PHYSICAL TRAINING IN TABLE TENNIS - SOCIOLOGICAL SURVEY

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Abstract: Table tennis is an accessible and performance practicing sport discipline or at the level of sport for all. Table tennis competition has become very fierce, competitors trying to surprise and overcome their opponents, observing changes in the game of table tennis, becoming extremely aggressive. This research aims to identify the views of 43 table tennis coaches in training junior players, the questionnaire referring to the physical training and the weighing of motor skills in training players.
Key Words:table tennis, training, beginners, survey.

Introduction

Getting great performance in sport requires, in addition to a harmonious development of all motor skills, further development of some specific sports skills. Many sports have some technical setbacks when the coaches abandoned totally the use of nonspecific means in performance athletes, attributing exclusive trust to the effectiveness of the specific means.

Literature is relatively "poor" in studies and articles related to the issue of physical training in table tennis, but on the content of sports training, Romanian authors, [1,3,7,8,2] distinguished the following main elements of content, called factors or components of sports training: physical training, technical training, tactical training, psychological training, the theoretical training, which for some sports, add also an aesthetic training.

The dedicated term physical training, sometimes replaced with the physical condition or physical capacity, means the content of the training that ensures the preparedness and physical performance of the athlete consists of a methodical process organized and oriented towards optimal development of human motor skills consistent with the requirements and the specifics of the effort in sports performance of that sport branch.[2,3,4,8]

Thus, our study sought to identify the views of table tennis coaches in Romania, with reference to the physical training of juniors.

Method

The questionnaire based survey method is a method of investigation as written, represented by a succession of questions on the subjects addressed logically sequenced on the studied phenomenon, namely physical training in table tennis sport training. The questionnaire conceived and applied by us, consisted of 18 questions, 7 being closed questions and 11 open questions.

Out of 11 closed questions there was one with two answers, three were with four possible answers and 7 with five possible answers, suitable to statistical approach. There were distributed a total of 50 questionnaires to the same number of specialists. For objective or subjective motives, no more than 43 questionnaires were returned. Out of these, due to answer defects - answers to less than half the questions, three were not taken into account when recording and data processing. We mention that the procedures for transmitting the questionnaire were accompanied by a letter from the doctoral student containing the acceptance request and the purpose, specifying that the information will only be used for processing scientific interest, without disclosing the identity and thanks for the effort to fill in and submit the questionnaires.

When asked about the importance of physical training and the sports training from the data presented in Chart 1, it appears that most experts considered the part of physical training as important (50%) or very important (25%), 25% appreciate the importance of being on average or less, indicating that no specialist considers the importance of this factor as insignificant. It appears that the distribution of the opinions of specialists on the importance of physical training is concentrated in the major proportion - 95% - around great appreciation, with a slight asymmetry to the right and a normal vaulting.

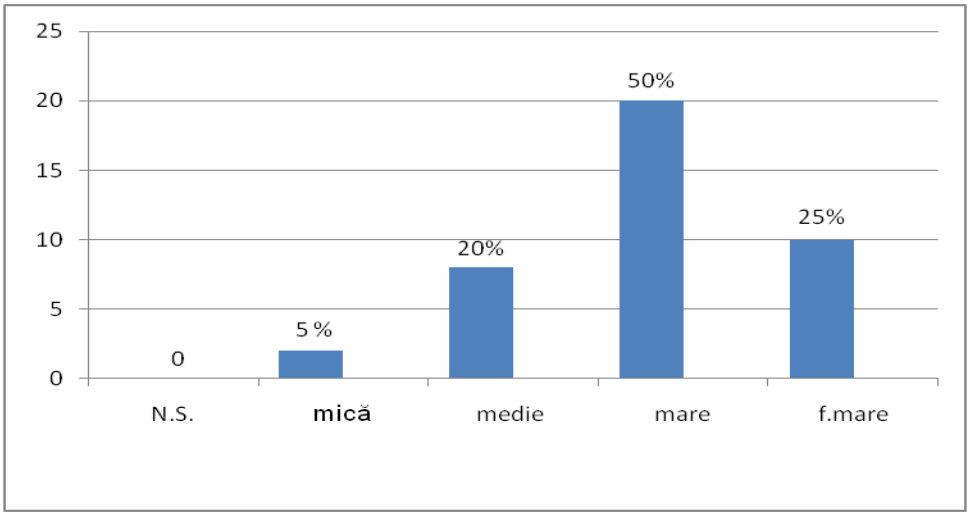

Figure 1. Graphical representation of views on the importance of physical training factor in table tennis

The question which focused on the views on the sports training factor that should be mainly addressed in table tennis. Digital and percentage results are shown in Table 1, revealing that the number of responses - 97 is greater than the persons included in the group investigated, respectively 40.

Table 1. The predominance of emphasis on sports training in actual components and percentages

Training Components	lots	Cumulated lots	Percentage	cumulated Percentage
Physical training	18	18	18,4%	18,4%
Tehnical training	41	59	43,0%	61,4%
tactical training	29	88	29,6%	91,0%
Psychological training	6	94	6,0%	97,0%
Theoretical training	3	97	3,0%	100%

This stems from the fact that they have checked two or three components of sports training, which should focus on specific sports training in table tennis. It appears that most of the specialists' opinions, ie 91% goes to three factors that are addressed mostly through exercise. The order of predominance of emphasis in training within three factors place on the first level, with a significant advance, the technical training - 43.0%, followed by tactical preparation - 29.6% and physical training – 18,4%.

It follows a share of 72.6%, for the technical and tactical component followed by the physical one - 18.4%, the psychological one- and the theoretical one 6% - 3%. We find, however, a non-correlation between opinions on the question of the importance of physical training and regarding the question about the share on the emphasis on training factors, according to the responses, the importance of physical training is at a high and very high rate of 75% while the share resulting from the opinions on the emphasis in preparation, from the next question is only 18.45.

Although we have not requested argumentation views, we believe that these non-correlations expressed in answers to questions are due to a concept that persists in sports games that much of the physical training is done through exercises carried out in technical and tactical preparation. This view was refuted in the practice of activities combated in research papers and topical studies.

A significant aspect in terms of the thesis topic was referred to the proportion of the specific motor skills given by the specific effort in men's table tennis, motor qualities originally listed as top concept and classification. The results of the views expressed by the group researched subjects are presented in Table 2

From the responses of specialists there emerges a model of specific motor skills share in an effort table tennis boys, as well as a model for the formative age-specific second stage.

Table 2. The results the specialists' opinions investigation on the proportion of motor skills in table tennis for boys and training phase two

Motor qualities	The share in boys table tennis	The share in the second training phase
speed	30%	40%
skillfulness	40%	45%
Rezilience/endurance	15%	10%
strength	15%	5%

There is a preponderance of skill and speed characteristics, 40% and 30% in specific boys table tennis effort, plus those of endurance and strength in equal proportions - 15%. In this context we note increasing the share of strength in specific forms of manifestation in table tennis and a broad vision, of the four integrated motor qualities in contrast to views that the table tennis was just a sport skill. As regards the motor skills proportions in the second training phase we believe that they are consistent with the potential development indices of speed, agility, endurance and strength existing in children practicing table tennis in the formative stage in question. Besides a few teachers - coaches have even stated that when talking about development resistance at this age they refer to general endurance as aerobic support and the work for the development of specific indices of work force is made exclusively with the hindering of the body.

Regarding the physical training share in the boys table tennis training effort, as foreseen in the annual training plan

On the share allocated to physical training in the effort of training provided in the annual plan of training of athletes from the phase two training - Chart 2 - the opinion of most coaches is that it should be up to 30% - half of those questioned and up to 40% - 12 subjects. 6 persons stating to allocate physical training up to 50% or even 60% of the work included in the annual plans for physical training, and two subjects ticked other share without specifying what it is.

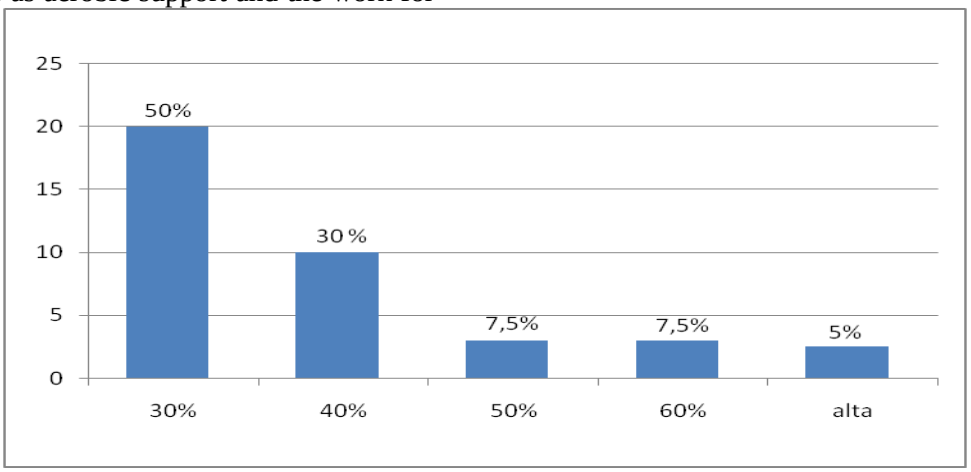

Figure 2. The representation of the share allocated to physical training in the effort of training provided in the annual plan of training - the second training phase

Given the concept of structure of the questionnaire, the opinions expressed on this question should be considered as such. But if we analyze correlative answers to the following questions, you can find some contradictions. For example, most specialists - 30 of 40 consider the importance of physical preparation as large - 20 people or very large - 10 people. Once the answers to another question, it appears that half of experts

allocate up to 30% of the annual work training for physical training, although the growth and development of children requires another vision.

The following issues can and should be considered together because they relate to the same set of problems in two temporal phases during the preparatory stages, respectively the first and the second. They covered four problems: the number of lessons- workouts per week, number of lessons workout only physical training topics, the number of topics of physical training and of technical-tactical training and the number of lessons only with technical and tactical topics, all with reference to the children in formative phase two.

We find that the number of training lessons remained constant at 6 per week , aspect that we consider normal, given the program and the children's school obligations. Thus, we see that in the first period part the preparatory workload for the physical component is equal to that assigned to the technical and tactical component. If we take as a benchmark a lesson workout of 120', in the first preparatory phase of the period about 360 minutes is allocated for both physical training component as well as for the technical and tactical training. In the second part of the preparatory period during the time allotted to physical training drops to 240 minutes, while the technical and tactical preparation allocated increase to about 480 min. In the preparatory period from a training workload of about 720' in a week, that averages 300' - about 41.66% allotted to physical training and 420' - 58.33% to the technical and tactical training.

For the preparatory period and the second training cycle, the proportion appears to be functional in what concerns the formative and developmental needs. The condition would be that from which we call technical and tactical most of the time to be allocated to the technical composition, ie at least 80%.

Among coaches, during the competitive period, the average opinion is that only lessons with mixed themes, with physical - technical - tactical nature to be performed, those specialized only in physical training or technical-tactical training disappearing.

Knowing that physical training has two components, namely general physical training and multilateral and specific physical training, we found it necessary to hear the views of experts on their workload in proportions , three times during the annual cycle of training : beginning preparatory period, the end of the preparatory period and during the competition. Specialists shared their opinions via questionnaire outlining the following percentages:

- Beginning of the preparatory period: 80% general and multilateral physical training, 20% specific physical training;
- The end of the preparatory period: 70% general physical training and 30% multilateral specific physical training;
- During the competitive period, the percentage is 60-40%.

We note two significant aspects: greater share of general and multilateral physical training regardless of the preparation phase and the trend of increasing the share of specific physical preparation, without equaling the share of the general and multilateral one. Another matter of concern was that of the experts' assessment of the table tennis players level of physical training for the athletes found in the formative phase two. The views collected through the questionnaire are shown in Graph 3.3.

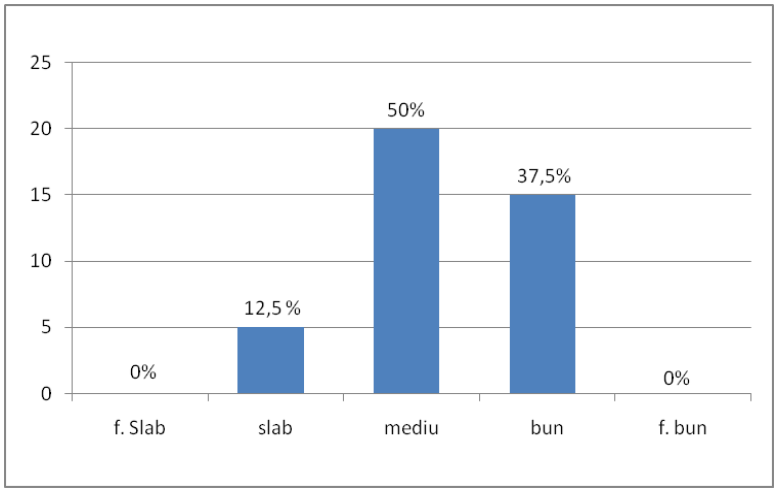

Figure 3. Graphical representation of assessing the level of table tennis players are in the formative phase two physical preparation

Of the five levels of assessment we found that opinions focus on three, excluding the extremes, ie very weak and all too good. If the exclusion of the *very weak* appreciation qualifier is normal, due to the fact that we speak about sports performance, the lack of *very well* qualifier is not a normal one, but they shape both a direction of improvement and a research one. Otherwise half of the interviewed consider physical training on the average level, 37.5% as good and 12.5% as poor. In the context of all questionnaire, recognizing the importance of physical training, mentioning efforts allocations towards the physical training workout, the weak qualifier is less grounded.

The following questions were aimed at motor qualities for which some reservations are expressed, respectively resistance and strength in training and the promotion workout for their development during the formative preparatory phase. In some questionnaires, the answers were double and two of them triple. All were taken so that there were 50 responses. The results are summarized in Table 3.

Table 3. coaches Opinions on physical attributes of strength and resilience in table tennis players in the formative phase two

Degree of recommendation	strength		Resilience	
	number	percentage	number	percentage
Not recommended	-	-	-	-
Slightly recommended	10	20%	6	12%
Necessary	25	50%	25	50%
Highly recommended	8	16%	11	22%
Very highly recommended	7	14%	8	16%

Coaches deem necessary and advisable specific force development to children in the second phase of formative assessment on different levels: in small measure. Seven subjects - 20%, average 25 subjects – 50 highly recommended 8 subjects - 16% and very highly recommended - seven subjects - 14%. We find from the above figures that the majority of coaches - 80% - considers advisable to develop formative force in the second phase from an average recommendation level to a very large one. The same orientation is to be found in the development of resilience when the percentage of recommendation between medium and very large increase to 88%.

The following questions were meant to find views expressed by experts on the possibilities and improvement factors of the two components of interest from the perspective of our work, namely the content of sports training and physical preparation factor therein. Being semi character questions they could mention any fact or possibility up to three options for each person questioned, and only on the content of sports training. Taking into account the 120 theoretical possibilities response and recorded content, the main factors related to the content of sports training whose

improvement could lead to increased athletic performance in table tennis were:
- Learning the habit of proper motor technique specific to table tennis - 34.2% / 41 cases;
- Improvement of favored, preferred tactical combinations - 26.6% / 32 cases;
- Development of combined effort in specific forms of table tennis, motor - 22.5% / 27 cases;
- Upgrading methodological tools and training materials promoting modern methods and means - 10% / 12 cases;
- the Rationalization of the means of training, the optimization of their use and promotion of items of advanced knowledge in sports training - 6.6% / 8 cases.

In addition to the items mentioned, related to the content of sports training, about 10% of the responses made reference to issues that do not pertain to the content of sports training, recording the most significant precisely because they can help to improve performance: modernization of sports equipment, better financing, motivating coaches salary and performance, facilities for athletes in social integration.

Discussion and conclusions

The sample of technicians upon who the questionnaire is applied is significant in the light of experience and technique. Subjects are placed in all four time slots considered by some authors as cycles of coach activity.

A quarter of the investigated sample is young and features in development cycle of 10 years of knowledge and practical experiments using the their own and other specialists' experience. We emphasize, however, that the majority of professionals surveyed - 62.5% - 25 cases, fall within the ages of optimal professional performance where advanced knowledge is combined with increased labor power.

The age for initial selection and classification in groups of beginners remains in question as bibliographic sources investigated in our documentation indicate the age of 6-7 years old for initial selection, while 70% of specialists included in research support ages 7-8 years and 8-9 years of age for an optimal selection. Each have their arguments:
- Bibliographic sources authors invoke the 10 years time training to achieve performance levels;
- Practitioners allege losses in the first two formative phase due to the peculiarities of human material development of children 6-7 years old who have not outlined somatic and functional elements to an extent that can be forecast during sports.

It is clear that on this issue, interdisciplinary nature wider debate and research is needed, aspects not covered by our theme.

In the components or factors of sports training, the specialists interviewed appreciate, at a convincing rate - 75%, that physical training is of high and very high importance in table tennis and to be placed among the components that should focus mainly on the sports training.

If we correlated the results of questions no. 3 and 4 with those questions no. 7:12 we conclude that the liabilities questions no. 3 and 4 are based to some extent on goals and not on theoretical knowledge derived from learning to take advantage from practice.

Through its design, the questionnaire prepared by us, although not a standardized one, had some control keys able to provide information on the truth claims.

From this point of view we consider as valid the majority of responses and results obtained by processing data, as we consider necessary the research approaches, such as that done by us in a position to argue points of view through specific scientific research instruments.

In what the physical attributes are concerned, they have a meaning insofar only if taken account of the specific effort in table tennis competition, the forms of motor skills and their share in light of the specifics mentioned.

The results of the investigation show that the specialists' opinions on the priority of motor skills in table tennis are skillfulness - a 40% rate - 30% resistance - 15% and power - 15%. If athletes are in the second formative phase, the order is maintained, changing the percentages due to the particularities of age as such: Skillfulness - 45% rate - 40% resistance - 10% and power - 5%. In any vision they recognize the need and importance of physical training and the development of motor skills in specific forms of table tennis and effort adapted to the particularities of age.

The specialists questioned about the weight and share of the general physical training and multilateral physical training, specific to the formative phase two, indicate correct percentage ratios for this age, 80-20%, 70-30%, 60-40% in favor of the first forms of physical training , indicating the orientation

towards increasing aerobic capacity. And at the same time, they appreciate the physical training at this age as largely in proportion of 87.5% to the medium and good qualifier, something that argues for improvement, including the experimental research. While some papers mention force as a contributing factor in the performance table tennis, specialists confirmed the views expressing force and strength to be motor qualities with a significant role, being necessary to develop them even at the age specific to the second formative stages.

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