keep striving. This aligns with the statement of Dimas (2024), who noted that the absence of sponsorship forced him to independently fulfill training needs. These findings reinforce the importance of external support in sports development.

Previous studies have shown that motivation, family, and environment play significant roles in influencing sports achievement. However, these three factors are rarely examined together in the context of student-athletes at PPLP. Therefore, this study is essential to explore the extent to which these factors interact in supporting or hindering athlete performance. A more comprehensive understanding will enable the design of more effective training strategies to enhance achievement. This is consistent with Suryani's (2020) notion of adopting a multidimensional approach in sports research.

Based on the above background, this study aims to analyze the influence of motivation, family support, and environment on the sports performance of track and field athletes at PPLP Central Java. The study is

expected to provide a comprehensive overview of the most dominant factors contributing to athletic achievement. The findings are also anticipated to serve as a basis for formulating more focused and sustainable development policies. In addition, this study will offer practical contributions for coaches, families, and sports institutions in improving the quality of athlete training. Thus, the research holds significant academic and practical value.

## METHODS

This study employed a quantitative approach using a survey method to analyze the influence of motivation, family factors, and environment on the athletic performance of track and field athletes at the Central Java PPLP. The study population consisted of all track and field athletes enrolled in the PPLP program, with 19 athletes selected as the research sample. Independent variables included motivation, family factors, and environment, while the dependent variable was athletic performance. Data were collected through questionnaires designed based on theoretical indicators (motivation: persistence, independence, interest; family: emotional, informational, instrumental, and appraisal support; environment: cleanliness, facilities, comfort, social interaction; performance: skills, attitudes, behavior). Data collection was further supported by documentation of achievements and field observations. The questionnaire instruments were tested for validity and reliability to ensure measurement accuracy and consistency.

Data analysis was carried out using SPSS version 25. The procedures included validity testing through Pearson's product-moment correlation and reliability testing using Cronbach's Alpha ( $\geq 0.7$ ). Descriptive statistics were applied to summarize the demographic and research data, while inferential statistics, specifically multiple linear regression analysis, were used to

examine the influence of motivation, family factors, and environment on athletes' performance. The goodness-of-fit of the regression model was evaluated using the coefficient of determination ( $R^2$ ), the F-test for simultaneous effects, and t-tests for partial effects of each independent variable. This analytical approach was chosen to generate robust empirical findings and to ensure replicability in similar research contexts.

## RESULTS AND DISCUSSION

The categorization results showed that motivation, family support, and athletic performance were in the high category, while the environment was in the moderate category. This indicates that Central Java PPLP athletes generally have strong motivation and family support, although the training environment still needs further improvement.

Validity testing confirmed that all questionnaire items for motivation, family, environment, and performance had correlation values above the critical r-table, indicating that the instruments were valid. Reliability testing further demonstrated Cronbach's Alpha coefficients above 0.70 for all variables, confirming the instruments were reliable for measurement.

The normality test using both Kolmogorov–Smirnov and Shapiro–Wilk showed significance values greater than 0.05, meaning the data were normally distributed. The classical assumption tests indicated no multicollinearity (tolerance > 0.1, VIF < 10), no autocorrelation (Durbin–Watson  $\approx$  1.9), and no heteroskedasticity (Glejser significance > 0.05). These results confirm that the regression model met statistical assumptions.

Model feasibility analysis showed an  $R^2$  of 0.681, which means that 68.1% of the variance in athlete performance can be explained by motivation, family, and environment, while the remaining 31.9% is

explained by other factors. The ANOVA results reported an F-value of 20.236 with a significance of  $0.000 < 0.05$ , indicating that the regression model as a whole was statistically significant.

Table 1. Regression Coefficients (t-test)

| Variable    | B      | Std. Error | Beta  | t      | Sig.  |
|-------------|--------|------------|-------|--------|-------|
| Constant    | -3.262 | 3.836      | –     | -0.850 | –     |
| Motivation  | 0.434  | 0.088      | 0.508 | 4.942  | 0.000 |
| Family      | 0.306  | 0.115      | 0.415 | 2.659  | 0.014 |
| Environment | 0.278  | 0.122      | 0.342 | 2.287  | 0.033 |

## DISCUSSION

The results demonstrate that motivation is the most dominant predictor of athlete performance. This highlights the importance of intrinsic factors such as persistence, discipline, and goal orientation in sustaining training and achieving success. The finding is consistent with achievement motivation theory, which argues that individuals with strong self-drive are better equipped to maintain performance under competitive pressure.

The significant effect of family support emphasizes the social dimension of athletic success. Emotional encouragement, instrumental assistance, and recognition from family members provide athletes with the psychological stability and confidence necessary to perform consistently. This finding supports earlier research stressing the family's role as the primary support system in youth athlete development.

Although the environment showed a weaker contribution compared to motivation and family, it still had a significant effect. This may be attributed to the relatively uniform facilities and coaching systems within the PPLP program, which minimize variation across athletes. Nevertheless, factors such as peer interaction and training comfort can still provide positive reinforcement for athletes' performance.

In summary, the study confirms that Central Java PPLP athletes' performance is more strongly influenced by psychological (motivation) and social (family support) factors than by physical environmental conditions. The scientific contribution of this research is the empirical evidence that psychosocial variables are critical determinants of youth athlete performance, complementing the existing focus on physical training and facilities. In practical terms, the findings suggest that athlete development programs should not only invest in infrastructure but also prioritize motivation-enhancement strategies and active family involvement. These insights may be applied in similar youth sports development contexts, contributing to broader sports science knowledge.

## CONCLUSION

This study concludes that motivation, family support, and environmental factors significantly influence the athletic performance of youth athletes at the Central Java PPLP, with motivation emerging as the strongest determinant. These findings address the research objectives by demonstrating that psychological and social variables play a more critical role than physical conditions in shaping athletes' achievements. The contribution of this research lies in strengthening scientific understanding of the psychosocial determinants of sports performance, providing empirical evidence that complements the traditional emphasis on facilities and physical training. Practically, the study highlights the importance of integrating motivation-building strategies and family engagement into athlete development programs, while scientifically, it enriches the literature by offering a replicable model for examining performance determinants in similar youth sports contexts.

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