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Methodology for the treatment of the contents of Field Hockey category 11-12 years

*Metodología para el tratamiento de los contenidos del hockey sobre Césped categoría 11-12
años*

*Metodologia para o tratamento dos conteúdos de Hóquei em Campo de 11 a 12 anos de
idade*

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ABSTRACT

The research is aimed at resolving insufficiencies in the treatment of content in the teaching-learning process of Field Hockey, in the 11-12-year-old category; consequently, the objective was set to develop a methodology for its didactic procedure. From a population of 18 teachers, a sample of 12 was intentionally selected; and from 168 hockey players, 72 were chosen. Methods and techniques such as document analysis, observation, interview, formative pedagogical experiment and critical opinion workshops were used. It was resolved the essence of the contradiction between the fragmented treatment of the contents of Hockey category 11-12 years and the need for a theoretical and methodological vision that favors coherent structuring between the developmental nature of the components of hockey players' preparation and those of the teaching-learning process of this sport. The instructive and educational potential of the contents were argued as a way to achieve the link of unity between the cognitive and the affective in the methodology that contributes to the improvement of its structuring, through didactic procedures supported by developmental learning and the particularities of sport. The application of the methodology, from the formative pedagogical experiment, allowed its feasibility and functionality to be assessed, and its effectiveness in achieving the established goals was evident.

Keywords: field hockey, methodology, treatment of contents.

RESUMEN

La investigación va dirigida a resolver insuficiencias en el tratamiento de los contenidos en el proceso de enseñanza-aprendizaje del Hockey sobre Césped, en la categoría 11-12 años; en consecuencia, se planteó como objetivo elaborar una metodología para su proceder didáctico. De una población de 18 profesores se seleccionó, de manera intencionada, una muestra de 12; y de 168 hockeístas, a 72. Se emplearon métodos y técnicas como el análisis de documentos, la observación, la entrevista, el experimento pedagógico formativo y los talleres de opinión crítica. Se resolvió la esencia de la contradicción entre el tratamiento fragmentado de los contenidos del Hockey categoría 11-12 años y la necesidad de una visión teórico y metodológica que favorezca la estructuración coherente entre el carácter



desarrollador de los componentes de la preparación de los hockeístas y los del proceso de enseñanza-aprendizaje de este deporte. Se argumentaron las potencialidades instructivas y educativas de los contenidos como vía para lograr el vínculo de la unidad entre lo cognitivo y lo afectivo en la metodología que contribuya al perfeccionamiento de su estructuración, mediante procedimientos didácticos sustentados en el aprendizaje desarrollador y las particularidades del deporte. La aplicación de la metodología, desde el experimento pedagógico formativo, permitió valorar su factibilidad y funcionalidad, y se evidenció su efectividad para lograr los fines trazados.

Palabras clave: hockey sobre césped, metodología, tratamiento a los contenidos.

RESUMO

A pesquisa tem como objetivo solucionar insuficiências no tratamento de conteúdos no processo de ensino-aprendizagem do Hóquei em Campo, na categoria de 11 a 12 anos; Consequentemente, estabeleceu-se o objetivo de desenvolver uma metodologia para seu procedimento didático. De uma população de 18 professores, foi selecionada intencionalmente uma amostra de 12; e de 168 jogadores de hóquei, para 72. Foram utilizados métodos e técnicas como análise documental, observação, entrevista, experimento pedagógico formativo e oficinas de opinião crítica. A essência da contradição entre o tratamento fragmentado dos conteúdos da categoria Hóquei 11-12 anos e a necessidade de uma visão teórico-metodológica que favoreça a estruturação coerente entre o carácter desenvolvimental das componentes da preparação dos jogadores de hóquei e da processo de ensino-aprendizagem deste esporte. O potencial instrutivo e educativo dos conteúdos foi defendido como forma de alcançar o elo de unidade entre o cognitivo e o afetivo na metodologia que contribui para a melhoria da sua estruturação, através de procedimentos didáticos apoiados na aprendizagem desenvolvimental e nas particularidades do desporto. A aplicação da metodologia, a partir da experiência pedagógica formativa, permitiu avaliar a sua viabilidade e funcionalidade, sendo evidente a sua eficácia no alcance dos objetivos estabelecidos.



Palabras-chave: hóquei em campo, metodologia, tratamento de conteúdos.

INTRODUCTION

Social demands, changes in the rules and current competitive systems of field hockey impose necessary transformations to the teaching-learning process (PEA in Spanish) of this sport, which is why its improvement is required to achieve a coherent development of the dimensions of the human being, through innovative didactic approaches.

The latter constitutes the highest aspiration of the preparation of hockey players from the grassroots level, from a conscious perspective that guarantees the fulfillment of their social responsibility as a practitioner in training and for the future exercise of the competition. That is why in the Comprehensive Field Hockey Athlete Preparation Program (PIPD in Spanish) category 11-12 years, the fundamental objective is declared to be their training with moral, volitional, collectivist spirit habits, values and development of physical capacities and skills, based on the principles of comprehensive education.

Based on observations made, the insufficient treatment of the contents of Field Hockey (hereinafter s/c) in the PEA of the 11-12-year-old category was identified, in the fragmentation of the fundamentals of the game, the limitations in the treatment of intellectual abilities and the predominance of the development of physical sports capacities and skills. In the case of hockey players, there is a limited development of skills and capacities to solve game situations, insufficient connection between their peers and the teacher, in the search for solutions to game situations, and limited cognitive and motor performance during learning.

These manifestations of insufficiencies revealed the contradiction between what was stated in the objectives of the Hockey (s/c) PIPD referring to the training of hockey players with the development of physical capacities and skills, based on the principles of comprehensive education and the insufficient development of knowledge, skills and values to solve game situations, which limited their comprehensive training.



In the search for a solution to this contradiction, authors such as Cevallos *et al.* (2023); Foresto (2021, 2022); Foresto (2021), Hernandez *et al.* (2023); Rodríguez *et al.* (2022) and Torres (2019) who provide teaching models, training manuals, exercise systems, evaluation tests and process control, to verify the diversity of criteria associated with the treatment of content in sport, with the predominant manifestation of the behaviorist approach.

Despite the multiplicity of alternatives, it is still not possible to propose solutions that objectively focus on the treatment of Hockey content (s/c) in the PEA of the 11-12-year-old category; therefore, knowledge is diluted, faced with the need to make it concrete in practice.

MATERIALS AND METHODS

In accordance with the investigative demands of the problem, through the scientific tasks proposed, a system of methods of the theoretical level and the empirical level supported by the dialectical materialist conception is assumed as the general theoretical and methodological basis of the research. The theoretical level methods included:

- Historical-logical: for the study of the evolution of the object and the field being investigated. Its application made it possible to determine the essential features that distinguish the field, the object of research, and thus the background of the problem presented.
- Theoretical systematization: to select, from the educational sciences, the laws, principles and essential categories, their definitions and relationships with other categories that allowed arguing the treatment of the contents of Hockey (s/c) in the PEA, category 11- 12 years, based fundamentally on the critical review of bibliographic sources and on the logical thought processes of analysis-synthesis, induction-deduction, comparison and generalization.



- Functional structural systemic: in the analysis of the theoretical relationships of the cognitive theoretical body of the methodology for the treatment of the contents of Hockey (s/c) category 11-12 years and its structuring in the form of a system.
- Modeling: for the design of diagnostic instruments and the development of methodology procedures.
- Study of the products of the process: to carry out an evaluative analysis of the PIPD, methodological guidelines, teaching programs, lesson plans, reports on the check of the hockey players` preparation, minutes of academic groups, technical groups and methodological preparations.

From empirical methods:

- Participant and structured observation: to obtain information on the procedures for the treatment of the system of knowledge, skills and values of Hockey (s/c) category 11-12 years, during the PEA, as well as to assess the degree of functionality of the methodology.
- Interviews and surveys: with hockey players and teachers to obtain opinions and criteria about the treatment of the contents of Hockey (s/c), category 11-12 years.
- Formative pedagogical experiment: as a way to corroborate the feasibility and functionality of the methodology.
- Critical opinion and collective construction workshops: to assess the feasibility and functionality of the methodology.

In addition, testimonies and mathematical-statistical procedures were used: for the collection and interpretation of the data obtained, mainly from descriptive statistics, among which the measurements of average values and the distribution of absolute and relative frequency stand out; in addition, for the qualitative interpretation of data graphed in tables, supported by the Microsoft Excel processor.



RESULTS AND DISCUSSION

In order to fulfill the proposed objective and be able to form the proposed methodology, a diagnosis of the current state of the treatment of Hockey (s/c) contents in the PEA category 11-12 years was carried out, based on the methods and planned instruments, the main results of which are described below:

When analyzing the PPID, the normative document that governs the sports preparation of hockey players in the 11-12 year category, it is seen that the indications related to the treatment of Hockey (s/c) content in the PEA guide towards the importance of the use of methods and procedures for its improvement; however, the suggested methods do not aim at the treatment of the components of preparation, this limits the correspondence between physical capacities, technical-tactical actions and between one's own capacities of strength, speed, flexibility, endurance and their directions; likewise, it restricts the integration of the preparation components and the relationships between the known technical elements and the tactical elements that occur in the game situation.

In this way, it was possible to verify that in the methodological guidelines of the sport there are no clarifications that intend, from the particularities of the theoretical, conceptual and practical methodological system of Hockey (s/c) category 11-12 years, the development of intellectual skills, the meaningful value of the content and its contribution to developmental learning, as well as the use of methods, procedures, means and forms of evaluation that place hockey players at the center of the PEA.

Hence, the didactic procedures used in the Hockey (s/c) PEA are clearly memoristic, mechanistic and behavioral, insufficient in promoting analysis, synthesis, abstraction and comparison among other intellectual skills.

Likewise, the use of forms of evaluation that guide the active position of hockey players in the dynamics of the process is limited, as there are no cognitive strategies that recognize active learning and take into consideration ideas, judgments and reasoning of all the subjects involved in the development of skills that allow solving game situations in the PEA, with a



high level of responsibility and that constitute socialized, democratic and participatory learning spaces.

The systematization of experiences carried out with teachers and methodologists with more experience in hockey (s/c) in Cuba, allowed to verify, in the PIPD and methodological guidelines of Hockey (s/c) category 11-12 years, that the traits that govern the PEA of this sport are characterized by the use of practical exercise methods (standard, variable, game and competitive). Furthermore, the didactic procedures used are fundamentally directed at the external part of the process, that is, at the organization of the class (front, stations, sections, route, circuit, among others).

Likewise, the directions of preparation (technical, tactical, theoretical, psychological) and evaluation activities are aimed at developing physical-sports capacities and skills, to achieve performance, as well as to promote ethical and moral values. However, the use of methods that promote in hockey players, category 11-12 years, the development of intellectual skills such as evaluating, criticizing, reflecting, among others, that favor the solution of game situations during teaching-learning is limited.

Such inconsistencies demonstrate that current models and programs do not provide sufficient elements to develop teaching-learning from a conception that avoids the classic transmission of knowledge, that proposes game situations that stimulate the independent search for solutions, in which the teacher plays the role of counselor, facilitator of the process, to enhance the involvement of the hockey players, in a way that demonstrates the understanding of the components of their preparation, through the solution of game situations during teaching-learning, given the limitations that prevailed, whose essence, did not conceived the hockey players as protagonists of their own learning, since the activity focused on the teacher's guidance was weighted.

On the other hand, the procedures for carrying out the diagnosis were based on the proposal of Gamboa (2018, 2019, 2020) structured according to the following steps: planning or preparation, data collection, organization and presentation of data, synthesis, analysis and interpretation of data and finally formulation of conclusions and decision making.



The research variable is delimited: the treatment of the contents of Hockey (s/c) category 11-12 years in the PEA that is developed in the special sports areas; which is understood as the procedures used for the development of knowledge, specific skills and values during this process, as a result of the relationships between the components of the athlete's preparation, the sports teaching methods and intellectual and motor skills.

The first dimension was structured in the indicators: 1- Level of correspondence between the physical capacities to be worked on and those required by the technical-tactical action to be carried out, 2- Level of correspondence between the degree of complexity of the game situations and knowledge prior knowledge of hockey players and 3- Level of correspondence between the components of the preparation and the teaching-learning methods.

The second dimension was structured in the indicators: 1- Degree of knowledge about intellectual and motor skills, 2- Degree of execution of procedures that favor the development and application of intellectual and motor skills and 3- Degree of application of didactic resources that promote the prominence of hockey players.

The third dimension was structured in the indicators: 1- Level of teacher- hockey player and hockey player-hockey player interaction during the game situations, 2- Level of involvement in the realization and solution of the game situations and 3- Level of socialization achieved in the solution to game situations.

Results of the interview with the coaches

75 % of the teachers did not establish a relationship between physical capacities and their preparation directions, 83.3% did not relate the known technical elements and the tactical elements that occurred in the game situation, 66.6% did not took into account the game situations, according to the degree of complexity and 91.6% did not use the diagnosis of the hockey players ` prior knowledge, depending on the game situations.



96.6% of the teachers stated that they had limited domain for the development of theoretical knowledge about intellectual and motor skills, as well as the relationship between them, which made it difficult for them to treat them from the contents of sport. 97.5% failed to establish a relationship between the content, skills and teaching resources used in the PEA.

Results of observations of training sessions

When evaluating the results emanating from the 47 observations carried out in the municipality of Las Tunas, it was found that in 91.4% of the sessions, the teacher did not treat the specific content of the sport, based on the relationships between intellectual and motor skills.

In 97.2% there was a predominance of the repetitive method, with exercises of a schematic and mechanistic nature, incapable of producing positive transfers that would achieve the appropriate effect on the hockey players' thinking. In 95% of the games played in the training sessions, the execution of actions was insufficient to activate the operational thinking of the hockey players, for autonomous decision-making.

In 89.5% of the training sessions, deficiencies were observed in the theoretical-tactical knowledge of the hockey players, in the role they played and the game situations they were presented with. In 85% of the training sessions, interaction and dialogue between the hockey players themselves was not stimulated during the development of the PEA, which limited the design of solutions to game situations based on the didactic and developmental treatment of the contents.

In general sense, the results obtained from the application of the previous instruments, together with the documentary analysis of the PPID, reflected the insufficiencies in the regulatory documents that govern Hockey (s/c) in relation to the categories, objective, content, method and control that have been treated inadequately; this situation influenced the unfavorable treatment of the contents of Hockey (s/c) category 11-12 years in the PEA.



Likewise, in the methodological guidelines, the importance of using methods and procedures for the improvement of the hockey PEA (s/c) was expressed. However, methods were suggested that did not include the treatment of the components of preparation, which limited the correspondence between physical capacities, technical-tactical actions and between the capacities of strength, speed, flexibility, endurance and their directions. Likewise, the integration of the preparation components and the relationships between the technical and tactical elements that occur in the game situation were limited.

Hence, in the methodological guidelines there were no details that intended the development of intellectual skills or the meaning of the content and its contribution to developmental learning, as well as the use of methods, procedures, means and forms of evaluation that place hockey players in the center of the PEA.

Methodology for the treatment of Hockey (s/c) content in the teaching-learning process of the 11-12-year-old category

Once the results of the applied instruments were processed and analyzed, the modification proposed by Mesa (2018) was considered for the development of the methodology. This modification includes the conceptual apparatus within the foundation, merges the stages, evaluation and actions in the didactic procedures, integrates the recommendations and guidelines for their application and does not carry out the total or partial graphic representation. The structure consists of: general objective, rationale, teaching procedures and recommendations.

The foundations of the methodology respond to the need and social commitment that Hockey (s/c) has in the Cuban sports system and the demands of sports policy that lies in making possible the goals of the sports institution with the interests of society. Cuban, so innovative ways are required in the treatment of sports content in the PEA.

The general objective of the methodology is: to contribute to the development of knowledge, skills and values that allow hockey players to solve complex game situations with prominence, from the treatment of hockey (s/c) content based on the developmental conception of the PEA.



In its development, the contributions of Márquez (2019) were taken into consideration about the structure of the ability, which is made up of the epistemological base (knowledge), inducing components (motives, objectives) and executing components (actions and operations). The proposed methodology has a flexible and comprehensive nature, so it can be contextualized according to the level of the hockey players (Figure 1).

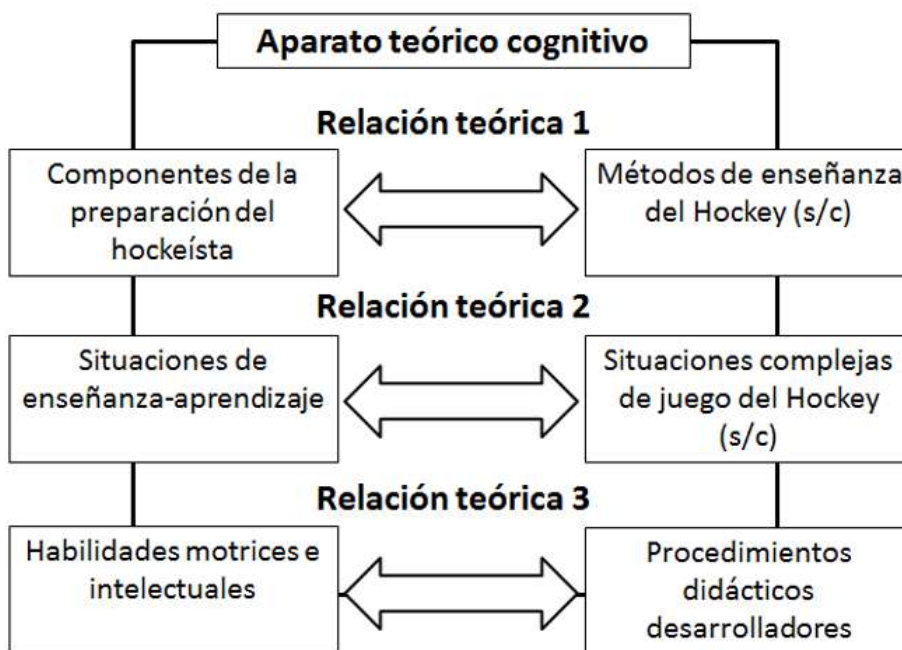


Fig. 1. - Scheme of the theoretical-cognitive apparatus of the methodology (own elaboration)

The relationships that emerge allow game situations to be understood as resources to develop the theoretical and practical thinking of hockey players. The reciprocal link with the knowable content of game situations is mediated by the interaction of their personality with that of their peers, which is organized by the teacher through didactic tasks close to the reality of the game, to prepare and adopt individual solutions. and collective.

On the other hand, the methodological or instrumental apparatus reveals its functionality, based on four didactic procedures with their respective actions; This provides the means for its definition in practice, by containing theoretical and methodological aspects of specific didactics in the PEA of hockey (s/c).



The first procedure allowed us to organize the necessary conditions for the application of the methodology, through the treatment of the contents, from an integrative conception of the components of the hockey players' preparation; this treatment brought the hockey players closer to the importance of the contents of Hockey (s/c) and its application, when it came to solving the dissimilar complex game situations that were presented to them, and allowed them to design the appropriate space for the events to occur. cognitive and affective-volitional interactions, in a socialized, participatory and interactive environment that led to the formation of interests and motivations, from the beginning of the class (Figure 2).

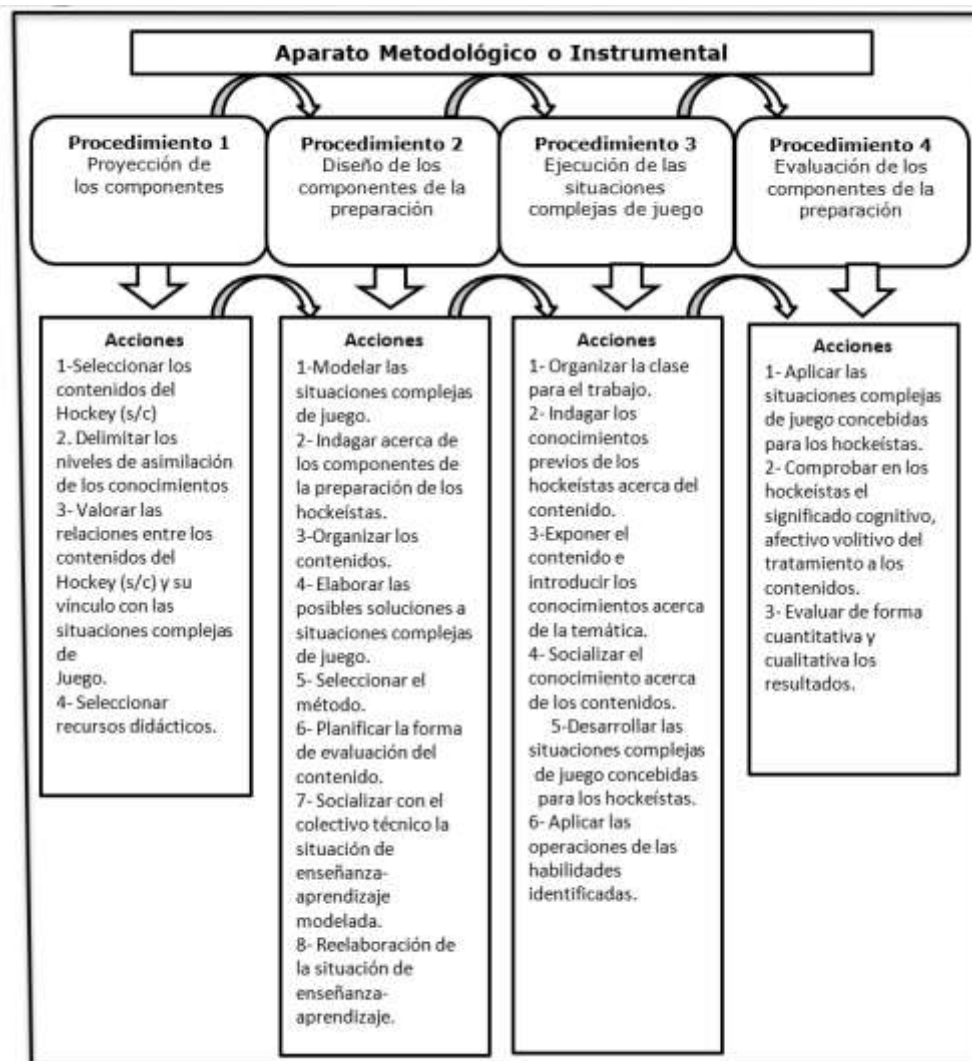


Fig. 2. - Scheme of the methodological or instrumental apparatus of the methodology



The second procedure was aimed at the design of complex game situations, whose relevance lies in its dynamics and the potential of the contents of Hockey (s/c) to contribute to the preparation of its performance in practice. Some examples are shown below:

The following complex offensive and defensive game situations, cooperation and opposition were defined: 1x1, 2x1, 2x2, 3X2, 3x3, 4x2, 4x3 and 4x4 in reduced spaces of 14.75 m, front line; 22.90 m, midline; of 14.75 m, defensive line, and in the goalkeeper's area that allowed the hockey players to execute specific attack and defense actions in 5x5, 7x7 and 9x9 games, in a time of 20 minutes that progressively increased.

These complex 1x1 game situations in small spaces were characterized by guiding the hockey players to dribble and shoot on goal with the relevant variant and provoking plays that culminated in a shot on goal; while the defense was directed to put pressure on the player with the ball, close the player to the line to reduce the possibility of shooting at a better angle, test at the distance of the stick to tackle, remove and control the ball, avoid penalty plays or penalty corner and in the case of the goalkeeper, go out to intercept the player or the ball.

In the case of complex 2x1, 2x2, 3x2, 3x3, 4x2, 4x3 and 4x4 game situations in small spaces, they were characterized by allowing the hockey players to observe the position of their teammates before passing to the one who is best unmarked in the attack, look for free spaces and open up to be able to receive the ball, change the direction of the game, dribble and pass or shoot on goal with the relevant variant, according to the complex game situation presented; in addition to provoking plays that culminated in a shot at goal. From a defensive point of view, it distinguished itself by enabling hockey players to cover the passing line and cover free spaces, put pressure on the player with the ball, occupy and defend their position and other positions on the field.

Likewise, the complex game situations 2x1, 2x2, 3X2, 3x3, 4x2, 4x3 and 4x4 in small spaces in the 14.75 m, on offense stood out for promoting the hockey players to make serves towards the best unmarked player and look for free spaces to direct the serve. On defense, by marking the opponent's position, covering free spaces, putting pressure on the player with the ball, anticipating the trajectory of the ball and the opponent, reception and control



to pass or remove the ball from the danger area, occupying and defending their position on the field, overwhelm, relieve and defend other positions on the field, stop and dribble balls in a coordinated, alternating and simultaneous manner, depending on the complex game situation presented.

The third procedure was aimed at the practical realization of complex game situations in the Hockey (s/c), PEA whose relevance resided in the integrative approach of knowledge, skills and values. Finally, the fourth procedure established, in turn, a way for feedback and regulation of said process. The teacher used self- evaluation, co- evaluation and hetero-evaluation to enhance the responsible participation of the hockey players in their learning and to verify the degree of compliance with the objective proposed in the Hockey (s/c), PEA.

Assessment of the results of implementation of the methodology through critical opinion and collective construction workshops

The use of critical opinion and collective construction workshops was based on the concept established by Torreblanca and Varona (2023), which explains that socialization workshops are spaces for critical opinion and collective construction and their objective is to develop reliable criteria that, from a collective dimension and based on analysis and argumentation, provide evaluative judgments on the feasibility and functionality of the proposal.

For the development of the workshops, the necessary conditions were guaranteed and four teams were defined, based on the level of preparation of each of the participants, their experience, results and involvement in the PEA of Hockey (s/c), with the intention to facilitate coincidences in interactive spaces and encourage debates to take place in favorable environments.

These debates allowed adjustments to be made, by assuming collective assessments to consider the feasibility of the proposal; its use led to the improvement of the methodology with successive approximations of agreement of opinions.



94.6% of the participants stated that the cognitive theoretical body as the foundation of the methodology is relevant and fits the proposed objectives and 89% issued positive judgments about active and developmental learning as an essential quality and regularity of the process.

90% reported that the double intentionality in the training of teachers was relevant, since to this extent the hockey players learn the contents of Hockey (s/c), interpret its usefulness and systematize the didactic tools useful to solve complex game situations in the practice.

94% expressed the originality of the methodology for the treatment of Hockey (s/c), content in the 11-12-year-old category, as well as the recognition of its validity, its generality and the theoretical-practical tools for its adaptation.

91.5% recognized the relevance of the methodology for its impact on the transformation of the hockey model, above all, the importance it has and the possibilities it offers for the development of knowledge, skills and values in the teaching-learning of the Hockey (s/c) category 11-12 years.

96% agreed with the efficacy, validity and effectiveness of the actions and procedures of the instrumental methodological body, as well as the importance of active and developmental learning, a particularity that distinguishes the cognitive theoretical body.

90.3% considered that the cognitive theoretical body is written with clear language and highlighted the guiding role of the teacher and the leading role of the hockey players, from the treatment of the contents of Hockey (s/c) in category 11- 12 years, which is manifested in the instrumental methodological body of the methodology.

Assessment of the results of implementation of the methodology through the formative pedagogical experiment

Based on the exposed criteria, the methodology was implemented through the formative pedagogical experiment, which for Valledor (2018) allows the proposal to be comprehensively submitted to validation in the daily pedagogical practice of the object that is intended to be transformed. Likewise, this researcher exposes the no need for control



groups in the experiment, with the comparison of the same sample before, during and after the implementation of the proposal, as a means of corroborating the feasibility and viability of the contributions of the research. The experiment was assumed as a type of activity carried out to obtain scientific knowledge, discover the objective laws that influence the object (process) studied, through special mechanisms and instruments.

Once the methodology was applied, it was found that 66.6% of the teachers in their planning raised the levels of interrelation between the physical capacities that were worked on and those needed by the technical-tactical action to be executed. 58% of them used teaching-learning methods that favored the treatment of the preparation components.

It was also confirmed that the methodological guidelines proposed the use of Hockey teaching methods (s/c) that aimed at the treatment of the preparation components, as well as the use of didactic procedures that develop Hockey (s/c) category 11-12 years old that will contribute to the development of motor and intellectual skills, from complex game situations.

This favored, from the particularities of the theoretical, conceptual and practical, methodological system, the development of intellectual skills, as well as the meaning or value of the content and its contribution to developmental learning; at the same time, it benefited the use of methods, procedures, means and forms of evaluation that placed hockey players at the center of the PEA.

The results achieved in the experiment showed the effectiveness of the application of the methodology for the treatment of the contents of Hockey (s/c) in the 11-12-year-old category, since the levels of correspondence between the physical capacities to be worked on and those demanded by the technical-tactical action to be carried out. Likewise, an increase was revealed in the relationship between the degree of complexity of the game situations and the prior knowledge of the hockey players, as well as between the components of preparation and teaching-learning methods.



The results achieved demonstrated the effectiveness of the application of the methodology for the treatment of Hockey (s/c) contents, in the 11-12-year-old category, since the levels of correspondence between the physical capacities to be worked on and those demanded were increased the technical-tactical action to be carried out, results that differ from the work of Torres (2019) focused on the physical-motor work of training.

The relationship between the degree of complexity of game situations and the prior knowledge of hockey players, as well as between the components of preparation and teaching-learning methods is another achievement that is also novel compared to the studies by Foresto (2021, 2022) and Hernández et al. (2023) who addressed these components from a training perspective.

Also favorable is the increase in the degree of knowledge about intellectual and motor skills and the high execution of procedures that favored their development and application, in addition to the increase in the application of didactic resources that promoted the prominence of hockey players; the authors Cevallos et. al (2023), Foresto (2022) and Torres (2019) study these variables focused on the development of motor skills and procedures in that direction.

The projections and design of game situations by the subjects involved in the process increased, which raised the level of teacher- hockey player and hockey player-hockey player interaction; results that partially coincide with those of Foresto (2022), although they differ in the approach to the levels of involvement in the realization and solution of game situations and the levels of socialization in the various solutions given.

A social impact is seen in the satisfactory results achieved in the enrollment evaluation, at the same time the impact that was had on the satisfactory results in the competitions stands out, coinciding with the contributions of Rodríguez et al. (2022). A greater number of pertinent solutions to game complex situations were achieved in a leading manner, which raised the offensive and defensive level above 80%, which places Las Tunas among the teams with the best results in the country, and generates an increase in the entry to the Higher Schools of Athletic Improvement (ESPA) to carry out the different sporting life projects of the Las Tunas and Cuban hockey players.



The same occurs with the degree of satisfaction of the teachers' improvement needs, based on the preparation received and the activities carried out during the exchange meetings with the national Hockey specialists (s/c) that allowed the orientation of their leaders, once the investigation is completed, work on the redesign of the PIPD and the regulatory documents of the PEA of this sport.

CONCLUSIONS

The diagnosis of the initial state confirmed the existence of the scientific problem and the insufficiencies related to the treatment of the contents of Hockey (s/c) category 11-12 years, based on the fact that hockey players did not solve game situations in a leading way, while that in the teachers the shortcomings were recognized to promote the appropriation of knowledge, skills, habits and values of the hockey players, derived from the didactic insufficiencies of the treatment of the contents.

The systematization of the theoretical foundations allowed the elaboration of the cognitive, methodological and instrumental theoretical body of the methodology for the treatment of the contents of hockey (s/c) category 11-12 years, supported by the postulates of developmental learning, which express the particularity of the process and its essence, which leads to forming leading hockey players, capable of solving dissimilar game complex situations.

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The authors have participated in the writing of the work and analysis of the documents.



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