



Model of the Influence of Training and Discipline on Karate Athletes' Achievement with Motivation as an Intervening Variable

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Abstract. This study aims to analyze the effect of training and discipline on motivation and its implications for the athletic performance of karate athletes at the Banyuasin Regency Youth, Sports, and Tourism Office. The study uses a quantitative approach with a causality design. The study population consisted of 52 karate athletes, and the entire population was sampled using a census method. Data collection was conducted through a questionnaire with a five-point Likert scale that measures the variables of training, discipline, motivation, and athlete performance. Data analysis used the Partial Least Square (PLS) method with the help of the SmartPLS application through outer model and inner model testing. The results showed that training and discipline had a positive and significant effect on athlete motivation. In addition, training and discipline also have a positive and significant effect on the athletes' performance. Motivation was found to have a positive and significant effect on the athletes' performance and was able to mediate the effect of training and discipline on the karate athletes' performance. The findings of this study emphasize the importance of improving the quality of training programs, implementing consistent discipline, and strengthening the athletes' motivation to optimize their athletic performance.

Keywords: Athlete Performance; Discipline; Intervention; Motivation; Training.

1. BACKGROUND

Sport is a strategic tool for developing healthy, productive, and competitive human resources. Through sporting activities, individuals not only achieve physical fitness but also foster the values of discipline, hard work, sportsmanship, and responsibility. These values play a crucial role in character building and improving the quality of human resources. According to Winarno (2021), sport is an effective medium for developing an individual's physical, mental, and social potential, thereby enhancing their capacity to face life's challenges. Athlete performance is one indicator of success in the sports development process, which is influenced by various factors, including physical, technical, and psychological factors. In the athlete development process, a planned and sustainable training program is a crucial factor in improving an athlete's abilities and performance in competition (Bompa & Buzzichelli, 2019).

In addition to training, discipline in training is also a crucial factor influencing an athlete's success. Discipline in following a training schedule, adhering to established rules, and consistently following the coach's instructions can improve the quality of the training process and impact athlete performance (Sutrisno, 2019).

Besides technical factors and training discipline, motivation also plays a crucial role in determining an athlete's success in achieving performance. High motivation will encourage athletes to train harder, face challenges more effectively, and demonstrate a strong commitment to achieving their goals (Weinberg & Gould, 2019).

Sports achievement is the result of a planned, systematic, and continuous coaching process. Achievement is not solely determined by an athlete's physical and technical abilities, but is also influenced by various other factors, such as the quality of training, discipline, and motivation. Harsono (2021) states that athlete performance is influenced by internal factors such as physical condition, technique, tactics, mentality, motivation, and discipline, as well as external factors such as the quality of the coach, facilities, and infrastructure, and the supportive sports environment.

Training is a crucial factor in improving an athlete's abilities and performance. According to Sukadiyanto and Muluk (2021), sports training is a conscious, systematic, and continuous development process aimed at improving an athlete's physical, technical, tactical, and mental abilities, enabling them to achieve optimal performance. Well-structured and well-programmed training can help athletes develop their full potential.

Besides training, discipline is also a crucial factor in supporting an athlete's success. Discipline reflects an athlete's awareness and commitment to complying with training rules, maintaining physical condition, and consistently following the coach's instructions. According to Hasibuan (2021), discipline is a person's awareness and willingness to comply with the rules and regulations of an organization. In the context of sports, discipline helps athletes maintain consistent training, thereby improving their abilities and performance.

Besides training and discipline, motivation also plays a crucial role in improving athlete performance. Motivation is an internal or external drive that drives individuals to achieve specific goals. Rivai and Sagala (2022) state that motivation is the primary driving factor determining the intensity of a person's efforts to achieve goals. In the world of sports, motivation drives athletes to train consistently, face challenges, and strive for excellence.

This research was conducted on karate athletes under the guidance of the Banyuasin Regency Youth, Sports, and Tourism Office. Karate is a relatively well-developed sport in Banyuasin Regency and has the potential to achieve greater success. However, initial observations indicate that the performance of karate athletes in Banyuasin Regency has not yet reached the expected target.

Observational data from 2025 shows that out of a target of ten medals, Banyuasin Regency karate athletes only managed to win two bronze medals, while neither gold nor silver medals were achieved. This situation indicates that athlete performance is still suboptimal and requires an evaluation of the coaching process.

Furthermore, observations also indicate that the training program has not been implemented optimally. Only approximately 65% of the set target has been achieved. Athlete

performance improvement is also relatively low, at around 55% of the expected target. This indicates that the training program has not been able to significantly improve athletes' abilities.

Another issue identified was the varying levels of athlete discipline. Some athletes demonstrated good discipline in training, while others lacked discipline in adhering to training schedules and coaching instructions. This situation has the potential to impact the effectiveness of the athlete development process.

Furthermore, athlete motivation levels are not yet fully distributed. Observations indicate that some athletes still have low motivation during training. Low motivation can be caused by various factors, such as unsatisfactory training results, limited facilities, or a lack of support from the sports environment.

Various previous studies have shown that training, discipline, and motivation are related to individual achievement. Research conducted by Taalipu, Podungge, and Monoarfa (2021) and Putri, Koto, and Hutagalung (2023) showed that training influences performance improvement. Other research also shows that discipline influences individual achievement (Karen, Tewal, and Walangitan, 2021). Meanwhile, research by Cahyono and Ikhsan (2022) found that motivation influences work performance.

However, several other studies have shown different results, creating a research gap. Some studies found that training or motivation had no significant effect on achievement, so further research is needed to examine the relationship between these variables, particularly by using motivation as a mediating variable.

Based on the description, this study aims to analyze the influence of training and discipline on the achievements of karate athletes with motivation as an intervening variable at the Youth, Sports, and Tourism Office of Banyuasin Regency.

2. THEORETICAL STUDY

Sports achievement is the result attained by an athlete through a planned, systematic, and continuous training process. This achievement reflects the athlete's ability to apply various aspects of their abilities, such as physical, technical, tactical, and mental abilities, in a competition. According to Winarno (2021), sports achievement is the maximum achievement achieved by an athlete through a structured and continuous coaching and training process. This view suggests that achievement is not achieved instantly, but rather through a long process involving targeted training and continuous coaching. Therefore, sports achievement is not only measured by winning competitions but also by improving an athlete's abilities in various aspects that support performance during competition.

Furthermore, sports achievement is influenced by various interrelated factors, both within the athlete and from their environment. According to Malayu SP Hasibuan (2021), achievement is the result of a person's work based on their skills, experience, dedication, and the time spent performing a task. In the context of sports, achievement is measured not only by medals won or victories in competitions, but also by the development of individual abilities such as physical strength, endurance, playing technique, and competition strategy. Similarly, Harsono (2021) explains that sports achievement is influenced by internal factors such as the athlete's physical condition, technique, tactics, motivation, and discipline, as well as external factors such as the quality of the coach, the coaching system, training facilities and infrastructure, and environmental support.

One of the important factors influencing athlete performance is training. Training is a systematic and ongoing development process to improve an athlete's physical, technical, tactical, and mental abilities. According to Sukadiyanto and Muluk (2021), sports training is a conscious, systematic, and ongoing development process aimed at enhancing an athlete's abilities so they can achieve maximum performance. Good training focuses not only on improving physical condition but also on developing technical skills, competition strategies, and the athlete's mental readiness to face various competitive situations.

Furthermore, effective training must be designed in a planned manner, taking into account proper training principles. Hidayat (2022) states that training is a programmed activity aimed at developing individual potential through various methods and strategies designed to enhance specific abilities. In the context of sports, training programs must consider various aspects such as training intensity, frequency, duration, and training variation to ensure optimal athlete performance. Through structured and continuous training, athletes can gradually improve their abilities, thereby achieving peak performance in competition.

Besides training, discipline is also a crucial factor influencing an athlete's success in achieving sporting achievements. Discipline reflects an individual's attitude and behavior that demonstrates adherence to established rules, norms, and responsibilities. According to Malayu SP Hasibuan (2021), discipline is a person's awareness and willingness to comply with all applicable rules and norms within an organization. In the world of sports, discipline is crucial because it relates to an athlete's consistency in following their training program, adhering to their coach's instructions, and maintaining a lifestyle that supports improved performance.

This view is reinforced by Harsono (2021), who stated that discipline is a key factor in an athlete's success. Athletes with high discipline are able to consistently implement training programs, maintain their physical and mental condition, and adhere to the strategies designed

by their coaches. Similarly, Widiastuti and Nugroho (2021) explain that discipline in sports reflects an athlete's responsibility for their training process. Athletes with high levels of discipline tend to be more focused on implementing their training programs, thus optimally improving their abilities and performance.

Besides training and discipline, motivation also plays a crucial role in determining an athlete's performance. Motivation is a drive, whether internal or external, that drives someone to take action to achieve a specific goal. According to Veithzal Rivai and Ella Jauvani Sagala (2022), motivation is a set of attitudes and values that influence an individual to act to achieve a desired goal. Motivation determines the intensity, direction, and persistence of an activity.

In the context of sports, motivation is a crucial psychological factor because it influences an athlete's enthusiasm for training and competition. Malayu SP Hasibuan (2021) states that motivation is the driving force that creates a person's enthusiasm for work or activities effectively to achieve goals. Meanwhile, Hamzah B. Uno (2021) explains that motivation is the inner strength that drives someone to act and strive to achieve specific goals. Athletes with high motivation will demonstrate a strong spirit in training, be able to withstand competitive pressure, and strive to achieve their best.

Several previous studies have examined the relationship between training, discipline, motivation, and achievement. Research conducted by Taalipu, Podungge, and Monoarfa (2021) showed that training has a positive influence on improving achievement. Research by Putri, Koto, and Hutagalung (2023) also found that effective training programs can improve athletes' abilities and performance. Furthermore, research by Karen, Tewal, and Walangitan (2021) showed that discipline influences individual achievement. Another study by Cahyono and Ikhsan (2022) also showed that motivation has a significant influence on achievement. Some studies even consider motivation as a mediating variable, such as research by Neza and Rivai (2020), which found that motivation mediates the effect of training on achievement, and research by Umariah and Hamzah (2024), which showed that motivation plays a role as a mediator in the relationship between discipline and achievement.

Based on various theories and previous research, it is understood that athlete achievement is the result of the interaction of various interrelated factors. In this study, training and discipline are seen as factors that can influence athlete achievement, both directly and indirectly through motivation. Well-programmed training will improve athletes' abilities and foster motivation to achieve. Similarly, high discipline will encourage athletes to consistently carry out training programs, thereby increasing motivation and ultimately impacting performance. Therefore, motivation in this study acts as an intervening variable that bridges the influence of

training and discipline on athlete achievement. Based on this framework, a research hypothesis is formulated stating that training and discipline influence athlete motivation and achievement, both directly and through motivation as a mediating variable.

3. RESEARCH METHODS

This study uses a quantitative approach with the aim of analyzing the relationship between training, discipline, motivation, and the achievements of karate athletes at the Youth, Sports, and Tourism Office of Banyuasin Regency. The quantitative approach was chosen because it is able to measure the relationship between variables objectively through numerical data analysis. The type of research used is causal associative research, namely research that aims to determine the cause and effect relationship between independent variables and dependent variables as explained by Indrawan and Poppy Yaniawati. In this study, training and discipline act as independent variables, motivation as an intervening variable, and athlete achievement as a dependent variable. The research model is designed to analyze the direct influence of training and discipline on athlete achievement, as well as the indirect influence through motivation as a mediating variable that bridges the relationship between these variables.

The population in this study was all karate athletes under the guidance of the Banyuasin Regency Youth, Sports, and Tourism Office, totaling 52 athletes. According to Sugiyono, a population is a generalized area consisting of objects or subjects that have certain characteristics determined by the researcher to be studied and then conclusions drawn. The sampling technique used was saturated or census sampling, which is a sampling technique when all members of the population are used as research samples. Thus, the number of samples in this study is the same as the population, namely 52 karate athletes who as a whole were used as research respondents. The use of this technique aims to obtain a more comprehensive picture of the training conditions, discipline, motivation, and achievements of athletes in the sports development environment studied.

The data used in this study consisted of primary and secondary data. Primary data were obtained directly from respondents through questionnaires and observation. The questionnaire served as the primary instrument for collecting data related to the variables of training, discipline, motivation, and athlete achievement. The research instrument was structured as a closed-ended questionnaire using a five-point Likert scale: strongly disagree, disagree, neutral, agree, and strongly agree. Each statement was scored from 1 to 5 depending on the respondent's level of agreement with the statement. In addition to the questionnaire, observations were also

conducted to obtain a realistic picture of the athletes' training conditions, discipline, and motivation during the training activities. Meanwhile, secondary data were obtained through literature review and documentation from books, scientific journals, research reports, and other documents relevant to the research variables.

The data analysis technique in this study used the Structural Equation Modeling (SEM) method based on Partial Least Square (PLS) with the help of SmartPLS software. The PLS method was chosen because it is able to analyze the relationship between complex latent variables and can be used in relatively small sample sizes as explained by Imam Ghozali. Data analysis was carried out through two main stages, namely the evaluation of the measurement model (outer model) and the evaluation of the structural model (inner model). The evaluation of the outer model aims to test the validity and reliability of the indicators through testing convergent validity, discriminant validity, composite reliability, average variance extracted (AVE), and Cronbach's alpha. Next, the evaluation of the inner model was carried out to test the relationship between latent variables by looking at the values of the coefficient of determination (R^2), predictive relevance (Q^2), and path coefficient. Hypothesis testing was carried out by looking at the t-statistic and p-value values, where the hypothesis is declared significant if the t-statistic value ≥ 1.96 and p-value ≤ 0.05 . This research model analyzes the influence of training and discipline on athlete achievement with motivation as an intervening variable through two structural equations, namely $\text{Motivation} = \beta_1 \text{ Training} + \beta_2 \text{ Discipline} + \epsilon_1$ and $\text{Achievement} = \beta_3 \text{ Training} + \beta_4 \text{ Discipline} + \beta_5 \text{ Motivation} + \epsilon_2$.

4. RESULTS AND DISCUSSION

Measurement Model Analysis (Outer Model)

Measurement model analysis (outer model) is conducted to evaluate the appropriateness of the indicators in reflecting the latent constructs in the research model. This evaluation includes testing convergent validity, discriminant validity, and construct reliability, ensuring that each indicator accurately and consistently measures the research variables. A measurement model is considered appropriate if the indicators have adequate levels of validity and reliability before analysis is conducted on the structural model.

Validity Test

The validity tests in this study consist of convergent validity and discriminant validity. Convergent validity is used to determine the extent to which an indicator represents the construct being measured. This test is conducted by examining the outer loading values for each indicator and the Average Variance Extracted (AVE) value.

Convergent Validity

Convergent validity indicates the level of correlation between an indicator and the latent construct it represents. According to Ghazali and Latan (2021), an indicator is considered to have convergent validity if its outer loading value is above 0.70 and its Average Variance Extracted (AVE) value is greater than 0.50. These criteria indicate that the indicator has a strong contribution in reflecting the latent variable.

All indicators for each variable have outer loading values above 0.70. This indicates that all indicators have a strong correlation with the construct being measured, thus meeting the convergent validity criteria.

The indicators for the Training (X1), Discipline (X2), Motivation (Z), and Achievement (Y) variables consistently show high loading values, indicating that each indicator adequately represents the latent construct. Thus, all indicators are valid and can be used in subsequent analysis stages.

Overall, the results of this test indicate that the measurement model has met the requirements for convergent validity, making the research model suitable for further structural model evaluation. A visualization of the relationship between indicators and latent constructs based on data processing using SmartPLS is shown in the following figure.

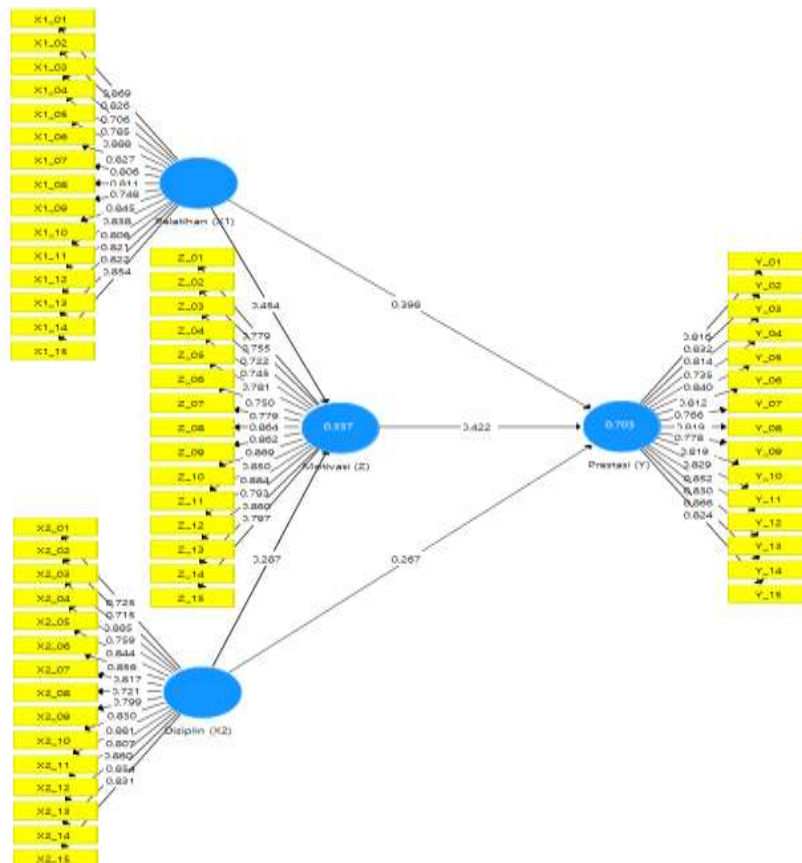


Figure 1. Data Processing using SmartPLS.

Table 1. Hypothesis Test Results.

No	Track	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
1	Training (X1) -> Motivation (Z)	0.454	0.452	0.122	3,714	0.000
2	Discipline (X2) -> Motivation (Z)	0.287	0.298	0.101	2,855	0.004
3	Training (X1) -> Achievement (Y)	0.398	0.398	0.097	4.118	0.000
4	Discipline (X2) -> Achievement (Y)	0.267	0.270	0.085	3.145	0.002
5	Motivation (Z) -> Achievement (Y)	0.422	0.420	0.097	4,351	0.000

Source: Processed primary data, 2026

The Influence of Training on Karate Athletes' Motivation

The results of the study showed that training significantly influenced the motivation of karate athletes at the Banyuasin Regency Youth, Sports, and Tourism Office. This suggests that structured and programmed training can increase athletes' internal drive to train more seriously, maintain their commitment to training, and be focused on achieving success.

The training not only focuses on improving physical and technical abilities, but also encompasses aspects of competition strategy, training discipline, and mental preparedness. This provides athletes with a better understanding of training goals and a clear direction for their development. Athletes who experience the benefits of the training process tend to exhibit higher motivation in participating in each training program and strive to improve their abilities.

The findings of this study align with the opinion of Sukadiyanto and Muluk (2021), who stated that sports training is a systematic development process aimed at improving abilities and building athlete motivation. Furthermore, Harsono (2021) explained that planned and ongoing training can foster achievement motivation because athletes experience tangible improvements in their abilities. These findings are also consistent with research by Saharso and Asda (2024) and Wahyuni, Noviantoro, and Suyantiningsih (2024), which concluded that training significantly influences athletes' achievement motivation.

The Influence of Discipline on the Motivation of Karate Athletes

The research results show that discipline significantly influences the motivation of karate athletes at the Banyuasin Regency Youth, Sports, and Tourism Office. Athletes with high levels of discipline tend to have stronger motivation to undergo training and coaching programs.

Discipline is reflected in athletes' adherence to training schedules, commitment to each training session, and adherence to the coach's instructions. This discipline fosters regular and consistent training habits, fostering a strong sense of responsibility and commitment to training and increasing motivation to achieve.

These findings align with Hasibuan's (2021) opinion, which states that discipline is an individual's awareness of obeying applicable rules, thereby increasing enthusiasm and motivation to achieve goals. Harsono (2021) also emphasized that discipline is a crucial factor in an athlete's success because it maintains consistent training and mental readiness. The results of this study also align with those of Wulandari et al. (2024) and Umariah and Hamzah (2024), which found that discipline significantly influences achievement motivation.

The Influence of Training on Karate Athletes' Achievement

The research results show that training significantly influences the performance of karate athletes at the Banyuasin Regency Youth, Sports, and Tourism Office. This demonstrates that planned and continuous training can improve athletes' abilities, thus improving their performance.

Through a systematic training program, athletes receive coaching that encompasses technical, physical, tactical, and mental readiness. Athletes who consistently participate in training tend to be better at applying competitive techniques, maintaining consistent performance, and coping with competitive pressure. This directly contributes to improving the quality of competition results.

The findings of this study align with those of Sukadiyanto and Muluk (2021), who stated that sports training aims to improve athletes' physical, technical, tactical, and mental abilities to achieve maximum performance. Harsono (2021) also emphasized that training is the core of the sports development process. The results of this study are consistent with those of Taalipu et al. (2021), Putri et al. (2023), and Febriyanto et al. (2025), which stated that training significantly influences athlete performance.

The Influence of Discipline on Karate Athletes' Achievements

The research results show that discipline significantly influences the performance of karate athletes at the Banyuasin Regency Youth, Sports, and Tourism Office. Athletes with high levels of discipline tend to perform better than those with less discipline.

Discipline in sports is reflected in adherence to a training schedule, commitment to a training program, and adherence to the coach's instructions. Disciplined athletes train consistently, allowing optimal development of physical, technical, and mental abilities. This

consistency in training allows athletes to maintain their performance and improve the quality of their competition results.

These findings align with Hasibuan's (2021) opinion, which states that discipline is a crucial factor in improving individual performance or achievement. Harsono (2021) also emphasized that discipline is key to success in sports because it maintains consistent athlete development. The results of this study also align with those of Karen et al. (2021), Zainuddin et al. (2022), and Montol et al. (2022), which found that discipline significantly influences achievement.

The Influence of Motivation on Karate Athletes' Achievement

The research results show that motivation significantly influences the performance of karate athletes at the Banyuasin Regency Youth, Sports, and Tourism Office. Highly motivated athletes tend to demonstrate greater enthusiasm for training and a strong commitment to achieving success.

Motivation is a psychological factor that drives athletes to train diligently, face the challenges of competition, and maintain consistent performance. Highly motivated athletes will strive to utilize their full potential to achieve the best possible results in every match.

These findings align with McClelland's (1961) theory, which states that individuals with a high need for achievement are driven to achieve their best through effort and perseverance. Furthermore, Uno (2021) explains that motivation serves as a driving force that directs individual behavior toward achieving goals. The results of this study are also consistent with those of Saiba et al. (2021), Cahyono and Ikhsan (2022), and Bone et al. (2023), which found that motivation significantly influences athlete performance.

The Role of Motivation as an Intervening Variable between Training and Achievement

The results of the study indicate that motivation acts as an intervening variable in the relationship between training and karate athlete performance. This suggests that training not only has a direct influence on performance but also has an indirect effect by increasing athlete motivation.

Well-planned training can boost athletes' self-confidence, mental readiness, and enthusiasm for training. This fosters internal motivation, which drives athletes to optimally apply their training results in competitions. Thus, motivation becomes a psychological factor that bridges the link between training and performance.

These findings align with Sukadiyanto and Muluk's (2021) findings, which state that sports training not only improves technical skills but also builds athletes' motivation. These

findings are also consistent with research by Neza and Rivai (2020) and Nabilla et al. (2024), which concluded that motivation mediates the effect of training on performance.

The Role of Motivation as an Intervening Variable between Discipline and Achievement

The research results show that motivation also acts as an intervening variable in the relationship between discipline and karate athlete performance. This suggests that discipline implemented during training can increase athlete motivation, which ultimately leads to improved performance.

Discipline fosters regular and consistent training habits, fostering a heightened awareness of the importance of training. This fosters a motivation to achieve, encouraging athletes to train more diligently and maximize their abilities in competitions.

These findings align with Hasibuan's (2021) opinion, which states that discipline can increase individual motivation in achieving goals. Rivai and Sagala (2022) also explain that discipline can shape positive attitudes that impact performance and achievement. These findings are also consistent with research by Neza and Rivai (2020) and Umariah and Hamzah (2024), which found that motivation can mediate the effect of discipline on achievement.

5. CONCLUSION AND SUGGESTIONS

Based on the analysis and discussion of the research, it can be concluded that training and discipline play a significant role in improving the motivation and performance of karate athletes at the Banyuasin Regency Youth, Sports, and Tourism Office. Planned, systematic, and sustainable training has been shown to increase athletes' motivation in participating in coaching programs and has a direct impact on improving their performance. Furthermore, high levels of training discipline also contribute to fostering a sense of responsibility, consistency in following training programs, and increasing athletes' readiness for competition. Motivation, in this study, has been shown to significantly influence athlete performance and acts as an intervening variable that strengthens the relationship between training and discipline and performance. This suggests that improving the quality of training and implementing good discipline will be more effective in improving performance if supported by strong athlete motivation in achieving training and competition goals.

Based on the research findings, several suggestions can be provided to improve athlete performance. The Banyuasin Regency Youth, Sports, and Tourism Office is expected to continue improving the quality of its coaching program through more structured, targeted, and sustainable training to ensure optimal athlete motivation and performance. Coaches and sports administrators are also expected to strengthen the implementation of training discipline while

providing motivational support to athletes through psychological approaches, rewards, and the creation of a conducive training environment. Furthermore, future researchers are advised to expand their research by adding other variables that could potentially influence athlete performance, such as coach leadership, the training environment, and organizational support. They are also advised to expand the research to include other sports to provide a more comprehensive understanding of the factors influencing successful sports performance development.

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