

Cross-Sectional Research on the Predictors of Physical Fitness of Athletes in Universities in Iraq

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Abstract

The focus of this study was the physical fitness of athletes in Iraq. The objective of the present study was to assess the influence of four variables—coaches' positive behaviour, sports activities, mental health monitoring, and sports training—on the physical fitness of athletes in Iraq. The study aimed to gather quantitative data using a carefully constructed questionnaire. The research focused on the athletes enrolled in universities across Iraq. A total of 1,000 questionnaires were distributed to respondents in a cross-sectional design, from which 850 responses were selected for data analysis. The relationships in this research were examined using statistical methods such as confirmatory factor analysis and structural equation modelling, implemented through the R Package. The study revealed that the positive behaviour of coaches, engagement in sports activities, monitoring of mental health, and sports training all play a crucial role in enhancing the physical fitness of athletes in Iraq. This research is unique and adds valuable insights to the existing literature by addressing areas of knowledge that have not been previously explored. In order to enhance the physical fitness of athletes, it is imperative for policymakers to ensure that coaches are equipped with the necessary tools. This includes fostering positive behaviour, organising sports activities, monitoring mental health, and providing comprehensive sports training.

Keywords: Physical Fitness, Sports Activities, Coach Behaviour, Sports Training, Health Monitoring.

Introduction

The government in Iraq is currently prioritising the development of policies aimed at promoting sports within the country (Alrashid, 2020). These policies create a conducive environment for young individuals, especially students from various educational institutions. This strategic approach aims to support students by focusing on improving their health. It is an initiative that contributes to nation-building. In addition, the athlete's performance in various games is beneficial for enhancing their skills and making a positive impact on the nation's progress (Gadai et al., 2022). The university administration should offer athletes responsible opportunities to enhance their performance. Various universities in Iraq have developed practice stations to enhance the public's perception of sports performance. Students are driven to enhance their performance

through the implementation of strategies essential for athletes' consistent physical fitness (Abd-Alzahra, Abd, & Rasheed, 2021). Government policies that offer support can facilitate improving athletes' performance.

However, the athletic performance in Iraq falls short when compared to that of other developed nations. Dergaa et al. (2022) highlighted the need for intense training and fitness as one barrier preventing athletes from competing in international games. Fitness levels have a big impact on athletes' game performance. However, its validity is called into question when considering the situation in Iraq (Abdullah et al., 2022). Hence, athletes must employ innovative strategies to achieve their developmental goals. Even so, when athletes are driven to enhance their performance, they also enhance their fitness levels. In improving the performance of athletes, fitness level is considered a significant factor (Li et al., 2020). Inadequate training

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can have detrimental effects on athletes, affecting both their physical fitness and their overall performance and demeanour during the game. Hence, the physical condition of athletes becomes a crucial element that is undermined in the context of Iraq.

In the past, scholars have made valuable contributions to the literature on the factors that influence the physical fitness of athletes. A recent study by [McGuigan et al. \(2020\)](#) emphasised the importance of athletes' mental health in relation to their physical fitness and performance in games. In their study, [Ryan et al. \(2020\)](#) emphasised the importance of athletes engaging in regular practice sessions. It plays a crucial role in their overall performance. There has been a noticeable improvement over time. The study by [Montull et al. \(2022\)](#) emphasised the importance of athletes' physical fitness in enhancing their game performance and overall fitness. Meanwhile, a study conducted by [Kornosenko et al. \(2020\)](#) found that the mental health of athletes may not be a reliable indicator, but their psychological well-being does have a significant impact on their physical performance. [Li, Kumar and Alazab \(2022\)](#) found that coaches' positive and negative motivation can impact athletes' performance, presenting both challenges and opportunities for improvement. Therefore, previous studies have noted inconsistencies in their findings. Thus, additional research is necessary to gain a comprehensive understanding of the physical fitness of athletes ([Bezner et al., 2020](#)).

The focus of this study was the physical fitness of athletes in Iraq. The objective of the present study was to assess the influence of four variables—coaches' positive behaviour, sports activities, mental health monitoring, and sports training—on the physical fitness of athletes in Iraq. The study aimed to gather quantitative data using a carefully constructed questionnaire. The study focused on athletes from various universities in Iraq. A total of 1,000 questionnaires were distributed to respondents in a cross-sectional design, and 850 responses were included in the data analysis.

The relationships in this research were examined using statistical analysis techniques such as confirmatory factor analysis and structural equation modelling, implemented through the R Package. The study revealed that the positive behaviour of coaches, engagement in sports activities, monitoring of mental health, and sports training all play a crucial role in enhancing the physical fitness of athletes in Iraq. This research is unique and adds valuable insights to the existing literature by addressing important gaps in knowledge. To enhance athletes' physical fitness, policymakers should ensure that coaches are equipped with resources such as positive behaviour reinforcement,

sports activities, mental health monitoring, and sports training.

Review of Literature

The coach is tasked with ensuring that athletes receive the necessary guidance and instruction to enhance their performance ([Coimbra et al., 2021](#)). The guidance of a coach facilitates improving athletes' training, fostering a professional relationship between the two parties. Athletes' physical fitness, which their coach improves through appropriate sports training, is a determining factor in their performance during games ([Smith et al., 2020](#)). The coaches or management board should create a training programme aimed at enhancing the athletes' performance during the game. In addition, the behaviour of the coach has a direct impact on the performance of athletes, as it plays a significant role in their training ([Silva et al., 2020](#)). When coaches inspire athletes to enhance their physical fitness and performance, it fosters a positive relationship that is crucial for their overall success. A coach is essential for enhancing the overall well-being of athletes, both mentally and physically, and enabling them to participate in their respective sports ([McMahon et al., 2020](#)). Thus, the coach plays a crucial role in the athletes' performance during the game. Effective coaching is crucial for athletes to excel in their game. On the other hand, athletes who receive inadequate training from their coach experience a decline in performance, indicating a detrimental impact on their physical fitness ([McGuigan et al., 2020](#)). Hence, it is crucial for coaches and athletes to maintain a positive relationship. An effective training programme should be created for athletes to enhance their physical and mental well-being and optimise their performance.

H1: *There is a relationship between coaches' positive behaviour and the physical fitness of athletes.*

[Pea et al. \(2021\)](#) emphasizes the importance of participating in sports activities for athletes to improve their performance. Engaging in pre-game sports activities enhances athletes' mental and physical well-being, thereby promoting their overall physical fitness. Enhancing the performance of athletes in challenging conditions can be achieved through the cultivation of their mental and physical fitness ([Xin et al., 2022](#)). High levels of motivation and deliberate actions aimed at enhancing overall game performance improve athletes' performance. A positive attitude is crucial for athletes to enhance their performance and overall well-being. Enhancing athletes' performance in sports programmes is crucial, as it contributes to the development of their physical fitness ([Kornosenko et al., 2020](#)).

The importance of physical fitness cannot be overstated, as it not only enhances athletes' physical well-being but also has

a positive impact on their mental health. The correlation between physical and mental fitness is enhanced over time, leading to improved performance among athletes (Alrashid, 2020). Developing positive psychology is crucial for athletes to enhance their physical fitness and ensure consistent performance. In addition, athletes must possess both physical and mental fitness to enhance their performance (Abdullah et al., 2022). Likewise, when athletes are strongly driven to enhance their productive performance, they strive to enhance their physical fitness, which is a prerequisite for excelling in sports programmes.

H2: *There is a relationship between participating in sports activities and the physical fitness of athletes.*

According to Lauwerier et al. (2020), the development of mental well-being is essential for athletes' performance. Optimal mental health is crucial for athletes to successfully achieve their goals in competitive sports. Participating in the games can be a dependable way for driven athletes to enhance their overall well-being. In addition, athletes must prioritise enhancing their mental well-being and performance standards (Chu et al., 2021). Athletes' performance is crucial for their overall success, serving as a pathway towards achieving their objectives. The opportunities available to athletes are cultivated over time and require a proactive mindset. It is crucial for coaches to closely observe the mental well-being of athletes to determine their readiness for game participation (Johnson et al., 2020).

The mental well-being of athletes is crucial for their participation in games and their overall physical fitness. The ability of athletes to perform at their best is not only important for their physical health but also for their mental well-being. Proper mental health monitoring is crucial for obtaining comprehensive information on improving physical health as well (Montull et al., 2022). Hence, it is imperative for athletes to prioritise their mental well-being and enhance their physical condition. Improving physical fitness can enhance strategic thinking and create opportunities for advancement. According to research by Gadais et al. (2022), highly motivated athletes frequently adopt a protective attitude towards their exceptional performance. Hence, the psychological welfare of athletes holds utmost significance as it directly impacts their

physical prowess.

H3: *There is a relationship between mental health monitoring and the physical fitness of athletes.*

Sports training programmes have been found to be beneficial for athletes in enhancing their fitness level, as demonstrated by Bezner et al. (2020). This training offers participants the opportunity to gain practical experience in the field of game development, requiring them to effectively work towards achieving their objectives. Sports training should align with the specific requirements of the game, enabling athletes to enhance their performance (Abd-Alzahra et al., 2021). Athletes who are driven to enhance their performance adopt a focused mindset when engaging in their sports training. The reliability of athlete performance is influenced by the sports activities they engage in to enhance their skills (Ryan et al., 2020). Engaging in sports events and programmes can greatly enhance athletes' physical fitness. Regular exercise can have a positive impact on their overall behaviour.

However, enhancing athletes' performance can strategically enhance their overall behaviour during the game (Lopes Dos Santos et al., 2020). Hence, it is imperative for athletes to undergo training to cultivate a positive mindset that enhances their participation and success in games. It would help them enhance their behaviour while engaging in the game and attaining the objectives. This phenomenon contributes to the enhancement of athletes' physical and mental fitness, serving as a pathway for their participation in the games (Dergaa et al., 2022). In addition, when highly motivated athletes engage in sports training, they cultivate a positive mindset that enhances their learning abilities. The athlete's mental and physical well-being are impacted by their involvement in the sports training programme. Hence, it is imperative for the coaches and board management to establish effective policies that will enhance the athletes' learning and performance, ultimately leading to improved game outcomes.

H4: *There is a relationship between sports training and the physical fitness of athletes.*

The proposed model of the study is reported in Figure 1.

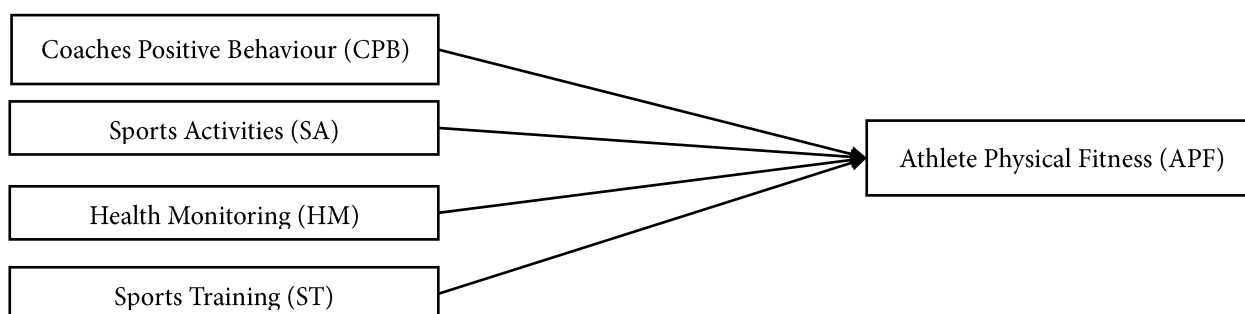


Figure 1. Proposed Research Framework.

Methodology

The study is based on quantitative data obtained from a Likert scale questionnaire. The purpose of collecting this data was to assess the correlation between the four independent variables and one dependent variable. A survey instrument was created to gather data from the participants. The questionnaire utilised Likert scale items to assess each variable, drawing from existing research. Based on this research, the items were chosen for their credibility and operationalization. The items used to measure coaches' positive behaviour were derived from the study (Williams et al., 2003). The study by Kondric et al. (2013) utilised items to assess sports activities. The scale items used to measure health monitoring came from a study by Neupert et al. (2022).

Additionally, Unruh (1998) study served as a source for the scale items used in sports training. The scale items for the dependent variable, which gauges athletes' physical fitness, came from the Cuppett and Latin (2002) study. The items were evaluated based on the reliability coefficient, Cronbach's alpha, which exceeded 0.70 for each scale item. Sekaran (2003) states that a scale is deemed valid and suitable for data collection if its Cronbach's alpha exceeds 0.70. Therefore, the questionnaire for this research was completed and printed. A survey-based method was chosen for data collection due to its suitability for the study and cost-effectiveness. However, the data was gathered using a cross-sectional approach, as the relationships between variables were measured concurrently.

Data for this research was obtained from respondents who were athletes and students at universities in Iraq. A total of 1,000 questionnaires were distributed to gather data; however, only 870 questionnaires were collected in response. Data was collected from all universities in Iraq using a systematic sampling approach. After gathering the data, it was subjected to initial analysis, during which twenty responses were excluded due to data biases. Therefore, a total of 850 responses were included in the final sample for data collection.

The study participants consisted of 60% male athletes and 40% female athletes. Each of them was an undergraduate student pursuing various programmes at universities in Iraq. In addition, the analysis of the data in this research was conducted using the R Package. The study utilised confirmatory factor analysis and structural equation modelling to test the data and examine the relationship between research variables. This research holds methodological significance as previous studies have not extensively explored the relationship from the perspective

of R Package data analysis.

Findings

The results of this study were obtained using the R Package. The initial results of the chi-square test were obtained. According to McHugh (2013), the chi-square test is a statistical tool that compares observed and expected results. Its purpose is to determine whether any difference between the observed and expected data is due to chance or if it indicates a relationship between the variables being studied. Results with a p-value of less than 0.05 were deemed statistically significant and accepted. The results presented in Table 1 provide strong evidence with a p-value of less than .001. Hence, the data was deemed suitable for further analysis.

Table 1

Chi-Square Test

Model	X ²	df	p
Baseline Model	4409.523	210	
Factor Model	583.970	179	< .001

Note. The estimator is ML.

The scale's reliability and internal consistency were assessed using the coefficients omega and Cronbach alpha. The purpose of this test was to assess the correlation between the items used to measure a single scale. The reliability statistics presented in Table 2 indicate that both the coefficient omega and Cronbach's alpha exceeded the threshold of 0.70, which is considered statistically significant (Cronbach, 1949; Hayes & Coutts, 2020). Hence, the data for this test was deemed suitable, and a strong internal consistency among the data was established.

Table 2

Reliability

	Coefficient ω	Coefficient α
CPB	0.815	0.803
SA	0.825	0.774
HM	0.899	0.897
ST	0.854	0.832
APE	0.927	0.925
total	0.939	0.949

In addition, the factor loadings were examined to assess the reliability of the individual items within a scale. The purpose of this test was to determine whether the loading of any item was below a significant level. A significance level of $p < 0.05$ was used to determine the presence of significant factor loading. The findings presented in Table 3 demonstrate that the p values for all scale items were less than .001. This indicates that the items on the scale are

reliable at the individual level. Therefore, all items were deemed important in assessing the relationship between

the variables in this study.

Table 3

Factor Loadings

Factor	Indicator	Estimate	Std. Error	z-value	p	95% Confidence Interval	
						Lower	Upper
CPB	CPB1	0.666	0.061	10.903	< .001	0.547	0.786
	CPB2	0.688	0.065	10.559	< .001	0.560	0.816
	CPB3	0.860	0.055	15.609	< .001	0.752	0.968
	CPB4	0.867	0.052	16.773	< .001	0.765	0.968
SA	SA1	0.882	0.061	14.490	< .001	0.763	1.001
	SA2	0.822	0.061	13.527	< .001	0.703	0.941
	SA3	1.025	0.061	16.769	< .001	0.905	1.145
	SA4	0.392	0.060	6.578	< .001	0.275	0.508
HM	HM1	0.877	0.052	17.021	< .001	0.776	0.978
	HM2	0.939	0.059	16.053	< .001	0.825	1.054
	HM3	0.977	0.057	17.048	< .001	0.864	1.089
	HM4	0.950	0.057	16.533	< .001	0.838	1.063
ST	ST1	0.944	0.056	16.906	< .001	0.835	1.053
	ST2	0.840	0.056	14.922	< .001	0.730	0.951
	ST3	1.017	0.065	15.565	< .001	0.889	1.145
	ST4	0.743	0.068	10.978	< .001	0.611	0.876
APE	APF1	0.886	0.052	17.191	< .001	0.785	0.988
	APF2	0.853	0.050	17.180	< .001	0.755	0.950
	APF3	0.838	0.052	16.251	< .001	0.737	0.939
	APF4	0.959	0.050	19.306	< .001	0.862	1.057
	APF5	0.928	0.056	16.427	< .001	0.817	1.038

We also examined the presence of multiple collinearity issues in the data. The heterotrait-monotrait ratio was examined to assess the presence of multiple collinearity problems. For a significant acceptance of no multicollinearity issues, the findings of this ratio should be less than 0.85 (Henseler, Ringle, & Sarstedt, 2015). The research data presented in Table 4 has confirmed the absence of any multiple collinearity issues. Therefore, the data was deemed suitable for further analysis.

Table 4

Heterotrait-Monotrait Ratio

CPB	SA	HM	ST	APE
0.799				
0.649	0.801			
0.729	0.771	0.768		
0.818	0.833	0.756	0.675	
0.622	0.709	0.624	0.794	0.811

Finally, the findings of the regression coefficients were measured to analyse the relationship between research variables. The regression coefficients are presented in Table 5. Nevertheless, the model plot is depicted in Figure 2. The results of study H1 established a clear and positive

correlation between the positive behaviour of coaches and the physical fitness of athletes. In a similar vein, the results of H2 indicated a noteworthy and favourable correlation between engagement in sports activities and the physical fitness of athletes. Additionally, the results of H3 support the notion that there is a strong and beneficial correlation between monitoring mental health and the physical fitness of athletes. In addition, the results of H4 indicated a notable and favourable correlation between sports training and the physical fitness of athletes.

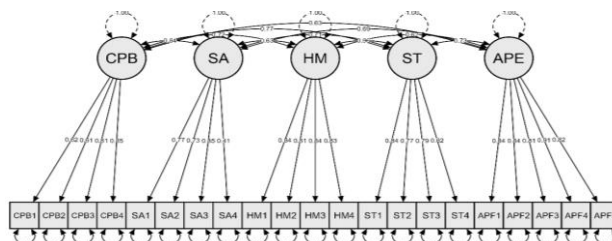


Figure 2. Model Plot.

Table 5

Regression Coefficients

Predictor	Outcome	Estimate	Std. Error	z-value	p
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CPB	APF	0.288	0.035	8.228	<.001
HM	APF	0.171	0.018	9.500	<.001
ST	APF	0.335	0.055	6.090	<.001
APF	APF	0.129	0.019	6.789	<.001

Discussion

The findings of this research were obtained using the R Package to analyse the relationship between the research variables. Previous studies have provided initial support for these relationships. Nevertheless, this study provided support for these relationships using empirical data. The results of study H1 supported a clear and positive correlation between the positive behaviour of coaches and the physical fitness of athletes. The relationship established in this study was compared to the results of previous research, following the analysis of its statistical findings. Coimbra et al. (2021) assert that coaches bear the responsibility of ensuring athletes receive appropriate training to enhance their performance. When an athlete receives training from a coach, it enhances their training and fosters a suitable coach-athlete interaction.

For optimal performance in the games, athletes must maintain a high level of physical fitness and receive appropriate sports training from their instructor. Li et al. (2020) state that the management board or coaches are accountable for developing a training programme to improve athletes' performance during competitions. The coach's behaviour significantly affects the athletes' performance, as it is closely observed and evaluated during their training. Smith et al. (2020) found that a strong coach-athlete relationship is crucial for overall athlete performance. This relationship is fostered when coaches motivate athletes to improve their physical fitness and performance. Athletes need to possess both mental and physical fitness to participate in any sport. Enhancing fitness levels can be achieved through the guidance of a coach prior to the athletes' participation in the game.

Research conducted by Xin et al. (2022) highlights the significant role of coaches in enhancing athletes' performance during competitions. For players to achieve success in the game, it is crucial for coaches to provide them with the necessary training. Research conducted by Wang, Lei and Wu (2023) suggests that inadequate sports instruction from a coach can negatively impact a player's performance, indicating potential issues with their physical condition. The relationship between coaches and athletes should be characterised by mutual respect. An appropriate training schedule should be created for the athletes to improve their physical and mental health and overall performance.

In a similar vein, the results of H2 indicated a notable and

favourable correlation between engagement in sports activities and the physical fitness of athletes. This study compared the developed relationship with previous findings from other studies, analysing the statistical data obtained. According to Chu et al. (2021), participating in a variety of sports is a crucial factor in improving athletes' performance. Athletes' overall well-being is enhanced through engaging in pre-game sports activities, which is a positive contribution to their physical fitness. According to research by Mohammed Saeed, Salih and Abdulkareem (2023), improving mental and physical fitness is a reliable strategy for athletes to improve their performance in difficult circumstances. Athletes can enhance their performance by maintaining high motivation and implementing strategic measures to improve their overall game performance.

Yang, Dai and Miao (2021) emphasises the importance of athletes developing a positive mindset to enhance their performance and overall well-being. Enhancing athletes' performance in sports programmes is crucial, as it aids in the development of their physical fitness. Physical fitness is of great importance, as it not only enhances athletes' mental health but also contributes to their overall well-being. According to a study by Silva et al. (2020), the correlation between physical and mental fitness becomes stronger over time in athletes' performance. There is a noticeable enhancement in the overall performance. Athletes must develop a positive mindset to consistently perform well, which is a crucial factor in improving their physical fitness. Hung et al. (2021) suggest that athletes can enhance their performance by focusing on both their physical and mental well-being. In conclusion, athletes who are highly motivated to enhance their performance focus on enhancing their physical fitness, a crucial aspect for optimal participation in sports programmes.

Additionally, the results of H3 support the notion that monitoring mental health is linked to improved physical fitness among athletes. The relationship established in this study was further examined by comparing it with the results of previous research. Weerakkody et al. (2021) emphasise the importance of athletes prioritising their mental health to enhance their overall well-being and optimise their performance. There exists a relationship between the psychological well-being of athletes and their capacity to achieve their objectives in the realm of sports. Participating in the events can be a solid option for athletes who are strongly determined to improve their health. Furthermore, athletes are required to enhance their mental well-being and overall performance. According to Lopes Dos Santos et al. (2020), athletes' performance is crucial to achieving their objectives and moving in the direction of success. Athletes need to invest time and maintain a focused mindset to

capitalise on the opportunities available to them.

Li et al. (2022) assert that coaches have a duty to assess the mental well-being of athletes to ascertain their readiness, both physically and mentally, for game participation. The cognitive well-being of athletes is instrumental in their sports participation and overall physical fitness improvement. Ensuring the consistent performance of athletes is crucial not only for their physical abilities but also for their mental well-being. According to research by Lauwerier et al. (2020), keeping track of one's mental health effectively is essential for gathering detailed information on how to improve it. Therefore, athletes should prioritise enhancing their mental well-being alongside their physical conditioning. Johnson et al. (2020) suggests that improving strategic working and offering opportunities for advancement can be beneficial for individuals' physical fitness. As a result, athletes who are driven to excel adopt a defensive mindset when it comes to their exceptional performance. Hence, the psychological well-being of athletes holds great significance as it directly impacts their physical achievements.

In addition, the results of H4 indicated a noteworthy and favourable correlation between sports training and the physical fitness of athletes. In addition, this study compared the established relationship with the results of previous research, following its statistical analysis. As per the findings of Subijana et al. (2021), sports training programmes have been shown to enhance players' fitness levels. Through their work in game production, individuals gain valuable experience and are motivated to excel to achieve their goals. Fogaca (2021) suggests that athletes can enhance their performance by engaging in sports training that specifically targets the demands of the game. Athletes who are driven to enhance their performance adopt a focused mindset to excel in their sports training. This enables them to efficiently accomplish their objectives. It is crucial to emphasize that the sports activities athletes participate in to improve their skills have an impact on how consistently they perform.

Felton et al. (2021) suggest that athletes can enhance their physical fitness by engaging in sports activities and courses. Attaining a high level of physical fitness has numerous advantages, particularly in terms of promoting consistent behaviour. To enhance athletes' behaviour during competition, it is crucial to focus on improving their performance. As stated by McMahan et al. (2020), the training linked to the games is crucial for athletes to develop a constructive mindset to actively participate and attain success. Participating in the game and achieving the set goals could serve as a means for them to enhance their behaviour. This phenomenon facilitates players in improving both their

physical and mental well-being, which is a positive progression towards their participation in the games. Peña et al. (2021) found a positive association between athletes who are highly motivated by sports training and their development of a positive attitude towards learning. The athlete's mental and physical well-being is influenced by their participation in the sports training programme. In summary, it is imperative for the coaches and the board's administration to formulate suitable strategies for the athletes to optimise their learning and performance, hence improving their competitive abilities.

Implications and Future Directions

This research makes a significant contribution to existing knowledge for two reasons. First and foremost, the results of this research have made a substantial contribution to the existing body of knowledge, surpassing earlier investigations in the literature. This study made a valuable contribution to the existing body of knowledge by establishing a clear and positive correlation between coaches' positive behaviour and the physical fitness levels of players. However, there was a discrepancy in the conclusions of prior investigations regarding this link. Similarly, the current research adds to the knowledge that there is a strong and beneficial association between engaging in sports activities and the physical fitness of athletes. However, past investigations have demonstrated inconsistencies in connection with this correlation. Moreover, the research has added to the existing body of knowledge by demonstrating a substantial and favourable correlation between the monitoring of mental health and the physical fitness of athletes. Previously, there was a lack of coherence in the conclusions of prior investigations concerning this correlation. Ultimately, the study has enhanced our understanding by demonstrating a substantial and favourable correlation between sports training and the physical fitness of athletes. Nevertheless, past investigations have yielded inconsistent results about this correlation. Therefore, this research makes a substantial contribution to enhancing the existing body of knowledge. Essentially, this study emphasised that the physical condition of university athletes plays a crucial role in determining their performance. Therefore, this study proposes four variables that exert a substantial impact on the physical condition of athletes. Firstly, the study revealed that cultivating coaches' favourable conduct towards athletes is beneficial for enhancing their physical fitness. Furthermore, the study posited that universities should organise sporting activities to enhance the physical fitness of athletes. It is a method to involve the sportsmen in regular activities. Furthermore, the study indicated that institutions should establish a health

monitoring system for athletes. It would be advantageous for both individuals and coaches to comprehend their state of health. By adopting this approach, their performance would be enhanced. Ultimately, it is vital to organise sports training activities for athletes, as it would have a substantial impact on their sports performance, elevating it to a higher level. Implementing these four indicators suggested by this research might enhance.

However, the findings of this research make a substantial contribution to the existing body of knowledge. Nevertheless, there are certain suggestions available for scholars to make additional contributions to the existing

information. Initially, the study solely examined direct interactions, restricting the exploration of potential external influences. Hence, further research might be undertaken to assess the moderating interactions that may influence the causal linkages among the variables in this study. Moreover, it is imperative for future research to gather data from collegiate athletes in Iraq and other regions to offer additional perspectives to the existing pool of knowledge. Thus, it would be a noteworthy contribution to the existing body of knowledge, benefiting future research endeavours.

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