# INTERFERENCE OF NON-INTELLIGENT FACTORS IN VOLLEYBALL PLAYERS' SPORTS EVENTS



ORIGINAL ARTICLE
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INTERFERÊNCIA DE FATORES NÃO INTELIGENTES NOS EVENTOS ESPORTIVOS DOS JOGADORES DE VÔLEI

INTERFERENCIA DE FACTORES NO INTELIGENTES EN LOS EVENTOS DEPORTIVOS DE LOS JUGADORES DE VOLEIBOL

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#### **ABSTRACT**

Introduction: Non-intelligent factors include learning habits, motivation, interest, emotion, attitude, and student characteristics. Many sports practices have demonstrated that creating excellent athletic performance and winning intense competition depends on various factors. Among them, physical quality is the physiological and material basis to ensure the quality of exercise. Movement technique is the essential condition. However, non-Intelligent factors are the internal motivators for both to function. Objective: Analyze the non-Intelligent factors that affect the performance of volleyball players. Methods: Several volleyball players were selected as research objects. The non-Intelligent factors that affect volleyball performance are analyzed by questionnaire survey and experimental method. Finally, this paper uses mathematical statistics to analyze the experimental data. Results: Volleyball players are easily disturbed by external factors. These non-Intelligent factors can easily lead to large fluctuations in the athlete's psychology. These reasons will affect the stability of volleyball players' serving skills. Conclusion: The non-Intelligent factors that affect the performance of volleyball players are the proficiency of serving technique, the degree of psychological relaxation, and the ability of emotional control. *Level of evidence II; Therapeutic studies - investigation of treatment results.* 

Keywords: Volleyball; Athletes; Sports; Lod Score.

#### **RESUMO**

Introdução: Fatores não-inteligentes incluem hábitos de aprendizagem, motivação, interesse, emoção, atitude e características estudantis. Muitas práticas esportivas têm demonstrado que criar um excelente desempenho atlético e vencer competições intensas depende de vários fatores. Entre eles, a qualidade física é a base fisiológica e material para garantir a excelência do exercício. A técnica do movimento é a condição essencial. Entretanto, fatores não inteligentes são os motivadores internos para que ambos funcionem. Objetivo: Analisar os fatores não-inteligentes que afetam o desempenho dos jogadores de vôlei. Métodos: Vários jogadores de voleibol foram selecionados como objetos de pesquisa. Os fatores não-inteligentes que afetam o desempenho do voleibol são analisados por questionário e método experimental. Finalmente, este artigo utiliza estatísticas matemáticas para analisar os dados experimentais. Resultados: Os jogadores de vôlei são facilmente perturbados por fatores externos. Estes fatores não-inteligentes podem facilmente levar a grandes flutuações na psicologia do atleta. Estas razões afetarão a estabilidade das habilidades de serviço dos jogadores de vôlei. Conclusão: Os fatores não-inteligentes que afetam o desempenho dos jogadores de vôlei são a proficiência da técnica de saque, o grau de relaxamento psicológico e a capacidade de controle emocional. **Nível de evidência II; Estudos terapêuticos - investigação dos resultados do tratamento.** 

Descritores: Voleibol; Atletas; Esportes; Escore Lod.

### **RESUMEN**

Introducción: Los factores no inteligentes incluyen los hábitos de aprendizaje, la motivación, el interés, la emoción, la actitud y las características del alumno. Muchas prácticas deportivas han demostrado que la creación de un excelente rendimiento deportivo y la obtención de una intensa competición dependen de varios factores. Entre ellos, la calidad física es la base fisiológica y material para garantizar la calidad del ejercicio. La técnica de movimiento es la condición esencial. Sin embargo, los factores no inteligentes son los motivadores internos para que ambos funcionen. Objetivo: Analizar los factores no inteligentes que afectan al rendimiento de los jugadores de voleibol. Métodos: Se seleccionaron varios jugadores devoleibol como objeto de investigación. Los factores no inteligentes que afectan al rendimiento de los jugadores de voleibol se analizar los datos experimentales. Resultados: Los jugadores de voleibol son fácilmente perturbados por factores externos. Estos factores no inteligentes pueden provocar fácilmente grandes fluctuaciones en la psicología del deportista. Estas razones afectarán a la estabilidad de las habilidades de saque de los jugadores de voleibol. Conclusión: Los factores no inteligentes que afectan al rendimiento de los jugadores de voleibol son el dominio de la técnica de saque, el grado de relajación psicológica y la capacidad de control emocional. **Nivel de evidencia II; Estudios terapéuticos - investigación de los resultados del tratamiento.** 



**Descriptores:** Voleibol; Atletas; Deportes; Escala de Lod.

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#### **INTRODUCTION**

Volleyball is a group sport with comprehensive technical requirements. Its resistance is strong. The technical level of volleyball players plays a vital role in the whole game. The performance of the volleyball player's technical level depends mainly on the individual non-intellectual factors of the volleyball player. Non-intellectual factors are also increasingly becoming an essential factor. This paper takes college volleyball students as the research object. This paper designs a questionnaire on the influence of non-intellectual factors on the serving technique of college students' volleyball players during the game. We distributed a total of 100 questionnaires. The number of questionnaires recovered was 83. The recovery rate of the questionnaires was 83%.

#### **METHOD**

#### **Basic Concepts**

Non-intelligence factors have four primary effects on volleyball players: dynamic function, maintenance and adjustment function, compensation function, and stereotype function.

The dynamic function of non-intellectual factors is first reflected in the initiation of volleyball players. They are not only the inner force that drives people's continuous action but also have the function of initiation.<sup>2</sup> The dynamic function of non-intellectual factors is also reflected in the orientation and guidance of volleyball players. When aspirations are established, players can have clear goals and directions for their struggles. At this time, the competition activities will achieve better results. Moderate non-intelligence factors are good non-intelligence factors. It plays a benign role in promoting the intelligent activities of volleyball players. The moderating function of non-intellectual factors means that they can dominate the individual's behavior. It can control individual behavior and adjust individual psychological functions. Excellent non-intelligence factors compensate for some players whose congenital conditions are not very good.<sup>3</sup> The so-called stereotype function refers to the more and more fixed organizational situation of a particular cognition or behavior.

#### AR volleyball player hitting pose feature extraction

In this paper, a multi-scale fusion of the volleyball player's hitting posture AR map and body changes is carried out by combining the ambiguity feature decomposition method. The fusion result is:

$$\sigma_i = \begin{cases} \mu, |e_i| > \mu \\ -\mu, |e_i| \le -\mu \end{cases} \tag{1}$$

Stereo-segment the label corresponding to each superpixel to obtain the B component of the three-dimensional color feature decomposition of the volleyball player's hitting posture AR:

$$f = \sigma_i J / \lambda g \tag{2}$$

 ${\it g}$  is the decomposition amount of the three-dimensional color feature. We calculate the weight information of each superpixel according to the image boundary for 3D reconstruction of the volleyball player's hitting pose  ${\it AR}$ . In this way, the 3D dynamic feature reconstruction output is obtained:

$$D = \delta f = \int (\delta - \phi b(t))dt \tag{3}$$

b(t) is the three-dimensional dynamic function of the hitting attitude.  $\phi$  is the weight coefficient of each superpixel.

There is no need for a code of ethics for this type of study.

#### **RESULTS**

The importance of non-intellectual factors to the game of volleyball This paper investigates 83 volleyball students in colleges and universities using the questionnaire survey method. The study found that most volleyball students in colleges and universities recognized the importance of non-intellectual factors in volleyball games. (Table 1)

## Cognition of the role of good non-intelligence factors in volleyball

Volleyball students in colleges and universities have a different cognitive emphasis on the role of non-intelligence factors in volleyball games. The higher recognition rate stabilizes the level of technical performance, enhances self-confidence, and improves the field's adaptability. This shows that volleyball students in colleges and universities are not fully aware of the role of good non-intelligence factors. Their incomplete cognition of the role of non-intelligence factors in volleyball games will affect their emphasis on non-intelligence factors in volleyball games. This is not conducive to strengthening volleyball players' cultivation and training of non-intellectual factors. (Table 2)

## Analysis of non-intellectual factors affecting the successful service of college volleyball players

Volleyball players are easily disturbed by external factors in volleyball games. These factors can easily lead to large fluctuations in the athlete's psychology. This will affect the stability of his serve technique. Therefore, it is practically necessary to strengthen the psychological training of volleyball players to improve their non-intelligence factors. (Table 3)

The non-intelligence factors that affect the serving psychology of college students'volleyball players have diversified characteristics. Among the top three are faster scoring, shorter game times, and changes in

**Table 1.** Statistical table of cognition of the importance of non-intelligence factors in volleyball competition among special students in colleges and universities.

	Very important	Important	Generally	Unimportant	Very unimportant
Student number	23	30	15	12	3
Percentage	27.71%	36.14%	18.07%	14.46%	3.61%

**Table 2.** Cognitive statistics of the role of good non-intelligence factors in volleyball games.

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	Student number	Percentage	
Improve field resilience	42	50.60%	
Reduce mistakes	40	48.19%	
Concentrate	33	39.76%	
Stable technical performance level	56	67.47%	
Enhance self-confidence	46	55.42%	
Other	16	19.28%	

**Table 3.** Non-intellectual factors affecting the serving psychology of college volleyball players.

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	Student number	Percentage		
Shorter game time	44	53.01%		
Changes in-game rhythm	41	49.40%		
Accelerates scoring	41	49.40%		
Injustice by the referee	20	24.10%		
Off-site interference	22	26.51%		
Other	18	21.69%		

game tempo. In the game, if the points are scored or lost too quickly, it will cause tremendous psychological pressure on the athletes. This makes athletes afraid to use aggressive serve techniques. Volleyball players become wary, especially when the game reaches a critical stage or is flat.<sup>7</sup> They try to keep serve errors to a minimum. In this way, while ensuring the server's stability, it reduces the offensiveness of the server technology. This volleyball tactic affects the volleyball players' serving skills. The shortening of the game time and changing the game rhythm can easily make the players feel impatient. This will affect the accuracy of the volleyball player's serve and cause his serving technique to fail to function normally. (Table 4)

Students from other colleges and universities believe that many non-intellectual factors affect college students' volleyball players.<sup>8</sup> The top three are proficiency in serving technique, inattention, and poor emotional control. Teachers believe that the non-intellectual factors affecting college volleyball players are the proficiency of serving skills, psychological tension, and poor emotional control.

#### **DISCUSSION**

Coaches should strengthen volleyball players' physical fitness training and strengthen the critical strengthening training of volleyball players' serving skills. This is a realistic requirement to improve the comprehensive quality of volleyball players. The performance of serving skills in volleyball players is closely related to the individual's non-intellectual factors. Non-intellectual factors are the basis and premise of the excellent performance of personal technology. Although most coaches are aware of this problem, they often ignore the training of non-intellectual factors in the actual training process. The main reason is that most volleyball coaches don't know how to train. The traditional teaching concept of coaches is deeply rooted, and it is difficult for them to pay attention to non-intellectual factors. One was a strength of the property of the process.

The firm belief in success when encountering temporary difficulties and adversity in the game is the key to the final victory. Athletes should deal with fatigue, injury, technical obstacles, game setbacks, and other problems with a positive attitude, actively facing them and overcoming them. This puts you in an active position. This is the guarantee of winning

**Table 4.** Subjective factors affecting the serving psychology of college volleyball players.

	Student number	Percentage
Serving Skill Proficiency	44	53.01%
Lack of competition experience	41	49.40%
Inattention	25	30.12%
lack of confidence	33	39.76%
Psychological tension	24	28.92%
Poor emotional control	35	42.17%
Other	12	14.46%

the game.<sup>11</sup> Conscious effort, tenacious struggle, strict self-discipline, the courage to challenge difficulties, and other willpower qualities play a crucial role in the final victory of volleyball players. Competition is a need. It can stimulate people's emotions, lift spirits and mobilize positivity. Volleyball is a competitive sport.

The coach is the conductor of training.<sup>12</sup>The high-intensity, high-density training volume in the daily boring training can easily lead to some negative emotions in athletes. Athletes will have some inconsistency in training and lack of effort in work. This requires coaches to do some ideological education work to encourage athletes to train actively. For example, coaches often "put" the team's goals and the personal goals that athletes want to achieve on the training ground. In addition, the daily style of the coaches will also profoundly affect the athletes and stimulate the athletes' training.<sup>13</sup> Many volleyball coaches in China have done just that. They can be strict with themselves. The coaches can eat, live and train with the athletes. This makes the training enthusiasm of the athletes high.

Athletes' combat effectiveness comes from regular training. Strict management is the fundamental guarantee of regular training. <sup>14</sup> Every athlete has their own unique emotions, will, personality and character. Everyone has their hobbies. If the team does not have unified and strict management measures, then the neatness of the personnel cannot be guaranteed during training. This makes it impossible to guarantee the quality of training. The level of concern of the team to the athletes' lives will affect the athletes' training attitudes to varying degrees. <sup>15</sup> Coaches must cultivate the discipline of athletes based on strengthening management.

#### CONCLUSION

Most volleyball students in colleges and universities realize that non-intellectual factors play a significant role in volleyball games. Athletes with a higher cognitive rate are stabilizing the level of technical performance, enhancing self-confidence, and improving the adaptability of the field. Athletes have an incomplete understanding of the role of good non-intellectual factors. Most volleyball students in colleges and universities believe that serving skills impact the game. Most volleyball students have recognized the importance of the serve technique in the new regulations. The non-intelligence factors that affect the serving psychology of college students' volleyball players have diversified characteristics. Among the top three are faster scoring, shorter game times, and changes in game tempo. College students believe that many non-intellectual factors affect the serving psychology of college volleyball players. The top three are proficiency in serving technique, inattention, and poor emotional control.

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AUTHORS' CONTRIBUTIONS: The author made significant contributions to this manuscript. ZX: writing: data analysis: article review and intellectual concept of the article.

#### REFERENCES

- Rathnayake RMMI, Madushani AL, Rathnamudali KRDC. Factors Influencing the Motivation of National Level Volleyball Coaches in Sri Lanka. Asian Exerc Sport Sci J. 2021;5(1):46-54.
- Thuc DC. Choosing tests to assess professional volleyball physical fitness for male students majoring in physical education. J Med Care Res Rev. 2022;5(2):1176-81.
- Seyed Ali Nejad A, Ahmadi C. Development and Psychometrics" Scale of Factors Affecting the Branding of Volleyball Premier League Clubs". J Health Promot Manag. 2021;10(5):71-82.
- 4. Prieur J, Le Du G, Stomp M, Barbu S, Blois-Heulin C. Human laterality for manipulation and gestural communication: A study of beach-volleyball players during the Olympic Games. Laterality. 2020;25(2):229-54.
- Sarvestan J, Svoboda Z, Linduška P. Kinematic differences between successful and faulty spikes in young volleyball players. J Sports Sci. 2020;38(20):2314-20.
- Sandrima FS, Prasetyo Y, Algifari A. Impact of the 2019 volleyball proliga event on audience satisfaction and loyalty. J Sport Area. 2021;6(3):403-10.
- Ghorbani L, Farahani M, Keshavarz L. Analysis of Environmental and Organizational Factors Affecting the Aggression and Violence of Iranian Volleyball Spectators. App Res Sport Manage. 2020;8(4):25-37.
- Nasuka N, Setiowati A, Indrawati F. Power, Strength and Endurance of Volleyball Athlete Among Different Competition Levels. Utop y Prax Latinoam. 2020;25(10):15-23.

- Chunqi Z. Influence of Nicotine on Evaluation Indexes of Volleyball Players' Physical Training. TRS. 2021;7(4):353-63.
- Fuchs PX, Fusco A, Bell JW, von Duvillard SP, Cortis C, Wagner H. Effect of differential training on female volleyball spike-jump technique and performance. Int J Sports Physiol Perform. 2020;15(7):1019-25.
- Fatahi A, Yousefian Molla R, Ameli M. Comparative Analysis of Jumping and Landing Velocity of the Young Elite Spikers of the Iranian National Volleyball Team While Performing Block Jump. J Sports Biomech. 2020;6(3):144-53.
- 12. Hussein GL, Hasan AJ, Al-Jadaan DAN. The Effect of The Swom Strategy on Learning Some Artistic Gymnastics Skills for Students. RJAI. 2022;3(04):108-23.
- Sukamti ER, Budiarti R, Nurfadhila R. Effect of Physical Conditioning on Student Basic Skills Gymnastics. Jurnal Cakrawala Pendidikan. 2020;39(1):207-16
- Allen E, Fenton A, Parry KD. Computerised gymnastics judging scoring system implementation—an exploration of stakeholders' perceptions. ScGYM. 2021;13(3):357-70.
- Beiki Y, Ghorbani S, Esfahani Nia A, Bai N. Explaining happiness and behavioral regulations in sport based on satisfaction with the financial income of national beach volleyball players. J Sport Psychol. 2020;9(33):233-52.