Sport specialists attitude to structure and contents of theoretical preparation in sport

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Abstract

The article shows sports specialists’ attitude to structure and content of theoretical preparation in sport, which was evaluated by means of survey. The survey was designed as a questionnaire which contained 21 interpretative questions. Questions were distributed by types: six open, four closed, ten half-open and one polar. Summarized number of units and subparagraphs of questions in questionnaire blank have provided opportunity to receive opinions of respondents by 387 separate questions. It has been established that the structure and content of theoretical preparation at the stage of basic physical training must be represented by 19 units of information; at the stage of previous basic training - by 17; at the stage of specialized basic training - by 17; preparation for higher achievements - by 18 units; at the stage of maximal individual capacities realization - by 18 units; and during period of high sports skill preserving and gradual achievements' reduction - 19 blocks of data, respectively. We have found a necessity of gradual increase in volume of theoretical preparation from the stage of initial training (1.2%) to the stage of maximum realization of individual capabilities in sportsmen (9.10%), and dramatic reduction at stages of high sportsmanship preservation and gradual decrease in achievements (1.2%). Most significant for athletes’ sources of information have been also established - those include coach, friends and colleagues in the team (8.61-9.13 and 5.76-6.93 points respectively).

Keywords: surveys, questionnaires, sports specialists, theoretical preparation

Introduction

In accordance with didactic laws, an important aspect of athletic training process is a sequence in formation of different training sides, under which priority is formation of knowledge, and on its basis - sport abilities and skills (Briskin et al., 2012; Pityn et al., 2012; Pityn, Maryan, 2013; Briskin et al., 2014; Sobyanny et al., 2016). Generalization of research data in the field of physical education and sport, has allowed establishing a relatively independent existence of theoretical preparation in long training process (Karatnyk et al., 2015; Romanchyshyn et al., 2015; Galan et al., 2016;Andrieievaet al., 2017).

Despite existence of certain researches on theoretical preparation of athletes (Pityn, 2013; Pityn et al., 2012; Karatnyk et al., 2015; Romanchyshyn et al., 2015), are no studies on theoretical training of athletes in methodological data and definition of its integrity oriented system of methods and means of specific knowledge transmission. The survey of specialists in various kinds of sports was conducted to determine their attitudes and understanding of issues of theoretical preparation in many years’ process of athletes' sport skills improving. The group of experts included coaching category and category of faculty personnel of specialized educational institutions of different accreditation levels.

Coach and sportman are direct participants of pedagogical process, aimed at acquiring system of specific knowledge, which creates a basis that then allows forming abilities and skills (Briskin et al., 2012; Pityn, 2012; Briskin et al., 2015). Preparedness of athlete as an object of educational and training impacts, and controlled subsystem of preparation in sports, should be criteria of effectiveness of all aspects of training implementation, including theoretical (Briskin et al., 2015). In turn, coach as managing subsystem, thatprovides athletic training orientation by its different aspects. When forming survey form for specialists, in front of us had arose the need in superficial respondents' acquaintance with submitted problems. This we have achieved through introduction, which had indicated that study must express specialists' opinion on theoretical preparation at various stages of long-term preparation in sport (where respondent (coach or teacher) spends primary activity).

Purpose of research

Research objective is to survey and find out attitudes of sport specialists to structure and content of theoretical preparation in sport.
Material and methods

Among specialists in sports who were involved in survey, 6 were Honoured Workers of Physical Culture and Sports of Ukraine, 24 Honoured Trainers of Ukraine, 21 coaches of the highest category, 2 Doctors of science, 4 had PhD in Physical Education and Sport (Pedagogic sciences), 1 professor and 4 associate professors.

We have elucidated opinions of respondents on topical problems of theoretical sport preparation. For this survey of specialists, was designed a questionnaire that contained 21 substantive questions. Questions were divided by types into six open questions, four closed, ten half-opened and one polar question. Consequently, summarized number of units and subparagraphs of questions in questionnaire form have provided an opportunity to receive opinions of respondents by 387 separate questions concerning theoretical preparation at various stages of long-term training of athletes. By way of questionnaires distribution, the survey was dispensing and postal; by type of research objectives - in depth study; by level of competence - expert interviews.

Results and discussion

System of athletes’ training in personalized part provides a "subject-object" relationship between athlete and coach. Besides, in addition to clarifying attitude of athletes to theoretical preparation, there appears a necessity to determine attitude of sport specialists towards this process. In order to solve this problem, we have used special questionnaire among specialists in the field of sports.

The survey has established that all sports professionals are related to training process of athletes with different qualification level at certain stages of preparation, which indicates the objectivity of received information. Experts suggest that section of theoretical preparation “Humanitarian and socializing knowledge” increases from initial preparation phase (PP) to the stage of preparation for higher achievements (PHA), from 4,1 ± 2,9 to 6,0 ± 2,1 points and further stabilizes at level of significance 5,9 ± 2,3-6,0 ± 2,6 points (phase of maximal realization of individual abilities (MRIA) and stages of preserving higher mastership and gradual achievements reduction (P&R)). However, value of standard deviation from average index in group, allows asserting a lack of respondents opinions coherence in this group.

Summarizing the importance of “competitive activities” section, we have traced a reverse situation. According to received information, significance of this section is increasing rapidly during early stages of long-term preparation (PP - 4,0 ± 2,3, stage of previous base preparation (PBP) - 5,8 ± 2,0, phase of specialized basic preparation (SBP) - 7,3 ± 1,7 points, respectively) and thereafter stabilizes at high levels of significance within limits 8,4-8,89 (PHA and P&R stages). Experts' appraisal is more similar; standard deviation in second part of training system varies between 1,29 -1,89 of standard deviation scores.

In section “Material and technical support” is observed more equable, gradual increase in information significance to solve major tasks of athletes’ training program. From PP stage to P&R stage has been recorded constant growth of estimates (from 3,81 ± 2,23 to 7,50 ± 2,38 points, respectively). In "Biomedical provision" unit, distinctive a wider range of assessments during long-term preparation of athletes (from 3,28 ± 2,39 points during PP, to 8,25 ± 1,95 points during P&R). Rapid growth of specialists' grades is observed in PHA phase (7,64 ± 1,86) and subsequently there's its relative stabilization. Contrary to aforementioned units of theoretical preparation, in "Safety rules" part is observed stable high level of significance from PP stage, where average group mark was 7,8 ± 2,4, and to P&R phase with 7,0 ± 2,8 points. It indicates the necessity of focusing on athletes' theoretical preparation, which allows preventively ensure preservation of sportmen's health in different competitive situations, training activities and beyond them. In our opinion, assessments results of significance in section "System of athletes' training" were predictable. During early stages of years preparation, assessments importance is much lower (PP - 3,68 ± 2,32 points; PBP - 5,00 ± 2,21 points, respectively). In SBP phase, increase of significance is marked (6,77 ± 2,35), to PHA stage - relative stabilization of estimates, with range from 8,03 ± 1,83 to 8,48 ± 1,82 points. In our view, this division of assessments is associated with understanding by specialists the process of athletes' personality formation at various stages of long-term training, and comprehension of sport activities features. Review of several information blocks significance were conducted within sections of athletes' theoretical preparation.

It has been established that within “Humanitarian and socializing knowledge” part of theoretical preparation, professionals have defined identical structure of the most important blocks of information during first two stages. These include blocks “Famous personalities in sport”, “Historical aspects of sport origin and development” and “Physical education and sport in Ukraine”. At SBP stage to first two blocks, one more – “Status of sport in Ukraine” was added. Beginning with PHA stage, in specialists is observed no consensus in identifying most significant blocks of information. During PHA stage were identified following blocks: “Famous personalities in sport”, “Trends in sports further development”, “Status of sport in Ukraine”. During MRIA stage – “Trends sports further development “, “State of sport development in the world”, “Status of sport in Ukraine”. During P&R stages – “Famous personalities in sport”, “Trends in sports further development”, “Historical aspects of sport origin and development”, respectively.

It is possible to observe specialists' emphasis on issues associated with peculiarities of formation kind of sport and that is important due to formation of motivation path of famous sports figures in sport.

In early stages of years of preparation in section "Competitive activities", experts suggest those blocks that allow athletes to better adapt to characteristics of participation in competitions. With increasing sport skills, according to experts, more and more attention must be paid to ensure organization and conducting competitions. In this, in our view, experts see reserves to improve athletic performance and possibilities of building a strategy for training process and participation in competitions at various levels. Among blocks of information of theoretical training in section “Material and technical support” was also was determined pronounced advantage of block “Sports equipment and requirements for it”. This block of information has received the highest rating among all (except MRIA - second rank) stages of long-term sports improvement process. Therefore, in various stages of long-term training, athletes suggest to consider blocks “Requirements for locations for competitions”, “Preservation and maintenance of sports equipment” (PP); “Requirements for Locations for competitions”, “Overview of sports equipment and gear” (PBP); “Requirements for locations for competitions”, “Planning organization and participation in competitions” (SPB); “Economic aspects of competitions’ organization and participation in them”, “Providing training process”, “Planning organization and participation in competitions” (PHA and MRIA); and “Overview of sports equipment and gear”, “Planning Organization and participation in competitions” (P&R).

In early stages of long-term training, experts pay their attention on need to develop theoretical knowledge on competitions organization, which may directly or indirectly affect sport performance of athletes. On stages with possibility to achieve maximum results, it is suggested to focus attention on financial aspects as decisive. Along the same time, for final stages, according to possibility of exhaustion of athletes’ functional reserves, key problem is planning participation in competitions and search for additional reserves to maintain high level of athletic performance. “Health care” section has content differentiation of theoretical training at different stages of a long-term sports improvement. In early stages (PP-SBP) undisputed leader is “Hygiene, training, athlete regime” block, while consistency of opinions on other important units at these stages wasn’t observed. For studying in the content of theoretical training are offered next priority blocks of information: “Effect of exercise on human body, Balanced diet” (PP); “Information about structure and function of human body”, “Effect of exercise on human organism” (PBP); “Balanced diet”, “Self-control. Diary of self-control” (SBP).

Starting from PHA stage, blocks “Balanced diet” and (as experts have identified as second) “Means of stimulation and improving efficiency and recovery. Massage and self-massage” become dominant. However, another important block of information during PHA stage was “Hygiene, training, athlete regime“, during MRIA – “Body functional systems and their importance for sports results”; during P&R – “Self-control, diary of self-control”.

We can state that specialists (in increasing level of skill of athletes) believe the primary system of knowledge from factors, which allow discovering reserves and maintaining reached level of preparedness in athletes. Among information of “Safety” content, it is worth noting “Injuries, causes, prevention” and “Safety and actions in critical situations” blocks, that have higher ratings in most stages of long-term preparation. However, in early stages (PP-SBP) experts have identified “Rules during training and competitions”, and higher stages (PHA – P&R) – “Medical (doctors) control” as leading sections.

Obtained results of a survey suggest that all specialists realize probable body injuries in athletes of different nature and etiology. Therefore, by rating these blocks the highest, they serve as preventive information. Also highly ranked “Rules during training and competitions” block indicates a need building knowledge of tolerant behaviour and needs of rules compliance in training and competitive processes.

Indisputably, theoretical part of “System of athletes’ preparation” was represented the most widely. It is necessary to pay attention on the fact, that in early stages of long-term preparation of sportsmen (PP – SBP) there are three blocks of information that are observed most significant among all groups (“Knowledge of technical training”, “Knowledge of physical training”, “Organization of training process”). However, other units have varied level of significance. During PP stage, among them are “Planning and accounting for sports training; conspectus of training class”, “Conceptual apparatus of sport”; during PBP stage – “Conceptual apparatus of sport”, “Methods and tools for training athletes”; and during SBP stage – “Knowledge of psychological preparation”, “Knowledge of tactical training”.

When owning by athletes a higher qualification level and proceeding to PHA step, it is worth noting similarity in opinion of most important blocks of information, which include: “Knowledge of psychological
preparation”, “Knowledge of tactical preparation”, “Knowledge of technical preparation”, “Knowledge of physical preparation” and “Individual workout plan”.

This facts allow to state that experts recommend in the content of theoretical preparation (from the earliest to the latest stages of long-term preparation) to form knowledge that is originally connected with a common understanding of training process, and further ones, that directly determine effectiveness of training.

To ascertain the completeness of aforementioned sections and units of information, it was asked to evaluate the completeness of theoretical preparation content. According to the poll, we can state that 94.59% of respondents believe that designed units comply with requirements of system for athletes’ preparation in their types of sports.

Initially, we have received recommendations of sport experts regarding content of theoretical preparation and its detailed consideration (by sections and units of information) at various stages of long-term athletes' sport self-improvement.

The goal of experts’ survey was to identify not only efficient content of athletes’ knowledge at various stages of self-improvement, but also other aspects of preparation.

It has been found, that the majority of surveyed professionals are convinced in the need to attract to athlete knowledge information, related to characteristics of competition rules in "related" kinds sports (60,00 % of respondents); characteristic of training system in “related” kinds of sports (88,57 %); and characteristic of competition and training system rules in different kinds of sport, elements of which are used in sports training (89,19 % of respondents). Insignificant part of experts could not give definite answer (2,70 – 28,57 %) and 5,71-11,43 % of experts have denied this need.

Next set of questions relates to optimal combination of theoretical preparedness with other parts of athletes’ preparedness. It should be noted that 16,91% of experts consider it necessary to combine theoretical training load with integral training: 17,77% – mental, 18,48% – tactical, 19,05% – technical, 20,34% - physical preparation and 7,45% were for independent realization of theoretical training.

Among experts who have proposed to combine theoretical and integral preparation training effects, is observed uniform distribution of opinions on the stage, which is the best for it. Approximately 17,80-20,34% of professionals believe that this process may be implemented at SBP to P&R stages. Similar answers arein professionals who offer to combine training effects of theoretical and psychological preparations; 18,55-21,77% of respondents are for such symbiosis in stages from SBP to P&R.

In considering recommendations, combination of theoretical and tactical preparations, distribution by all phases was almost identical to previous options (17,05-22,48% of respondents have suggested combining them mainly on SBP stage and above coming stages). Meanwhile, among supporters of combination of theoretical training loads and technical preparation, preference is given to implementing this process during PB-P&R stages (18,05-21,05% of respondents).

Specialists who insist on combining training effects of theoretical and physical preparation, have relatively evenly distributed their preferences between all stages of long-term preparation (15,49-18,31% of respondents).

As stated above, the least among professionals is number of supporters of independent realization of theoretical training. Besides, among them appears a steady tendency, by which part of such theoretical training realization increases from stage to stage. For this reason, in SBP phase, number of specialists who supported this option was 15,38%; for P&R stage – 17,31%; for MRIA stage – 25,00% and for P&R stage– 32,69% of respondents respectively.

Opinions of specialists on combination of training loads (theoretical and other areas of training) have pointed on its priority at each stage during years of athletes self-improving (Table 1).

Obtained data allows to identify priority for theoretical training during PP stage a combination of training loads mainly with physical education (28,57% of respondents). In PB step, preference of theoretical training with training loads within technical preparation implementation is strongly expressed (28,87% of respondents). On SBP stage respondents’ opinions were divided proportionally between all variants of implementation of theoretical knowledge along with other sections (18,18-19,87%) or relatively low value of self-realization. For PHA stage, the most appropriate (according to experts) is combination of theoretical training loads, mental and tactical sections preparation of sportsmen (19,70 and 21,97% of respondents respectively).

Meanwhile, priority embodiments of theoretical preparation on MRIA stage should be perceived with mental (20,00%) and physical (19,26%); on P&R stage– with mental, tactical and physical (17,83-18,60% of respondents) training.

Obtained data certifies the lack of common priorities among sport experts concerning features of theoretical knowledge combination implementation with other sections of preparation on main stages of athletes’ improvement process. Experts tend to determine recommended size of theoretical knowledge during long-term improvement process within 1-2% of annual training (22,22%) 3-4% (15,66%), 5-6% (14,14%) 7 -8% (20,20%) 9-10% (13,64%) and 11-12% (14,14% of respondents), respectively.
Table 1. Priority of method of theoretical knowledge implementation (according to survey results of sport experts, n = 38)

| Stage of long-term preparation | Method of implementation (%) together with section of preparation | | | |
|-------------------------------|---------------------------------------------------------------|---|---|---|---|
|                               | integral | psychological | tactical | technical | physical | independent |
| PP                            | 19.05    | 10.71         | 16.67    | 21.43     | 28.57     | 3.57        |
| PBP                           | 13.40    | 15.46         | 17.53    | 28.87     | 22.68     | 2.06        |
| SBP                           | 18.18    | 19.01         | 18.18    | 18.18     | 19.83     | 6.61        |
| PHA                           | 15.91    | 19.70         | 21.97    | 18.18     | 17.42     | 6.82        |
| MRIA                          | 17.78    | 20.00         | 17.78    | 15.56     | 19.26     | 9.63        |
| P&R                           | 17.05    | 18.60         | 17.83    | 15.50     | 17.83     | 13.18       |

Among sports specialists, that have recommended to isolate on theoretical training 1-2% of annual general load, were those who have offered it on PP stage (27.27%), P&R (25.00%) and MRIA (22.73% of respondents). Those experts, who considered optimal amount of theoretical knowledge of 3-4%, have mostly stopped their attention on PBP stage (35.48% of respondents). On other stages of a long-term preparing, such volume was supported by significantly less respondents (9.68-16.13%).

Another degree of theoretical training, (5-6%) experts consider most distinctive for PBP (32.14%) and SBS (39.29% of respondents) stages, respectively. It is interesting, that 5-6% from annual amount in P&R phases, hasn’t mentioned any of respondents.

Specialists who have supported amount of theoretical knowledge at 7-8% level from total annual, have demonstrated expressed preference on PHA stage (32.50% of respondents). Dominant group of sports specialists (with 9.10% priority volume of total annual workload) have determined that it is distinctive for MRIA (33.33%) and PBP (25.93% of respondents) phases, respectively. Unexpected was distribution of priorities among experts, who have determined the necessity of application of theoretical knowledge load volume 11-12% per annum. Thus, relatively more respondents were for such load volume on P&R (28.57%) and PP (21.43%) stages. We associate this fact that, on one hand, experts were guided by objective possibilities of implementation of theoretical knowledge within the limits of annual volume of workload (PP stage); on the other - significance of certain amount, as a reserve to maintain high sports results in athletes (P&R stage).

Studying general group regularities of specialists’ opinions distribution to quantity of theoretical knowledge training loads, has indicated a number of features (Tab. 2). Considering priorities of training loads volume, we note that for some phases are specific values of volumes, which were identified by experts. This occurs at PP (1-2%), SBS (5-6%), PHA (7-8%) and P&R (1-2% of annual load) stages. Such opinion was supported by 36.36%, 34.38%, 38.24%, 35.48% of respondents, respectively.

Table 2. The volume of training loads of theoretical knowledge (according to sport specialists survey results, n = 38)

<table>
<thead>
<tr>
<th>Stage of long-term preparation</th>
<th>Volume of training load ( % in annual cycle of preparation)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1–2</td>
</tr>
<tr>
<td>PP</td>
<td>36.36</td>
</tr>
<tr>
<td>PBP</td>
<td>6.25</td>
</tr>
<tr>
<td>SBP</td>
<td>6.25</td>
</tr>
<tr>
<td>PHA</td>
<td>20.59</td>
</tr>
<tr>
<td>MRIA</td>
<td>27.78</td>
</tr>
<tr>
<td>P&amp;R</td>
<td>35.48</td>
</tr>
</tbody>
</table>

In addition, on PBP and MRIA stages of long-term preparation, respondents have supported two versions of volume workload in annual training period. Thus, on PBP stage is adjacent 3-4 and 5-6% volumes on theoretical training (supported by 34.38% and 28.14% of respondents). However, on MRIA stage experts showed larger differences – 27.78% of respondents have indicated 1-2% amount and 25.00% of respondents – 10.09% of total annual volume of workload for athletes at this stage. The explanation of such attitude could be because some specialists assume that athletes on MRIA stage should be possible realizing their potential, and time for their theoretical knowledge should be given less. Others, in our opinion, isolate volume of workload at 9.10% level for theoretical training reserves in ensuring achievement of high sports results, due to exhaustion of other sections of training.

One of the key factors of theoretical knowledge organization (for which we have interviewed sport specialists), was determination of optimal information sources for athletes at different stages of preparation (Table. 3).
It has been determined that “Friends and team colleagues” as a source of information, is slightly increasing in importance from PP (5.76 points) to PHA (6.93 points) stage and further stabilizes at 6.54-6.63 points level.

Sport experts have sceptical rated possibilities such information sources as periodic popular scientific literature, scientific and methodical literature. These sources are characterized by low importance during PP-SPB stages (2.68-5.48 points). This could be caused by experts’ convictions regarding complexity of perception and understanding information from these sources by athletes on these stages. Therefore, during PHA-P&R stages, growth of importance rate can be observed (6.03-6.89 points).

Table 3. Significance of main sources of information transmission (according to survey results in sport experts, n = 38 points)

<table>
<thead>
<tr>
<th>Source of information transmission</th>
<th>Stage of long-term preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PP</td>
</tr>
<tr>
<td>Friends and team colleagues</td>
<td>5.76</td>
</tr>
<tr>
<td>Periodic scientific and popular literature (newspapers, magazines, etc.)</td>
<td>2.88</td>
</tr>
<tr>
<td>Scientific and methodological literature (digest of scientific articles, textbooks, monographs)</td>
<td>2.68</td>
</tr>
<tr>
<td>Coach</td>
<td>8.77</td>
</tr>
<tr>
<td>Family</td>
<td>5.59</td>
</tr>
<tr>
<td>Television</td>
<td></td>
</tr>
<tr>
<td>Movies (sport)</td>
<td>4.73</td>
</tr>
<tr>
<td>TV-programs (sport)</td>
<td>5.17</td>
</tr>
<tr>
<td>news (sport)</td>
<td>4.82</td>
</tr>
<tr>
<td>Internet</td>
<td></td>
</tr>
<tr>
<td>Specialized sport web-sites</td>
<td>4.66</td>
</tr>
<tr>
<td>Social networks</td>
<td>4.68</td>
</tr>
<tr>
<td>Forum-communication</td>
<td>2.88</td>
</tr>
</tbody>
</table>

According to survey results, “Coach” as a source of information mostly predominates. At all stages we have recorded its highest importance (8.61-9.13 points) and lowest rates of standard deviation. Experts also suggest reducing maintenance information with the family. There is a systematic decrease in its importance from PP (5.59 points) to P&R (4.67 points) stage on average level.

It can be affirmed for entire set of information sources, related to television, is distinctive an average level of relevance to issues of training system in athletes. On all stages (movies, TV shows, news) is observed growth of this indexes from the early stages to final years of preparation. An average group significance indicators range from 4.73 to 6.59 points.

Information sources, associated with Internet, specialized sports websites and social networks, are characterized by distinction features. Experts point on growth of value to all these sources of information from PP to P&R stage. However, the biggest significance, according to sport experts, are having specialized sports sites. They reach high level of importance on PHA, MRIA and P&R stages (7.21-7.55 points). Social networks, as source of information, are within an average level of importance; on final stages of long-term training (MRIA and P&R) they approach to high level (6.73 and 6.93 points respectively). “Forum-communication” respondents have identified with minor role in transmission of information section, as evidenced by low (PP, PBP) and medium (PHA-P&R) levels of significance.

Competing Interests
The authors declare that they have no competing interests.

Conclusions
Comprehensive review of theoretical training in sport problems was provided by structure and content of specialists in sports survey. The survey allowed to set the requirement-motivational nature of obtaining specific information in sports; to determine content and structure of theoretical preparation; organization of training process, ways of information transmission; to characterize priorities in building theoretical preparation at various stages of long-term improvement process in sport.
References


