

Sensory-perceptual ability. A challenge to the fencer's tactical thinking

Maikel Tejada Piñero^{1*} <https://orcid.org/0000-0003-2990-1315>

Lexy Figueredo Frutos¹ <https://orcid.org/0000-0002-8753-8481>

¹Universidad de Granma, Cuba.

*Autor para la correspondencia: mtejedap@udg.co.cu

ABSTRACTS

The theoretical-methodological insufficiencies detected in the sensoperceptual capacity present in the tactical direction of high performance school fencers, contained in the factual analysis carried out in training sessions and competitions, allowed to evaluate its behavior, from the dynamics of its components with a systemic character, during the process of tactical preparation. The research praxis was developed taking into account theoretical, empirical and statistical methods. All this under the application of the experiment in its pre-experiment modality. The results obtained were analyzed in a correlational study, when the results were introduced in practice.

Keywords: Fencing; Sensoperceptual Capacity; Tactical Preparation; Systemic Character.

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Introduction

Tactical preparation has become a fundamental link in the general training of the fencer. It is becoming more important nowadays as it acts as a determining factor in performance and competitive triumph. This is where new methods and procedures are

perfected and developed, providing a higher level of readiness to face the growing requirements of this sport worldwide.

Fencing is a very fast sport and requires little time to execute offensive and defensive actions. Success depends on the sensorperceptual manifestations such as the appropriate distance, time and speed required for the action, through the intellectual, affective-motivational and volitional capacity, which are considered the key to success. Therefore, these are the elements that nowadays impede the results of athletes, as tactical thinking, in its systemic action, is the most difficult one.

In this way, the studies of Keller (1984), who worked on the subject of technique and teaching methods, formation of motor habits, energy expenditure and the dynamics of psychic processes in fencers, are analyzed. It is necessary to highlight the research of Ponce (1988), about the specialized perceptions during the psychological preparation in the athlete, and demonstrated from the theory, the most significant ones that are manifested in combat sports.

In this sense, it is consistent with the studies of Morales and Álvarez (2002), on personalized sports training for fencing in the foil specialty, who offer ways for the methodological treatment of tactical preparation, whose objective was to show the transit of the aspects related to the conditioning, integrating, preventive, feedback, and how the methods become the integrating aspect when they are applied.

The methodological projection of Núñez and Milanés (2010), followed to form the tactical conception of the competitor and the sub-directions present in this process of preparation of the athlete, as well as the studies of Díaz (2010), referring to the bases of the technical, tactical and psychological preparation of the fencer, are analyzed. However, the absence of treatment alternatives to the process of tactical preparation, its knowledge and treatment is revealed, impairing the formation of skills in its sensorperceptual contents from a systemic vision.

From the reflections about the problematic approached in the context of the investigated reality, it is presented as a problematic situation: irregularities in the sensorperceptive processes sense of distance, action and reaction time and speed of movements, from the limitations of actions in the different spaces and processes of the tactical preparation system, as well as the integration of the interrelations of direction, therefore, they are limited in conceiving a systemic process, which can be directed from a functional approach.

The results obtained as a consequence of the theoretical systematization and the preliminary diagnostic study, allowed defining the following scientific problem: under what conditions is the behavior of the sensorperceptual capacity during the tactical preparation of high performance fencers of the school category? This supports the need for studies in this direction to assess the behavior of the sensorperceptual capacity, based on the dynamics of its components with a systemic character, during the tactical preparation of high performance fencers of the school category and be able to lead the bout, if it meets the particular requirements of fencing and be able to shape their tactical plan.

Development

Methods and simple

For the methodological procedure, the results in national competitions, number of individual and team medals, in at least one national event, three or more years of experience in the specialty were taken into account, taking into consideration that after this time the fencer acquires the basic elementary knowledge and techniques and is able to use them with certain effectiveness.

The sample design used is probabilistic, its objective is designed in such a way that the data can be generalized to the population with an accurate estimation of the error that could be made when making such generalizations. Therefore, the foil fencers were analyzed, divided into eight females and eight males, school category, from the "Pedro Batista Fonseca" Integral Sports School, Granma province, whose ages range between fourteen and sixteen years old.

As instruments were used the plastron, the specific tests proposed by Morales (1995), considered feasible in the research, which are grouped in different capacities such as the sensorperceptual, the tests of perception of time in the displacement, perception of touch time in the plastron, perception of distance in the plastron and perception of distance in pairs were taken. Exercises without partners are used for the development and improvement of specific coordination of movements.

In comparison with those performed on auxiliary apparatus, two new moments emerge: the action of the visual analyzer that helps to determine the correct distance to the target,

and a perfect muscular sensation, linked to the contact of the weapon with the target. The means used were: masks and masks, plastron with a valid area marked, tape measure, specialized sport clothing such as jacket and jacket, digital chronometer to record the time in minutes (min) and seconds (s).

Taking into account the logical processes of thought, the theoretical methods applied in the research are: the analytical-synthetic; to analyze the diagnosis of the scientific problem and the psycho-pedagogical characterization. Inductive-deductive: it propitiated to reach the solution to the thematic emerged during this research. The systemic-structural-functional: for the functions of each of its subsystems and components, of the tactical preparation expressed in the relationships established between them and the hierarchical and coordination levels that lead to the planned objective.

In empirical inquiries, unstructured observation is used with the objective of observing the different actions, as well as the fencers' training and competitions, based on the indicators present in the process under study. The measurement makes it possible to obtain the numerical value of the magnitude to be measured to check the state of the evaluative parameters.

The experiment in its pre-experiment modality, with a minimal control design by means of a pre-test and a post-test without control group. The review of documents, to consult structures, contents and methodological orientations of the existing integral programs of preparation of the athlete, and other documents. The research technique used was the interview, which made it possible to assess the behavior of the object and criteria of coaches.

Descriptive statistics: it is dedicated to collecting, ordering, analyzing, interpreting and representing a set of data, in order to describe its characteristics in an appropriate manner, based on the arithmetic mean, standard deviation, empirical frequency distribution and percentage distribution.

Inferential statistics to estimate parameters and compare the results obtained in the different pedagogical tests where quantitative variables were observed, the Wilcoxon and Student's t-test, available in the SPSS statistical package, version 22.0, were applied, with a significance level $\alpha = 0.05$. The Shapiro-Wilks test is used to determine the normality of the data in the continuous variables, whose results are normally distributed.

Results

When analyzing the data of the time perception test in the displacement, it is obtained that in the female sex, out of a total of eight, seven were evaluated as bad and one as excellent for an overall mean of bad and with a mean value of 12.17sec. In the male gender, eight were evaluated as poor with an average of 13.00 sec. In the plastron time perception test, four girls were evaluated as good, two as excellent, one as fair and one as poor for an overall mean of good with a mean value of 56%. In the boys, four were evaluated as very good and four as good for an overall mean of good and a mean value of 62%.

The distance perception test in the plastron, in the case of girls four were evaluated as bad, two as good and two as fair for an overall mean of fair and a mean value of 0.85 cm. In the boys, four were fair and four were poor for an overall average of fair, with a mean value of 0.87 cm.

In the paired distance perception test, in the female sex, seven obtained an evaluation of poor and one with an evaluation of fair for an overall mean of fair and a mean value of 2.13 cm. All males were evaluated as poor for a mean of 1.98 cm. The sensoperceptual capacity was evaluated as fair in both sexes.

In the second moment, post-test, the data of the time perception test in the displacement are shown, where in the female sex, out of a total of eight, three were evaluated as fair, four as good and one as excellent for an overall average of good and with a mean value of 9.30 sg. In the male gender, seven were good and one was fair for an overall mean of good and a mean value of 9.28 sg.

In the test of perception of touch time in the plastron, six girls were good and two were excellent, for an overall average of good with a mean value of 59%. In the boys, four were evaluated as very good and four as good for an overall average of good and a mean value of 64.25%, maintaining the qualitative evaluation, but the changes were reflected in the percentages of effectiveness.

The distance perception test in the plastron, in the case of girls, six were evaluated as good and two as very good for an overall mean of good and a mean value of 1.06. In the case of boys, seven were evaluated as good and one as very good for an overall mean of good, with a mean value of 1.04.

The test of perception of distance in pairs was analyzed, in the female sex six obtained good, one with regular and another with very good for an overall mean of good and a mean value of 1.74. In the males, all obtained good for a mean of 1.74. The sensoperceptive capacity was evaluated as good.

Discussion

In general, deficiencies were shown in the special coordinative capacities, especially in rhythm, coupling, differentiation, balance in fencing actions and complex coordinative capacities, among them, agility at the time of solving each problemal situation. This is a determining factor for an adequate perception of the distance and combat time of complex offensive and defensive actions.

In addition, other tactical subdirections were influenced, such as the affective-motivational in terms of tension, emotional stability, enjoyment and acceptance of the actions, in the volitional order in terms of self-control, tactical independence, perseverance in achieving effective actions in time and distance. In the organizational sub-direction, in what is related to the preparation of actions, analysis and search for solutions in the offensive and defensive tactical orientation.(eye)An entropy was produced by the predominance of little mastery of teachers and fencers of the contents of the sensoperceptual capacity, lack of disposition to the planned activities, presence of other tactical capacities and poor level of communication in its interactive-participative character. This caused contradictions between the poor mastery of the coaches with respect to the contents and the motivation of the fencers towards the development of the sensoperceptual aspects. Between the quality of the process and variety of tactical actions, the dynamics of the components and other sub-directions present.

It is important the presence of a dynamic balance between the component elements of the system, as a tendency to adapt in order to achieve an internal balance in the face of external changes in the environment, thus showing homeostasis. It is manifested, from the poor relationship between one and the rest of the components affect the level of hierarchy, and the internal dynamics. The changes are related to the information in the system, since this is the basis of structuring and order.

Therefore, it is necessary to understand the behavior of the sensoperceptual capacity in fencers, because according to Tejeda (2015), (...) it helps to perceive and improve the teaching-learning process of tactics. It values the action from its beginning to the end, including, its moment of valuation and restart, in how to think in order to then do and rethink, and thus, contributes to the creation of the tactical plan(...).

The logical forms of thought are revealed: concepts, judgments and conclusions, to which Guétmanova (1989) makes reference, and the author assumes, as this will allow the fencer to decide, create and do, through operations by way of analysis-synthesis,

comparison, concretion and generalization of each tactical action in an adequate time, distance, rhythm and speed of the action.

For the above mentioned, it is consistent with the studies of Mahlo (1983), (as cited in Tejada 2016a), these data lead to structure the preparation process, so that the tactical development does not arise from spontaneity, nor from the possibility of beginning its improvement from the first steps of learning, according to the needs of the fencers, but from the logical analysis of each problemical situation given in combat and the knowledge of the tactical sensoperceptual contents present in the preparation of this discipline.

In this way and to the extent that the frequency of training is greater and systematic, the possibilities that the performance capacity of the organism improves at a good pace increase. At present it can be verified that school fencers, with a higher weekly frequency of training, show a better sports preparation as long as this process reaches a good pedagogical direction, if the fundamental features that characterize systematization (continuity, rational alternation of loads, rest, succession of content) and the existing link between them are taken into account.

Without penetrating the author to other data from the systemic aspect of the process, it is necessary to comment that the research, to which this article gives way, surpasses other previous studies, whose authors were reflected in the introduction of this article, which allowed, from the permanent feedback, the integration of the interrelations of direction.

Therefore, its repercussion is manifested in tactical creativity, from the possible variants present in variable situations given in training, course of combat and competitions. The formation of skills in their sensoperceptual contents was increased from a systemic vision, since they are not only able to perceive the action, but also to give mental and motor solution from the tactical variants of each element.

In this way, giving a solution through action to the problems posed forces the fencer to order the problemical situation intelligently, leading him to obtain new knowledge. Consequently, Tejada (2016b), states that tactical action is expressed through operative thinking. Its formation is a broad and unitary process aimed at developing the factors of the activity participating in it.

These data lead to structure the preparation process in such a way that the tactical development does not arise from spontaneity, nor from the possibility of beginning its improvement from the first steps of learning, according to the needs of fencers, but from

the logical analysis of each problemical situation given in combat and the knowledge of the tactical contents present in the preparation of this discipline.

Conclusiones

The study of the behavior of the data consulted, allowed declaring a systemic, gradual, flexible and differentiated character during the design and execution of the didactic components present in the sensorperceptual capacity during the tactical preparation, by achieving their interrelation in the sports training of fencers, from the planning of the same, with an efficient and strict control to each one for the achievement of intellectual skills.

The methodological procedure used during the different stages, was carried out in a planned manner and allowed to answer the problem posed, fulfilling the objective of assessing the behavior of the sensorperceptual capacity during the tactical preparation of fencers.

Conflicts of interest

The authors declare that there are no conflicts of interest.