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Theoretical aspects, decision - making in high-performance baseball coaches from a psychological perspective. Preparation

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Abstract: Baseball, a national emblem of our country for its international achievements, requires close monitoring at all levels. The high level of competition in international tournaments has driven changes in team preparation, where coaches play a fundamental role in achieving sporting success. Therefore, it is essential to have better-prepared coaches with a broad and comprehensive vision. Thus, the very definition of preparation warrants greater attention and analysis for a true understanding. In this research, we studied the theoretical references supporting the preparation of high-performance baseball coaches for psychological decision-making. The theoretical method was applied, characterized by its historical-logical, analytical-synthetic, and inductive-deductive nature. Scientific contributions are presented after an in-depth study of the supporting theoretical elements, with a strong emphasis on conceptual aspects. The research explored topics focused on sports coach preparation through the appropriation

of knowledge, skills, and values, aiming for the conceptual definition of the research topic.

Keywords: preparation; decision-making; baseball coaches; psychological perspective

Aspectos teóricos, toma de decisión en entrenadores de béisbol de alto rendimiento desde la perspectiva psicológica. Preparación

Resumen: El béisbol, como patrimonio nacional, celebrado por sus logros internacionales, requiere una supervisión cercana en todos los niveles. El alto nivel de competencia en los torneos internacionales ha impulsado cambios en la preparación de los equipos, donde los entrenadores desempeñan un papel fundamental para lograr el éxito deportivo. Por lo tanto, es esencial contar con entrenadores mejor preparados y con una visión amplia e integral. Así, la propia definición de preparación justifica una mayor atención y análisis para una comprensión cabal. En esta investigación, se estudiaron las referencias teóricas que respaldan la preparación de los entrenadores de béisbol de alto rendimiento para la toma de decisiones psicológicas. Se empleó el método teórico, caracterizado por su naturaleza histórico-lógica, analítico-sintética e inductivo-deductiva. Las contribuciones científicas se presentan tras un estudio en profundidad de los elementos teóricos que las sustentan, con un fuerte énfasis en los aspectos conceptuales. La investigación exploró temas centrados en la preparación de entrenadores deportivos a través de la apropiación de conocimientos, habilidades y valores, con el objetivo de definir conceptualmente el tema de la investigación.

Palabras clave: preparación; toma de decisiones; entrenadores de béisbol; perspectiva psicológica

Aspetos teóricos, tomada de decisão em treinadores de basebol de alto rendimento sob a perspetiva psicológica. Preparação

Resumo: O basebol, um emblema nacional celebrado pelas suas conquistas internacionais, exige uma supervisão atenta a todos os níveis. O elevado nível de competição nos torneios internacionais impulsionou mudanças na preparação das equipas, onde os treinadores desempenham um papel fundamental na obtenção do sucesso desportivo. Por conseguinte, é essencial ter treinadores mais bem preparados e com uma visão ampla e abrangente. Assim, a própria definição de preparação justifica uma maior atenção e análise para uma compreensão cabal. Nesta investigação, estudaram-se as referências teóricas que sustentam a preparação de treinadores de basebol de alto rendimento para a tomada de decisões psicológicas. Foi empregue o método teórico, caracterizado pela sua natureza histórico-lógica, analítico-sintética e indutivo-dedutiva. As contribuições



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científicas são apresentadas após um estudo aprofundado dos elementos teóricos que as suportam, com uma forte ênfase nos aspectos conceituais. A investigação explorou temas focados na preparação de treinadores desportivos através da apropriação de conhecimentos, competências e valores, visando a definição conceptual do tema da investigação.

Palavras-chave: preparación; toma de decisiones; entrenadores de béisbol; perspectiva psicológica

Introduction

The training of Physical Culture professionals is intentionally structured within the institution, where ongoing education plays a fundamental role in postgraduate development. This significantly influences sports coaches, particularly those focused on high performance. Such development is crucial for equipping coaches with an advanced level of knowledge, which positively impacts the sports teams they lead. Furthermore, ongoing education fosters lifelong learning for professionals, enhancing both their personal and professional growth.

de la Vega *et al.* (2018) highlight that the techno-scientific impact is central to contemporary competition, encompassing aspects such as infrastructure, telecommunications, data management, equipment materials, facilities, athletic apparel, and the intensive application of interdisciplinary knowledge tailored to each sport.

Consequently, the technological advancements impacting a sport like baseball—followed by large fan bases - mean that sophisticated statistical management and the study of real-time game applications directly influence daily operations. This, in turn, necessitates continuous professional development.

Baseball is experiencing profound shifts in its internal dynamics and in the very conception of its preparation. This evolution demands new perspectives, driven by the extensive modifications in information utilization, the deployment of novel tools and equipment on the field, and the support of diverse professionals to facilitate more contextualized training. For team sports, growth is contingent upon the coach [*“En el caso de los equipos deportivos de conjunto, éstos dependen para crecer de su entrenador (...)”*] (Audelo, 2019, p. 165).

Undoubtedly, training baseball coaches for high-performance settings is an essential tool for navigating significant psychological demands. These demands arise from the challenging environments in which they operate and the sport's inherent dynamism.

Baseball introduces a further layer of complexity in monitoring professional performance and outcomes. This is perpetually subjected to intense scrutiny, evaluating the condition of teams and

management collectives concerning critical performance results, thereby escalating daily psychological pressure.

Current professional recruitment trends within the country, coupled with engagement with professional leagues, underscore the necessity for perpetually enhancing preparation levels. It is readily apparent that acquired knowledge rapidly becomes obsolete due to technological advancement, necessitating constant updating."

Considering sporting demands, athlete concerns, their expressed sentiments at various moments, and the enhancement of sports performance, personnel interacting with high-performance sports must be adept at detection, instruction, and development (Del Monte, 2018).

Building upon this analysis, it is posited that sports professionals require continuous preparation that cultivates a high level of knowledge within their working collectives. This preparation must acknowledge the substantial and rapidly updating changes in information, necessitating constant self-directed development from sports coaches.

Specifically, baseball demands significant psychological control and strategic planning. Consequently, coaches must embrace the challenge of their own ongoing preparation as a paramount objective. The psychological impact of in-game decision-making directly influences team outcomes, and integrating this crucial aspect from the foundational stages of training presents one of the most complex challenges to overcome.

Considering sporting demands, athlete concerns, their expressed sentiments at various moments, and the enhancement of sports performance, personnel interacting with high-performance sports must be adept at detection, instruction, and development [“... *tomando en consideración las demandas de cada deporte, los deportistas y sus inquietudes, lo que se expresa de ellos en los diferentes momentos y niveles de perfeccionamiento deportivo; consideramos, que el personal que intercambia con el deporte de alto rendimiento debe saber detectar, enseñar y desarrollar ...*”] (Del Monte, 2018, p. 6).

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team outcomes, and integrating this crucial aspect from the foundational stages of training presents one of the most complex challenges to overcome.

The diverse and complex sporting situations currently encountered reveal increasingly intricate decision-making processes. As sporting trends evolve, they necessitate novel perspectives for resolution, particularly regarding the specificities of modern baseball terminology within the competitive process and its adaptability in sports training.

Consequently, a crucial element to address in Cuban baseball is the cultivation of decision-making skills among coaches from a psychological standpoint. This must be anchored in the knowledge, skills, and values that empower them to adopt decision-making strategies with greater depth and alignment to the current demands placed upon the nation's sport.

From a broad perspective, the primary objective within high-level competitive sports collectives is to achieve a comprehensive understanding of sports training through knowledge integration. This should be manifest in every training session, where the psychological dimension is strategically incorporated into all facets, facilitating substantially deeper levels of preparation.

Methods

In this research, the theoretical method was employed to explore the conceptual frameworks underpinning the research topic. Specifically, the historical-logical method was utilized to analyze diverse theoretical references, contextualizing them within evolving trends over time relevant to the subject matter. For procedural execution, the analysis-synthesis technique was applied. This involved decomposing and identifying the internal components of the investigated topic, subsequently achieving a synthesis that illuminates its properties via both inductive and deductive reasoning. This overarching process facilitated a thorough analysis of theoretical elements and enabled logical deductions from the research, grounded in the generalization and abstraction of knowledge.

All methodologies were integrated under the dialectical-materialist conception, serving as the overarching scientific method. This approach fostered the seamless integration of theory and practice in the acquisition of knowledge.

Results and discussion

Professional development constitutes a highly regulated aspect of professional training. Institutions intentionally foster it as a critical determinant for the advancement of sports professionals, grounding it in the realities and challenges inherent in their professional practice.

Proficiency in understanding the internal dynamics of their context, managing current information, utilizing appropriate tools, and exhibiting suitable attitudes within their environment are significant factors that will guide the achievement of collective goals.

As Estévez (2019) observes, it is a reality that a significant number of teachers perform their professional duties without complete training in the area in which they work.

Concurring with the author's perspective, achieving mastery across various domains of professional performance is paramount. Fundamentally, cognitive limitations adversely affect the sports training instruction process, resulting in schematic and inadequate sports planning that fails to address the realities confronting sports coaches. The contemporary landscape necessitates the sustained professional advancement through the implementation of innovative techniques and procedures that enhance their performance in sports training.

Preparation for employment fosters lifelong professional learning, enhancing both skills and personal development. (Mengana & Guibo, 2022)

Central to interpreting this statement is the imperative for coaches to maintain a continuous formative approach throughout their professional careers. This necessitates clarity regarding the distinct yet related terms that define professional development, including: professional performance, professional training, postgraduate advancement, and skill enhancement.

Consequently, while preparation draws upon each of these domains, it is most effectively understood holistically, exerting a broader impact and yielding significant repercussions on learning levels. This comprehensive approach embraces all professionals and extends to the contextualization of their operational environments.

A significant characteristic of preparation, as noted by Mahama *et al.* (2023), is its long-term nature, spanning the entirety of a professional's career. It is not fully realized within a single training program but rather emerges from a continuous developmental process.

The interpretations derived offer a crucial insight into the implications of preparation. These are framed within generalized and broad-profile conceptualizations, underscoring the need for professionals to adopt a systematic strategy for their ongoing advancement and the continuous pursuit of knowledge that benefits their professional endeavors.

Preparation, conceived as a planned and strategic pursuit of logical actions, fundamentally requires flexibility to enhance the acquisition of new knowledge, skills, and values. Ultimately, these elements significantly influence professional practice and competence.



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The conclusive analyses by Quijano (2022) and Felipe *et al.* (2020) indicate that sports preparation, irrespective of the activity level, necessitates adaptation aligned with the educational requirements of its various components.

This underscores the importance of accumulating extensive, up-to-date information and embracing novel trends. Such knowledge facilitates effective sports training planning, integrating current elements that impact coaches' professional development and, consequently, their professional competencies. These competencies emerge from managing and implementing actions aligned with contemporary trends, ultimately driving significant improvements in sport.

As González *et al.* (2024) states that Cuban coaches need to approach the preparation of their athletes as an integrated process among its components, applying scientific and technical knowledge, and utilizing technological advancements [*“Los entrenadores cubanos necesitan asumir la preparación de sus atletas como un proceso integrado entre sus componentes, aplicando los conocimientos científicos, técnicos y el uso de los adelantos tecnológicos”*] (p. 37).

The preceding quote underscores the significance of all facets of preparation. Sports coaches must endeavor to influence the sports training process comprehensively, integrating knowledge that enhances the condition of sports teams when confronting the considerable disparities with global sports powerhouses, which possess resources for the sustainable development of coaches.

A generalized perspective on sports preparation is a primary factor in identifying deficiencies. The judicious application of findings from completed research will facilitate a robust understanding of preparation within contemporary contexts.

According to Veitía *et al.* (2023), this pertains to the training process for Physical Culture professionals, thereby impacting their preparation. It is a process that equips them with knowledge across various domains of sports performance, encompassing the acquisition and updating of expertise, which is aligned with the components of sports training: namely, theoretical, physical, technical, tactical, pedagogical, and psychological.

Preparation in sports stands as one of the most significant aspects due to its holistic impact, which is undoubtedly fundamental for achieving athletic results. A competitive team cannot be envisioned without adequate preparation across its various components.

In this context, one of the most crucial elements within the components of preparation is its psychological dimension. This necessitates that coaches possess generalized knowledge of the sports teams they lead, representing one of the factors that most significantly impacts performance.

It requires constant monitoring and an updated pursuit of information, with a heightened focus on solutions to high-performance sports challenges, considering the diversity of indicators and aspects that influence preparation.

Postgraduate advancement in physical culture and sports in Cuba is structured towards the permanent search, acquisition, expansion, and refinement of knowledge and fundamental skills. (Garcés *et al.*, 2023)

Highlighting the transcendental role of professional advancement for those guiding high-level sports training, the acquisition of new knowledge equips them with the necessary tools for their work. Internally, this dynamic is envisioned as a perpetual aspect of the professional development of sports coaches and the knowledge gained through preparation.

In reviews by researchers addressing the psychological aspect as a necessary element, Fonseca and Hernández (2021) and Yacherena *et al.* (2023) propose that psychological preparation arises from the interpretation of actions and the optimization of the athlete's psychic life. Essential aspects at the high-performance level are established, such as sports intelligence and counterintelligence, alongside the acquisition of psychological states or forms by the coach, which impacts professional advancement. This is deemed indispensable for coaches, providing solutions to the negative effects of competition, based on emotional regulation for resolving emergent problems.

In this regard, it is a viewpoint that underscores the complexity of the elements affecting sports coaches in the performance of their duties. The diversity of information, behavioral parameters, and situational management is highly intricate, demanding a broad and generalized vision from the sports professional, specifically from the baseball coach.

The coach is the primary guarantor of the implementation and ongoing control of the sports training process in high performance. In this context, the definition of a sports coach according to Pérez *et al.* (2022) is pertinent; he states that a person who possesses in-depth knowledge of their specific sport, along with high motivation towards the practice of their profession, and who knows how to creatively organize, plan, and integrate sports strategy, technique, and tactics to achieve the maximum performance of the athletes.

The study of this quote affirms the coach's importance from an organizational perspective. They evaluate and compare achieved states, perceive physical conditions, and make necessary modifications or adjustments, fostering new skills through training.

In the study conducted by Castillo (2021), it is stated that the role of the sports coach, who directs the entire preparation process across different disciplines, requires them to structure their pedagogical activity through a process that first encompasses the acquisition of knowledge [“... *el*



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rol del entrenador deportivo que dirige todo el proceso de preparación en las diferentes disciplinas, debe ir estructurando a su actividad pedagógica a través de un proceso que abarque en primer lugar la apropiación de conocimientos ... ”] (p. 1154).

It is further added that, due to their responsibility, they are the individual with the greatest control over the sports training process. They are perceived as the person in charge of educational aspects and information management, which will be provided through the appropriation of different types of knowledge and procedures that enable them to achieve adequate professional performance.

In various conducted studies, it is essential to highlight that the terms "coach" and "sports professor" present significant similarity. These studies identify them as the individuals who control the sports training process. In some references, such as Garcés *et al.* (2023), Maneiro (2022), and Mengana and Guibo (2022), their commonalities define this person as one who directs, supervises, controls, and oversees the pedagogical process of sports preparation to achieve high sports results. They possess the capacity to discern, organize, and specify the goals to be achieved, with a broad vision of the sport, playing a primordial role in the group's focus and unity, thus defining them as a teacher/coach.

The professional must possess knowledge of the age and formative stage of their athletes, mastering several areas to ensure that the teaching and learning process is adequate. This includes the technical, psychopedagogical, and organizational domains, requiring strong and systemic analytical capabilities.

According to the research contributions of Gálvez *et al.* (2018), to improve the results of baseball athletes, it is necessary to enhance the preparation of the coaches leading the sports training process [*“Para elevar los resultados de los atletas de Béisbol se hace necesario perfeccionar la preparación de los entrenadores conductores del proceso”*] (p. 16).

In agreement with the author's proposal, it is crucial to consider that results in high-level sports consequently depend on the scientific expertise possessed by those in charge of sports training. Their functionality in professional performance directly impacts group outcomes.

In the interpretive handling of the term "baseball coach," it is prudent to present the convergent criteria of several authors: Cordero *et al.* (2019); García Rivero *et al.* (2022); Martín *et al.* (2021); Vargas *et al.* (2021). They define this role as: a person who possesses absolute mastery of the sport, is capable of comparing states, planning, controlling, and modifying sports conditions

in pursuit of superior achievement, with the ability to eradicate technical errors and educate coherently within the teaching-learning process in baseball.

Knowledge of the internal elements of the sport, and specifically of baseball, is vital for the work of high-performance baseball coaches. In this context, addressing the definition of this sport is significant for achieving a better understanding of its essence.

According to the scientific contributions of authors Álvarez (2020); Cordero *et al.* (2019); García Rivero *et al.* (2022); Martín *et al.* (2021), it is a team sport, of a variable and contextualized nature within the group of "ball sports," classified as cooperation-opposition sports. It is distinguished by the use of strength in offense, offensive and defensive plays supported by traditional tactical schemes, requiring a high level of psychological skills and sophisticated strategic planning.

Baseball is one of the foremost exponents of high performance in our country, where there is constant deepening into the elements and indicators that sustain high competitiveness.

High performance relies on planning, exercise execution, intensity and frequency, as well as sports mastery and the high standards of athletic demand imposed by the sports coach through its implementation. Its fundamental culmination is the logical and coherent attainment of expected sports results.

Sports training encompasses different spheres of action, including basic training and sports initiation, the specialization phase, and the high-competition level. These processes must be planned, dosed, managed, and directed by a specialist with the knowledge to achieve the desired objective in a discipline (Quijano, 2022).

As the previous quote demonstrates, the sports coach is one of the most important members in the execution of high-level competitive sports activity. The EIDE (Schools for Sports Initiation and Development, for its Spanish acronym), due to their social purpose, form the base of the sports pyramid in high performance, where the sport itself is the focal point.

In scientific reviews conducted regarding high performance, various authors such as Cañadas *et al.* (2019) and Quijano (2022), in their similar criteria, interrelate it by stating that high performance represents the peak or elevated level. This is illustrated by a statistical order showing the magnitude of this performance, characterized by a high level of systematic training and competition execution; thus, highlighting the impact of psychology on sports coaches.

High performance is an exponent of the high rigor of training and competition. Consequently, the systematicity of athletes is one of the most palpable factors, requiring them to adopt behavior consistent with the daily physical and mental strain they endure without variation.



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One of the most complex aspects for sports professionals, especially in high-level sports competition, is decision-making. This is because it often involves significant time pressure and critical assessments of game situations, with a subjective nuance that fosters decisions based on deep interpretive analysis. In this process, emotional control plays a fundamental and decisive role, alongside analytical projections based on current trends, through the acquisition of knowledge and skills that aid in achieving a better interpretation of sporting situations.

Decision-making, due to its complex nature, its role as a generator of uncertainty, and its daily presence within the sports training process, has a palpable impact on performance. This is because, in many cases, it is the response to deficient results. Since its conceptual beginnings, notably with the work of author Simon (1979), elements of cognitive individuality in handling situations have been evident, showcasing the selection of alternatives or decision-making proposals.

At its core, several authors such as Hermans and Ulrich (2021) and Lugo *et al.* (2024) have concurred that these are not linear or schematic processes in their execution. They represent a conflict between existing conditions, goals, objectives, and expected outcomes. They are interactive and reflective, manifesting in results, behavioral management, and competitive strategies. These processes are sometimes based on prior decisions from similar situations and at other times are filled with intuition.

From other perspectives on decision-making, authors such as Ezurmendia and Valenzuela (2020), Gilbert *et al.* (2023), and Marshak and Heracleous (2023), contribute in their studies that decision-making presents a planned approach stemming from a higher level of cognitive complexity. Its impact can be prolonged over time and have repercussions on subsequent decisions. Consequently, decisions must be made cautiously, based on choices and optional alternatives derived from the information available in specific situations.

According to contributions from other authors like Almonacid *et al.* (2020) and Teoldo *et al.* (2023), it is an individual process that influences its final outcome, with a collective incidence in team sports. In this context, it has a significant impact due to information management, being constantly dependent on certain variables where competitive experience plays a fundamental role. The coach must respond to the variables of the competitive environment.

Due to their nature, decision-making processes are dynamic and flexible. A decision that is appropriate at one moment may not be under different conditions. In this sense, authors such as García Martínez *et al.* (2022); Pérez *et al.* (2022); propose that while stable in essence, they are

novel in their presentation. They constitute a factor that demands high preparation from professionals to respond to sporting demands. These authors also highlight the importance of environments, contexts, and communication, focusing on the capacity to accept uncertainty and high risks.

According to the criteria of authors Lugo *et al.* (2024), individuals perceive, reason, act, and defend (or not) their participation in decisions, acting as opinion-makers or decision-makers, in selecting alternative courses of action, and as solvers of strategic problems.

From an analytical perspective, decision-making is a process that evaluates situations and defines rules of action based on knowledge and acquired skills for managing them. It is necessary to utilize plans and strategies that provide not only a mode of operation but also a critical framework for assessing decisions and proposing mechanisms, derived from professional practice, that offer adaptability to complex situations.

Regarding decision-making in high-performance coaches, it is noted that: It is important to consider that cognitive flexibility is a sign of adaptation to uncertainty [*“Es importante tener en cuenta que la flexibilidad cognitiva es una muestra de adaptación a la incertidumbre.”*] (Feu *et al.*, 2023, p. 243)

Consequently, decision-making involves the constant management of situations and learning from them, grounded in the coach's cognitive and reflective stance to improve their decisions. This impacts their professional competence and competitive performance, based on the variability and flexibility of alternatives in problem-solving.

It is a superior-level process that highlights the detection of signals and the ability to process information within sporting contexts. Characterized by a multiplicity of factors for its execution and inherent complexity, it enables the triggering of changes in a course of interaction with the context aimed at achieving an objective. Here, cognitive capacity and skills for perception and interpretation are fundamental. With an ever-changing informational character, the interpretive analysis of sporting actions is paramount.

Complex situations demand decision-making with psychological repercussions. In this sense, possessing mastery of the psychological perspective in one's professional work is vital. A perspective is a specific viewpoint adopted to understand a situation or phenomenon; in psychology, it implies an approach used to analyze and understand an essential aspect of the subject within their environment.

In conducted studies, authors such as Almonacid *et al.* (2020) and Vázquez *et al.* (2019) were identified, showing as a key element of interest the knowledge possessed by sports professionals



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from a psychological perspective and its impact on decision-making. This stems from the use of supporting information, which influences the analysis and understanding of decisional responses.

In the study of the theoretical frameworks supporting the psychological perspective, authors like Sánchez (2003); Olmedilla *et al.* (2018); and Vargas *et al.* (2021) are considered. Through this perspective, responses are understood based on the cognitive aspects that characterize individuals and their specific particularities, which positively contribute to their work performance. This includes the self-knowledge they must possess to carry out daily tasks in sports training.

According to converging criteria, it is addressed as a specific viewpoint adopted to understand a situation in psychology, encompassing an essential aspect of the subject. Some perspectives focus on behavior, others on cognition and its capacity for self-determination.

The psychological perspective is manifested in five main approaches within psychology: the behaviorist, cognitive, psychodynamic, neuropsychological, and humanist approaches.

Behaviorist Approach: Its central idea is that human behavior can be explained and understood as a response to specific stimuli. It focuses on observing how environmental stimuli influence current and future behavior, categorizes the characteristics of subjects in resolving problematic situations, and places behavior itself at the center of attention.

Cognitive Approach: It explains behavior in terms of mental processes and cognitive functions. The mind is viewed as an active system that constantly processes information, and behavior is explained by the interaction between incoming information and how this information is processed and utilized for decision-making.

Psychodynamic Approach or Psychoanalysis: Unconscious conflicts are seen as the cause of many psychological disorders and dysfunctional behaviors. Repressed thoughts, feelings, and desires can affect a person's emotional and social life without their conscious awareness.

Humanist Approach: The human being is considered a unique entity, worthy of being understood and valued in their individuality. It centers on the emotions, thoughts, and unique experiences of each person, focusing on aspects of positive thinking and the mental power to adopt more active stances in responding to situations.

Neuropsychological (Biological) Approach: It delves into the relationship between the brain, the nervous system, and human behavior. It combines psychology and neuroscience to understand human conduct and thought, focusing on the study of the brain's structure and function, cognition, and emotion.

In the sports context, the psychological perspective manifests itself in each sporting moment and action. Consequently, behaviorist and cognitive theories are particularly significant. Authors such as Fonseca and Hernández (2021) and Ibáñez (2020) have addressed the subjectivity of sports coaches in interpreting sporting actions and the variability in their responses, based on their capacity to provide creative solutions to highly complex problems.

It is prudent to state that, through the conducted study, no research was identified that makes specific contributions to the preparation of the high-performance baseball coach for decision-making from a psychological perspective. However, studies by authors who have addressed the preparation of professionals from the standpoint of managing necessary knowledge and skills were examined.

In the scientific review of research contributing to the preparation of high-performance baseball coaches, the author Ruiz (2018) conducted a study that supports professional development. This study implemented a professional advancement strategy based on contemporary trends, aimed at the preparation of baseball coaches as a fundamental element. It has a theoretical focus that benefits the level of integrated knowledge about the sport, impacting the knowledge and skills acquired by those involved.

According to the investigative criteria of authors Mengana and Guibo (2022), the application of psychopedagogical knowledge and skills is essential to identify, intervene in, solve, and evaluate various problems inherent to professional training. This process requires decision-making based on personal judgment. In this sense, their research is approached from a foundation of theoretical preparation, encouraging the active pursuit of knowledge based on skills and values, and proposing a change initiative. The ultimate goal is to achieve genuine professional development through continuous training.

In the work of authors López and Diéguez (2022), research was conducted on coaches in need of professional advancement. This research corroborates the necessity of their preparation through ongoing professional development, where the acquisition of knowledge and skills is a key aspect. The importance of this preparation lies in enabling coaches to convey reasoning and knowledge to their athletes during sports training. This involves incorporating information and experiences that allow athletes to understand socio-educational and psychomotor elements for their comprehensive formation.

In the scientific contributions of the author González *et al.* (2024), the importance of preparation in baseball sports teams was deeply examined. The author conducted a theoretical study on the significance of preparation for achieving adequate sports results. This study demonstrated the



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value of preparation focused on theoretical aspects associated with pitching technique as a necessary component of the sport. It highlighted the undeniable impact on the pitcher's achievements, placing the integrative and analytical teaching of the art of pitching at the center of the process.

Scientists Poblete *et al.* (2025) worked to enhance the preparation of baseball coaches by improving the professional development process. This was based on integrating new knowledge, tools, and skills that facilitated the fulfillment of their social function, thereby guaranteeing the achievement of professional prestige and, consequently, the impact of their professional work.

One of the contributions to coach preparation comes from the strategic actions implemented by Corrales *et al.* (2025). They designed a series of strategic actions for managing the sports movement at the University of Pinar del Río. At its core, this initiative equips teachers with previously unacquired knowledge and skills for their work, focusing on theoretical aspects and their impact on professional performance.

Among the authors who have addressed the preparation of sports coaches, the following can be added: Añorga *et al.* (2008); Ginga *et al.* (2019); Mahama *et al.* (2023); Veitía *et al.* (2023). Their work has allowed for the unification of content based on their definitions within theoretical trends:

Preparation as the result of a pedagogical process.

Preparation as an action aimed at the acquisition of knowledge, skills, and values.

Preparation as a historical-social practice of growth and autonomy, grounded in a commitment to learning.

Regarding another element of the research topic, the theoretical study of decision-making by preceding authors and the new approaches by several authors such as Pérez *et al.* (2022); Ribeiro and Pantoja (2020); Pozo and Córdova (2023) has allowed for the grouping of decision-making based on theoretical trends:

- Decision-making as a complex cognitive process.
- Decision-making as a professional tool (capacity or skill).
- Decision-making as an emotional response, characterized by changing informational influences.

Conclusions

Following the analysis of the theoretical references conducted, this study can be finalized with the definition of the preparation of the high-performance baseball coach for decision-making from a

psychological perspective as: a pedagogical, planned, and organized process, directed at the person who supervises high-execution sports training in baseball. Its aim is the selection of the correct response among multiple possibilities, based on psychic aspects involving cognitive, procedural, and attitudinal elements, encompassing behaviors and the capacity for self-determination.

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Conflict of interests

The authors have no conflicts of interest.

Authorship contribution statement

Reinier Acosta Cruz: Conceptualization, methodology, validation, writing – original draft.

Juan Lázaro Márquez Marrero: Formal analysis, writing and critical review of the work.

Pedro Alberto Martínez Hernández: Date curation, research supervision.