

CHARLES UNIVERSITY IN PRAGUE,
FACULTY OF PHYSICAL EDUCATION AND SPORT,
DEPARTMENT OF SPORT GAMES

SPECIALIZED TRAINING OF CHILDREN AND YOUNGSTERS IN SELECTED SPORTS GAMES

JAROSLAV BUCHTEL, TOMÁŠ KOČÍB, MARTIN TŮMA

SUMMARY

The study has two principal goals. The first one is the analysis of personal characteristics of coaches, who function with teams of youth in clubs participating in the top and second to top competitions of adults in handball, tennis and volleyball. Analysis breaks data down following criteria of age, level of education reached and gender. The second goal of our study is the analysis of the sport preparation of children and youth in mentioned sports games on their observation of federations' recommendations about the content of training in respective age groups, including detection of their opinions on the beginning of specialized training for respective playing functions.

Research sample was created all-together by 234 coaches (102 volleyball, 69 tennis, 63 handball), who responded to sent non-standard questionnaire with closed and half-opened queries (total rate of return was 67%). Used questionnaire contained eight identifying and five factual questions. Quantitative characteristics were expressed in absolute and relative frequencies, for synoptic presentation of results we have used graphical illustration of responses. Questions concerned players participating in competitions of age groups from about 8 to 19 years.

As far as personal composition concerns, the prevailing part of observed sample is created by coaches of age category 30–40 years, out of which about 1/4 are women. We have found significant differences among respective games in the educational sphere. While in tennis and volleyball the university educated coaches creates simple majority (65% and 76% respectively), their portion in handball is only about 40%. The representation of P.E. teachers among respective sports games is similarly different – 83% and 76% respectively in tennis and volleyball, on the contrary to 29% in handball. Tennis possesses very low portion of coaches working with category of youngsters (6%). We have found also differences in opinions regarding to the necessity of preparatory phases, i.e. categories preceding younger pupils. Primarily coaches of tennis assume this phase as inevitable.

On the contrary we find the distinctive agreement in opinions concerning early specialization – only a narrow minority of coaches is assured about its benefits (8%). Coaches of tennis and volleyball are in agreement as concerns the start of specialization according to

playing functions in older pupils category. The selection of one age category in our group of tennis coaches is impossible.

Keywords: training of children and youth, education of coaches, age categories, early specialization

INTRODUCTION

Sports games belong to the most complicated sport branches when it comes to consider their movement content. Systematics of basic skills in majority of games has several categories. Team sports games, however, contain yet two higher level constituent game's elements – game combinations or and game systems. The process of game is very variable phenomenon and a number of authors acknowledges its complicatedness and irregularity (Táborský et al., 2007). The nature of game process enables utilization of various skills to solve the same or similar game tasks. Players that acquired higher amount of game skills then possess an advantage. It is possible to assert that one of the demands creating an elite player is mastering of the greatest possible amount of skills and in the highest possible variety of their executions. That is why the acquisition of necessary motion skills itself requests a lot of time. However also the improvement of mentioned skills due to training and regarding to their use in a game performance means from the time point of view very demanding affair, specifically thanks to their requested variability.

The long-term improvement of movement skills means therefore one of the crucial tasks solved in sports games primarily by coaches of children and youngsters. To acquire basics of all skills' executions possible to use while solving game tasks within the one or two year-long training cycles is clearly unrealistic. Principal motivational presupposition for taking part in long-term sport activity is to play. That's why it is recommended in beginners to use a principle of didactic reduction. This principle consists of the selection of skills necessary for participation in the most elementary form of a match. Their command means the prerequisite for gradual acquisition of further skills enabling the transition to higher level of game performance. The volume of motion skills, necessary to master in top matches is extensive. And this is also one of the important reasons why in sports games we experience so often discussions about the two possible training concepts:

- a) early specialization in training,
- b) training adequate or appropriate to the age.

Principal difference among them need not be in the final outcome (examples of attainment of outstanding top performance by the help of either one of these concepts are well known), but in the course of the training itself. To simplify the problem we could say that using early specialization approach children themselves adapt to the training, while the approach of the training appropriate to age means that training itself is being adapted to children (Perič, 2012).

Importance of the problem from the coaches point of view is best documented by the amount of contributions, seen e.g. on various web sites dedicated to the training of children

and youngsters. Just at random only it is possible to visit e.g. <http://www.ncbi.nlm.nih.gov/pubmed/22174125>, www.healio.com/ or <http://researchrepository.murdoch.edu.au/4422/>, etc. It is important to note that above mentioned nature of sports games (considerable volume of skills necessary for the top game performance) supports rather the concept of training adequate to age. Early specialization, aimed at the fastest possible attainment of top performance, seems to be easier in sports with lesser number of necessary skills or with pronounced dominance of dependence upon only one motor ability. In these sports it is therefore often possible to achieve top performance level in the relatively young age. Top performance in sports games requests high level of tactical skills that are dependent on the abstract thinking, which is not yet fully developed in children's age.

In spite of that it had occurred in Czech expert circles during the last time period several recommendations indicating a departure from traditional request of the appropriate to age training's concept. We have encountered them during various seminaries (only seldom in literature) and it should be noted, according to our opinion, it seems rather the effort to find out a new view upon the concept of appropriate to age training than the real preference of the early specialization. In general the universal training is supposed to be one of the principal characteristics of this concept. The universality according to Perič (2012) can be broken down to:

1. general (exercise, its content does not relate to content of the specialization),
2. specialized (uses instruments, their character corresponds to motion activity of the given sport branch),
3. special in the frame of the selected sport (e.g. in order a soccer player to be able to play in all players' functions – defender, halfback, etc.).

Based on own empirical experiences we assume that in many cases is the universality narrowed to the activities presented in category one. And its absolute preference is the cause of certain criticism of the appropriate to age concept.

Above given facts led us to considerations, whether training of children and youngsters (whose traditionally requested character is described in the following paragraphs) runs in concordance with demands determined by respective sports federations also in the new social conditions. Whether at all and if yes then by what way the nature of children and youngsters' training keeps changing in sport games generally or in respective single games (handball, tennis, volleyball) specifically.

For better orientation in the entire set of issues we specify brief review of basic requests upon the training of children and youngsters in selected sports games yet before formulating our goals, scientific questions and research methods.

YOUTH TRAINING IN SELECTED SPORTS GAMES

Handball

Handball's concept of progress in onset of learning and training (disregarding whether in environment of schools or clubs) respects the stages of sports training. In the stage

of sports pre-preparation it however has its specific features, for the general awareness about the nature of handball is smaller than in some other sports games (as e.g. volleyball, soccer). Besides self-creating the relationship to playing sports at all and the habit of the regular sports activity, it is necessary on top of that to familiarize beginners not only with elementary skills, but also with elementary rules enabling realization of matches.

The general principle of beginners' game simplification is practically applied by utilization of "minihandball" (in some sources named as "handball 4 + 1"). Our (Černý, 2007) as well as foreign (Hjorth, 2009) authors coincide in opinion that diminished playing court, decreased number of players and simplified rules determining playing the ball enable quick comprehension of the game principles. Having in the field four team players facilitates relatively high frequency of direct ball's contacts and due to it also increases the probability of successful intervention into the process of game. All of that influences positively the motivation to further activity. Enjoyment of the game itself is in this particular stage preferred over the match result and over the competition's rank (often even not determined). From the content point of view the training is aimed at acquisition of elementary skills as throw, jump, and movements with changing directions or assuming defensive positions. Man to man defensive system and attack against it are applied during the game.

In the stage of basic training the focus on acquiring basic skills persists further, including the enlargement of their "reservoir". We emphasize their initial learning by the form of presenting game tasks (Šafaříková, 1998), while prioritizing the correct task's solution. The degree of competence in solving game tasks is checked in matches. Therefore this is why further prevails the preference of tasks solving evaluation over the result itself.

Regarding to the stage of biological development it is recommended to promote the "universality" of players. By other words, during this training stage the specialization for respective playing functions is not desirable. On the opposite, it is recommended, players to rotate in respective playing functions (within the initial phase of this stage, including the position of goalkeeper) during season. Due to this approach and beside other, players gain important experiences for initial learning of cooperation. Even though the participation in regular competitions is necessary, the final rank should be the secondary factor.

With regard to the fact that players have already gained certain experiences with playing, the time occurs for transfer from minihandball to competitions with standard rules. This stage falls usually to the period susceptible for development of velocity. Priority should be given to velocity exercises, and not only in the sphere of general universality, but also in the frame of already acquired skills' improvement. In this particular place we consider as necessary for this stage to mention importance of the educational influence. Taking part in regular competitions with need to respect other participants of a match (teammates, opponents, referees, etc.) offers a lot of occasions to such activities. Through the creation of necessary playing relations within a team it is possible, as well, to influence upon and to create further (formal as well as informal) relations and influence thus upon the process of respective players' socialization.

During the stage of "specialized training" the training focus moves to cooperation, specifically in small groups of players. In elementary forms of cooperation (elementary game combinations) it is supposed, players will acquire them to such extend in order everybody to be able to realize them with everybody. On the other hand this stage is connected with

the outset of narrower specialization of single players to their respective playing functions. The initial teaching by the form of exposing players to the game tasks persists also in this stage. For players being motion-wise well prepared from the previous stage it is then also possible to increase emphasis upon the tactical aspect of a game task's solution. As far as basic skills are concerned, we focus in this stage on their variability. Unless the quality of execution will not drop down, will this stage mean the occasion for granting players some space to create their own game style. The growth of game skills quality significantly influences the character of operations aimed at the development of respective motor skills. Specifically in the sphere of strength preparation it is possible, thanks to the period of biological development, to apply more demanding methodical procedures. The placement in regular competitions (especially in later phases of this stage) is now already an important factor for evaluation of the training's quality as well as of the game performance. Priority given to the competition rank and points gained assigns, however, at the same time higher demands upon moral and ethical qualities of each individual player. The educational potential of competitions therefore is not negligible.

Tennis

Tennis is primarily an individual sport. Provided that players specialize themselves for doubles, it happens as a rule in the second half of their careers, when – because of condition reasons – it is possible to play longer on the elite level. Up to 12 years of age the most important factor in match is created by the technique. Afterwards it increases the significance of the condition and mental strength that become the most important factors in the adulthood (Crespo, 2005). There is relatively large variability of approaches to training of youth in tennis; the opinions about early specialization are summarized e.g. by Šafařík (2012).

In the stage of sports pre-preparation it is recommended to adjust tennis to children by such a way in order them to be able to realize all game situations in training matches in regard to their body proportions. In practice it means diminishing the court, lowering the net height and use of special balls. The rules are significantly simplified (mini-tennis, baby-tennis) and also score's calculation is different. Up to 10 years of age there are no rating standings and girls play together with boys. Individual and team competitions are organized, their intention, however, is the introduction of young players into the competition's system and acquainting them with the competition environment. The result itself should be understood as a byproduct and the course of a match means feedback enabling further planning of training. The content of training, beside general development of coordination, is created by basics of tennis technique and elementary tactics realized in different game situations. Tennis strokes result predominantly from movement patterns of throws. Because of purely practical reasons mini-tennis courts use to be marked off on regular tennis courts. It is, of course, necessary to have portable low net. Slow and low bouncing balls facilitate realization of larger number of tactical variants (e.g. movement to the net). Using these balls makes also easier to keep the ball under control and therefore alive longer, what decreases frustration from failed strokes and increases motivation.

Acquisition of the special tennis strokes follows also in the stage of basic training. Singles game is added by doubles which contains usually more game skills at the net

(volley, smash). In spite of the fact that doubles are very good supplement to training, their utilization in practice is often insufficient.

It is suitable to use larger scale of didactic styles, especially in case of preparatory games, where players themselves can discover possible solutions of game situations. It is recommended to alternate types of balls and transfer practice to the larger courts. In conditioning there is further developed coordination and velocity, where the focus goes to their special forms with short dashes and changes of directions. As important there is also the initial teaching of specific ways of tennis locomotion. Some matches in singles competitions are played without a referee and that is why it is necessary to familiarize players with principles of fair play and respect to an opponent.

In the stage of specialized training players already profile themselves to the certain style of play. High level technique's mastery enables transfer of attention to its efficient utilization. Speed and placement's accuracy together with variability of strokes and court's cover becomes main tasks of training. In correlation with the performance also the player's mentality gets the importance – that is in tennis, regarding to its demands, one of the most important factors. In conditioning it is used a lot of methods and importance of the strength training increases. Velocity or agility continues to be the principal prerequisite for success. Because of tennis being an individual sport, its training requests for considerable individual planning. That must be adapted not only to somatic characteristics, but also to assumptions from the point of condition view and to the personality of a player. Standing's rank already use to have a great importance in the entire system specially regarding to the further selection to training centers. A coach is also responsible for development of will and ethical principles, for players are often exposed to excessive pressure, resulting from the competition system, variable duration of matches, and ban of coaching or nature of the game with permanent interruptions.

Volleyball

Volleyball is the team, net and non-contact game. It means, there are no personal contacts on the court that could lead to injury of players. Volleyball lays certain demands from the technical-tactical aspects. Players must cope with ball's volleys and hits performed by various techniques, but within the frame created by rules. These ball contacts then allow for realization of basic skills and their sequences again for game combinations. These two phenomena create the real beauty of the game. During its development volleyball has become good-looking, exciting and often also thrilling game attracting large amounts of spectators both directly in stadias as well as in front of TV sets (Buchtel et al., 2005a).

In children and youngsters categories volleyball training possesses task to develop sufficient level of the motor abilities' complex, which will prepare its participants to achieve optimally maximal, and long-term lasting performances. The attainment of a high performance during major competition events, like OG, WCH and ECH, use to be assessed as the most valuable in majority of instances.

Above given goals make clear that youth volleyball training should come out from the general orientation, which however have to be in concordance with the specialized focus. General part then will be realized together with the specialized part, it means with

that, which aims predominantly at the elementary learning and improvement of volleyball game skills and knowledge (Šrámek, 2011; Buchtel, Ejem, Vorálek, 2011). The accomplishment of knowledge and skills enables future desirable performance, which we understand as behavior of a team (a player) in the course of a match (sets). As specialized training concerns, we can look at it from two points of view:

- a) Regarding of the volleyball game skills, resulting from initial learning and improvement of all game elements, their acquisition is necessary for realization of the game on elite and advanced levels;
- b) Regarding of the training adapted to requests of specialized playing functions in a match (Buchtel, 2005b; Zapletalová, Přidal, Tokár, 2005).

Content of volleyball training is created by four components – technical-tactical development, conditioning, psychic development and regeneration (Buchtel, Ejem, Vorálek, 2011).

Technical-tactical development requests to cope with basic skills in order to enable execution of respective ways of ball contacts from the technical-tactical aspect. It is performed in training by the help of corresponding organizational forms and didactic methods leading to the final phase of motor learning. In connection with above it is not possible during initial learning and training to omit the unity of technical and tactical aspects of all game elements, providing the tactical aspects (selection of the most suitable solution of a game situation) is dominating and the technical aspect (the way of ball handling) is inferior. Basic skills then facilitate successful match utilization of game combinations by what we mean the mutual cooperation of two up to six players that collaborate for fulfillment of a game task in momentary game situation.

Into the motor program built by technical-tactical development it is yet necessary to embed another component of training content, by which we mean further dynamic characteristics of a movement, as parameters of velocity, strength, coordination, etc.

The third component of the youth training's content – psychic development – strongly effects and influences predominantly upon the fact, players strive, in the course of a match, to realize all what they had earlier mastered both from the mental and motor aspects. Moreover without stress, which develops mentally demanding and difficult states. Tuning to such actual psychic state, which enables realization of all, what they have already mastered, that is the task of players' mental development.

The fourth content's component – regeneration – plays in current advanced and top training of youth permanently increasing role. Using all its means and forms, it effects the removal of fatigue after training and game loads and leads to preparation to further stress loading, that will be brought by next training units and competition matches.

GOAL

Opening chapter of our contribution provides readers by review of advantageous procedures recommended for the training of children and youngsters in order them to reach high and permanent game performance in adulthood. The authors repeatedly dealt with

a question, how these procedures, their basics originated yet from the times of significantly different social conditions, function in contemporary situation. Pronounced orientation of the society to profit and the endeavor for the quickest possible return of expended effort and means could significantly influenced the approach of coaches and clubs.

Goal of our research was to find out – based upon coaches' responses – the current situation concerning content, organization and forms of children and youngsters training in selected sports games. Regarding to the professional orientation of authors the research subject focuses on handball, volleyball and tennis. This composition – one goal game, one net game, and one individual game – can serve as a certain profile of sports games.

Scientific questions

What are the personal characteristics of coaches, who shares the conduct of training in clubs participating in top competitions of selected sports games?

How does the training of children and youngsters in respective sports games progresses and to what extent it respects above described procedures?

Presupposed research outcome should be the acquirement of information about situation in sport training of children and youngsters in sports games – handball, tennis and volleyball – which consequently can become an impulse for possible corrections of coaches' educational systems in respective sports federations.

METHODS

Method of data acquiring

For our research we have used the method of questioning by the form of non-standardized questionnaire with closed and half-opened queries (Bedrnová, Nový, 2007; Punce, 2008). This questionnaire was distributed to 125 handball, 78 tennis and 147 volleyball coaches using the below given way. The total number thus reached 350 coaches.

Questionnaires were sent electronically to e-mail addresses of coaches. Distribution of questionnaire to respondents, and its simple completion by answering questions, was performed by the help of Internet software www.vyplnto.cz. Coaches marked their answers just by a click only and then followed by successive marking of all other questions which were in total 18. After completing the last one a coach marked command “send questionnaire”. By this final step the questionnaire was returned to sender. The questionnaires were anonymous.

Characteristics of the research sample

Respondents – coaches, who returned completed questionnaires, were totally 234, and created research sample. Out of this number there were 102 volleyball, 63 handball, and 69 tennis coaches.

Return rate calculated from all questionnaires was considerable – it totaled 66.86%. Above mentioned games were selected intentionally because they could be broken down following a few classification keys: “invasive and non-invasive”, “goal and net”, and finally “team and individual” games.

Method and data elaboration

To collect and elaborate data we have used method of questioning by the help of non-standardized questionnaire with closed and half-opened questions. We expected that such selected and adapted methods can provide inspiring responses based on highest possible number of returned questionnaires (Pauknerová et al., 2006; Surynek, Komárková, Kašparová, 2001). Acquired data was analyzed specifically to respective questions and in sequence with their order in questionnaire. Quantitative characteristics were expressed in absolute and relative frequencies. To exemplify presentation of results we have used graphical illustration of answers. Results are arranged according to questions in the questionnaire and supplemented by discussion to respective subjects of our study.

With regard to the research intention we have divided team coaches according to the below given age categories of teams’ players that ranged from six to eighteen years of age. The observed sample therefore contained teams of:

- mini-pupils (preparatory units, pre-preparation),
- younger pupils,
- older pupils,
- so called “youth” or “cadets” (younger teenagers),
- juniors (older teenagers).

These were teams of youngsters from clubs, theirs teams will in current season participate in one of the two top state competitions – extra league and I. national league of senior men and women. We supposed, this means teams on elite or advanced levels. Regarding to clubs of such performance level it is possible to deduce that their care for youth teams is well established from all possible aspects. And this care is primarily motivated by the objective to educate young players of both genders capable to present optimal performances on elite level in adulthood.

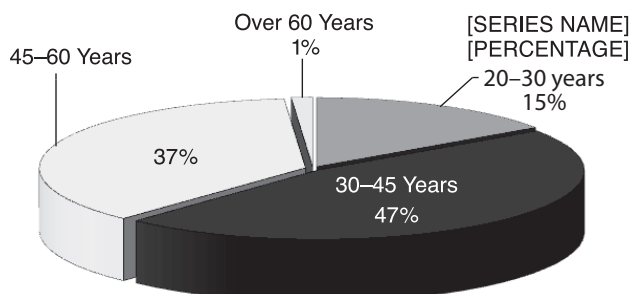
Utilized questionnaire was in the very first part created by eight identifying questions. We have expected they provide information about each individual respondent (e.g. age, civil and coach’s education, duration of coaching practice, etc.) The second part was created by five factual questions. These questions were aimed at providing information relating directly or indirectly to the subject of study – in our case to the field of children and youngsters training’s specialization in sports games. The third, and the last part of questions, was aimed at the training field again, but resulting from the peculiarities of each of the three studied sports games. It contained five to eight questions and obtained information will suit primarily to each individual sports federation handball, tennis and volleyball respectively. Results of this part therefore are not topic of our contribution.

RESULTS AND DISCUSSION

Question No. 1 ascertained gender of respondents. The composition of observed sample from the point of gender view is very imbalanced. Women create not full quarter (23%). We only can speculate that the predominant part of our sample performs coaching as free-time activity (the rate of professional coaches was not observed) and in most part of cases men have apparently for this particular type of voluntary activity much better conditions. On the other hand our society accepts just as a mere fact high rate of females among school teachers. And regarding to the fact that representatives of educational professions make 57% of observed sample, we could assume higher percentage of women. In the reality, however, women create also only 23% from our sample's "educational" subpart. Whether is this phenomenon specific for P.E. teachers only we, however, cannot assert, for we do not have trustworthy data concerning the ratio of women in P.E. teaching at schools. Distinctive differences we, however, find in respective sports games. While the percentual representation of women in volleyball and handball (25% and 28% respectively) resembles their representation in the entire studied sample, the share of women in tennis creates only 13% of the observed sample of tennis coaches.

An interesting phenomenon was found by analysis of achieved level of coaching education. While in the group of coaches with highest possible license the ratio of women (25%) corresponds to the entire sample, in the lower group (license B, second degree) the ratio of women drops to mere 11% and on the opposite in groups with lowest qualification or without qualification at all the share of women increases to its highest values (33% or 28% respectively). Also in this particular case we find differences among respective sports games. Tennis creates the significant extreme, where all women in studied sample ($n = 9$) possess the highest coaching license! In handball and volleyball we find the same percentual representation of women in the entire sample and in the group of lower (B, second class) licenses (14 and 15 respectively). The higher share of women in the group of coaches with highest license was found in handball (42%, while volleyball 31% only); on the opposite, then, the ratio of women in the group of coaches with the lowest or none licenses is higher in volleyball (35% and 40%) than in handball (30% and 17%).

Question No. 2 dealt with the age of respondents. For this reason the below given categories were created in advance. Age distribution of studied sample is illustrated on graph 1.



Graph 1. Age group of coaches

Age group 30–45 years scores the highest number of cases. According to our opinion this fact suits to long-term trend of transition to coaching activities after finishing playing career. Moreover it is possible to consider also current tendency of delayed parenthood, which finds the age of 40–45 years as period when own children grow to the age of beginners (around 10 years). A lot of coaches recruits from among of parents.

As a positive phenomenon we consider also the not negligible occurrence of the age category 20–35 years. Younger coaches mostly understand better to the needs and behavior of children and shorter age difference may mean also an advantage in establishing communication. In many cases this age group possesses also better time possibilities (specifically at the beginning of this period the group does not use to be bothered by worries about family). On the opposite quite exceptional occurrence of category over 60 years is, according to our opinion, clear reflection of hardness induced by coaching work with children and youngsters. A majority of higher age categories' citizens considers this activity as something beyond their possibilities and interests.

Should we evaluate the age composition according to respective sports games, we are finding the correspondence in the case of category 20–30 years (handball and tennis 16%, volleyball 15%). As to some extent alarming fact for volleyball seems that representatives of the group of 45–60 years of age create over the half (53%) of observed sample. The hypothetical question emerges whether this fact cannot reflect into the preference of more conservative approaches to training. On the other hand in tennis the category of 30–45 years significantly dominates (71%). We can only speculate, whether in this case the role plays the combination of adequate game experience and at the same time yet sufficient condition preparedness or some other causes. Taking into account this point of view the coaches of handball are distributed the most evenly (44% and 35% respectively); on the opposite, however, it is necessary to mention that sporadic representatives of the category over 60 years can be found exclusively in handball only.

Question No. 3 asked about civic occupation. This was a half-opened question. As the very gratifying reality we assume that P.E. teachers create almost three fifth of our sample. That's because training of children and youngsters needs to respect the whole number of laws and procedures, teachers are acquainted with much deeper during their preparation for occupation than it could be enabled by any coaches' courses or instructions. With regard to the main orientation of this article it is therefore possible to suppose that major part of the observed sample is familiarized in detail with the topics of early specialization or appropriate to age training. That appeared also in answers to further items of our survey. A number of parents possesses job duties until late afternoon hours and have not, then, possibility to accompany children to training units in sports clubs (especially in larger cities, where it is for small children indispensable). The sport training of mini and younger pupils in school groups or in school's sports clubs (together with support of organized sports clubs) seems to be an optimal solution. Children stay in known environment, being observed by known persons and thus to carry on sports activity is for parents much more acceptable and easier solution.

Also in this particular case the overall sample's characteristics is influenced by different situation in respective sports games. While in tennis and volleyball P.E. teachers create more than 3/4 of all coaches (83% and 76% respectively), their portion in handball

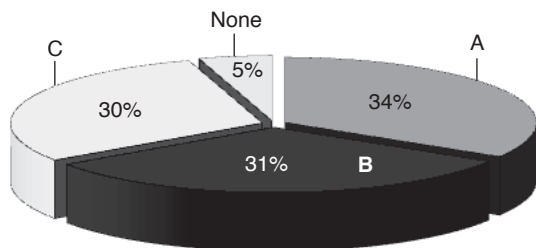
reaches neither the entire 1/3 (29%). With a really high probability this situation can reflect into the qualitative aspect of training process, especially then in younger age categories.

Question No. 4 detected general education of coaches. 65% of surveyed sample reported university education. And regarding to the age composition of our respondents we have to state that this result was not influenced by a certain “inflation” of higher education, which could be observed within society during last years. To complete the information we indicate that university educated P.E. teachers create 41% of our entire sample.

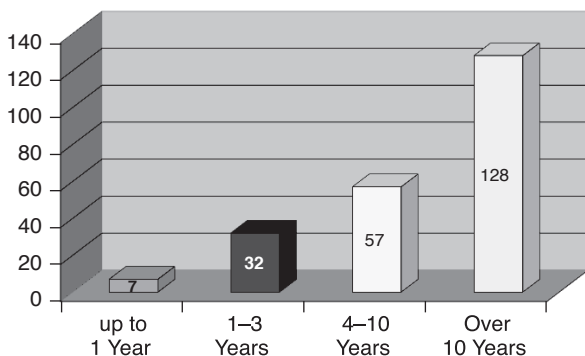
Similarly to the previous characteristics we find also here marked difference between volleyball and tennis on the one side and handball on the other. While in volleyball and tennis more than half of coaches possesses university education (76% and 65% respectively), the part of coaches with the same education in handball is significantly lower (41%). The decisive role in this case can play the fact that volleyball and tennis belong among traditional university sports.

Question No. 5 concerned the special education, therefore the coaching qualifications. The sample, followed up by us, possessed the uniform representation of coaches from each of the three qualification grades, what is well seen on the graph 2. Without coaching education there were only 5% of responding persons. They were dominantly coaches of younger categories. Even though coaches of youngest categories also need coaching education and some practical experiences, it is understandable that commencing coaches often start in these mini-categories. The most coaches bearing licence A was in the sample observed by us among tennis coaches (69%), handball and volleyball then identically hit 19%.

Question No. 6 identified the duration of coaching practice. Respondents were asked to mark one of the four below given possibilities. Practice duration within the group of queried coaches is shown on the graph 3. The most frequently coaches completed practice longer than 10 years. These coaches obviously work often with teams participating in highest competitions and leagues. 84% out of them are men, it means that in this subgroup the ratio of men is larger than in the entire observed sample. It is also interesting that women with such length of practice work with practically all categories of youngsters. Taking into account the length of coaching practice differences among respective sports



Graph 2. Coaches according to coaching education



Graph 3. Coaches according to practice duration

games were insignificant. Coaches with practice longer than 10 years created majority in all three games. They created 58% in tennis, 55% in volleyball and 51% among handballers.

Question No. 7 concerned age categories. As for categories of players coaches work with, there was the possibility to mark more answers. Totally 79 coaches got involved with the youngest category, up to 10 years of age, called by us altogether as “mini”. Out of this group 67% are teachers or professional coaches. Majority of them falls into the age category 30–45.

Majority of them falls into the age category 30–45. The largest share of coaches in this age category was found in tennis (41%), followed by handball (38%) and finally in volleyball (26%). 87 (37%) and 69 (29%) coaches worked with categories of younger and older pupils respectively. So called “youth” category attracted 47 coaches. Tennis recognizes only one category for “teenagers”, which takes four years – in this particular group we found only 6% of responding coaches. Category of juniors (older “teenagers”) then contains results from handball and volleyball only and the entire number of coaches, who marked this category, was 49 (21%). Out of these two sports games volleyball prevails having 29% while handball only 16% working with this category of category of children.

Question No. 8 ascertained the highest competition level youth teams of surveyed sport clubs participate at present year. Regarding to the state of performance in sports games studied by us we had created the three levels. The very first level occupied the highest possible national competitions. The second one made the lower competitions on national level and the last level was set for the competitions on regional and district levels. We had to adjust the partition of competitions in each sports game to both member base of players licensed in Czech Republic and our own experiences. Distribution of coaches according to the competition to which they prepare their teams of youngsters and starting from the highest competition yielded following percentages – 28%, 24%, and 48%. Out of all coaches working with teams in highest divisions 43% owns also the highest degree of coaching education, this amount slightly drops to 40% in the second level and

significantly lower, to 25% only, was reported this level of education in the competitions' the lowest level.

Looking at the studied criterion from the point of view of respective sports games, the largest ratio of teams in highest competitions grasped tennis. This is due to different structure of competitions in this sport, for the top regular youngsters' competitions in tennis are competitions in regions. And that's the reason why they are most frequent in the frame of the entire Czech Republic. The same percentages in volleyball and handball arrived both at about 25% of clubs.

Question No. 9 detected attitudes of coaches to the importance of mini-categories for the given sports game. The question was closed and offered four possible answers shown below. Only one tenth of all coaches is fully convinced about the necessity to complete mini-categories. The support of realization yet preparatory phase before the stage of younger pupils in this group of respondents is small because these coaches are not ensured sufficiently about its importance for further education of young players.

The most frequent defenders of preparatory stage's inevitability are tennis coaches (27%) comparing to volleyball (6%) and handball (4%). It results from the fact that initial learning and following improvement of skills in tennis request longer time as well as by experience that young players must be able to rival evenly adult players already in the age of 16–18 years, if they should get success in adulthood.

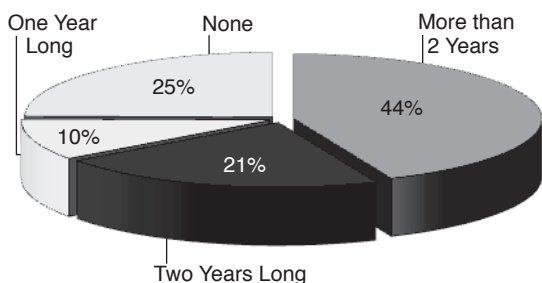
The next group, containing almost half of all coaches, these mini-groups recommends. This is surprisingly high percentage. It could be caused by the low level of work in preparatory phases where there are employed coaches with inferior levels of theoretical knowledge and practical skills.

Another 22% of coaches responded that children rather do not need to go through such preparatory phase of training and 27% supposes children do not need to complete it at all. These opinions were more presented at handball coaches (37%) followed then by coaches of volleyball (17%). They were in majority of cases coaches from the age group 45–60 years of age, therefore the generation that perhaps did not catch up flexibly enough the introduction of new training and teaching procedures. These situation did not occur in coaches of tennis.

Question No. 10 requested respondents, whether clubs, they are working in, have teams participating in competitions of younger pupils and whether there function yet teams belonging to so called preparatory categories. They are created by children of still younger age. Teams of mini-pupils use to be divided according to age and undergo one-year, two-year or longer training aimed at sports games. There, however, can also happen, clubs have no teams of mini-categories.

Results obtained to this question are well shown on the graph 4. This graph shows convincingly that almost half of all clubs possesses preparatory groups, which realize training longer than two years before they enter category of younger pupils. Clubs with mini-groups of two or one year durations exhibit the very same percentage value (21%). And one tenth of clubs only have no preparatory unit in mini-categories.

Taking into account just only selected sports games, we see, the highest percentage in using preparatory units occurs in volleyball (94%) and handball follows with (87%).



Graph 4. Preparatory categories in clubs

Tennis also organizes individual competitions for players of age from 6–9 years. Our question, however, dealt with competitions of teams only and that's why the obtained data point from tennis is the lowest one (29%).

Results of our survey can create a good news for training of sports games in pupils' categories. This information could activate and lead coaches to better quality training in categories of pupils, possibly also in youth categories. This activity could also be one of the pronounced factors, which improve players' prerequisites to their high performance level in adulthood.

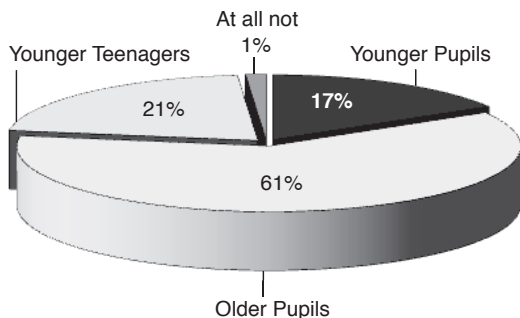
Question No. 11 requested the choice of one from two alternatives concerning training. The first one expressed focus on elementary learning and acquisition of such game skills, which can also be used by other sports games. The same was valid for general development of motor skills, too.

The second alternative expressed focus on elementary learning and acquisition of such specific constituent game elements that will be needed in the next years for realization the game ensuing from team systems with specialized functions of players.

The question was therefore aimed at the degree of early specialization in practice of youngest categories. The first alternative was selected by 92% of coaches, while the second one by the remaining 8% only. The opinions of coaches were distributed equally in all three sports games (handball 94%, volleyball 88%, tennis 87%). It is therefore possible to claim that very significant part of coaches supported the universality in the training of young players.

Question No. 12 pointed out that realization of elementary learning and training adapted to specialized demands of playing functions is based upon the game systems of top senior teams. Coaches were asked to express their opinion on at which age category it seems suitable to start players' specialization in selected game systems used in senior age. They could select from categories existing in Czech Republic, namely: younger and/or older pupils, younger and/or older "teenagers". They also could express opinion saying there should be no specialization at all.

Opinions resulting from answers to this question are illustrated in graph 5 in percentages. The best chance to start specialization admitted by more than half of respondents means its beginning in the older pupils' category. Percentages defending the same opinion

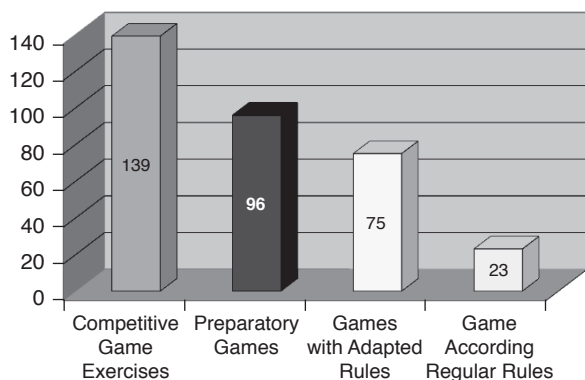


Graph 5. Since what category specialization is recommended

in other categories – younger pupils and older “teenagers” – are significantly lower. Obtained responses correspond to current opinions on training in other sports games, too.

Aiming at the respective sports games we get following responses: 76% of respondents in volleyball agree with the specialization’s beginning in the category of older pupils. In handball 60% of coaches recommends to start specialization in older pupils category, but 19% of respondents would prefer starting already in younger pupils. The view upon specialization in tennis seems to be to some extent different; this is due to the fact, there do not exist specialization in playing functions. The question, therefore, aimed at the game styles and in connection with that 32% of coaches recommended to start with specialization in category of younger pupils, 36% would select older pupils and finally 32% opt for category of cadets.

Question No. 13 inquired about methodically-organizational forms used by respondents in elementary learning and improvement. The answer is evident from the graph 6, which revealed that the highest frequency was registered by the utilization of competitive game



Graph 6. Use of methodically-organizational forms

exercises. Preparatory games ranked second and the third place was occupied by games with modified rules. Quite low frequency was hit by games with valid regular rules.

Building upon the results obtained in our survey it is possible to deduce that the frequency distribution of responses correspond to current theory dealing with training issues. Coaches not only know it, but they also utilize it in their training practice. This fact entitles us to express very good opinion about theoretical knowledge and practical command used in training of pupil and teenager categories.

CONCLUSIONS

Our survey provided information about opinions of coaches upon conduct of training and its realization in various categories of youngsters in the Czech Republic. It had shown also the organizational level and conditions secured in sports clubs enabling education and upbringing of young players.

As concern the sphere of coach's qualification we consider the even distribution of coaches of all three grades as satisfactory. Also younger coaches gradually engage into practice what provides clear presupposition for introduction of newer procedures, forms, means and methods – acquired from educational institutions – into real practice.

Positive finding is also the unequivocal preference of all-round training to training specialization. It is recommended by majority of coaches as late as from the category of older pupils. Next positive aspect is fact that in full half of clubs, especially where questioned coaches function more years, there operate preparatory units for the period longer than two years yet before the category of younger pupils. Preparatory units operating two and one year record the same frequency – 21%.

Negative ascertainment was revealed by information that only one tenth of coaches assumes as the necessity, players yet before the transition into the category of pupils went through preparatory units in their own or other clubs.

Comparing handball on the one side with combined volleyball and tennis on the other, we find there less coaches with university diploma and less coaches being professional in their coaching job. Tennis possesses more often younger coaches (30–45 years) holding university degree. Also volleyball includes into training process coaches with university diploma, however they are older in average. Comparing to handball and tennis volleyball owns also the largest amount of preparatory units in clubs.

As the conclusion it is possible to state that performed survey brought interesting and imaginative information that can help in improvement of training in handball, tennis and volleyball. Attained knowledge can also be used by corresponding sports federations in the area of coaching education, dedicated to coaches of pupil and teenager teams of all performance levels.

ACKNOWLEDGEMENTS

The survey was realized thanks to the support of FTVS UK research design “Active life style in biosocial context” No. MSM 0021620864.

REFERENCES

- BEDRNOVÁ, E., NOVÝ, I. et al. (2007). *Psychologie a sociologie řízení*. 3rd ed., Praha: Management Press.
- BUCHTEL, J. et al. (2005a). *Teorie a didaktika volejbalu*. Praha: Karolinum.
- BUCHTEL, J. (2005b). Herní trénink mládeže v současném volejbalu. *Těl. Vých. Sport. Mlád.*, 71, 8, p. 9–22.
- BUCHTEL, J., EJEM, M., VORÁLEK, R. (2011). *Trénink volejbalu*. Praha: Karolinum.
- CRESPO, M., MILEY, D. (2005). *Tenisový trenérský manuál 2. stupně*. Olomouc: UP Olomouc.
- ČERNÝ, T. (2007). *Házená s Moltenem*. Praha: Český svaz házené.
- HJORT, S. (2009). *Let's play minihandbal*. Basel: International Handball Federation.
- PAPAGEORGIU, A., SPITZLEY, W. (2000). *Handbuch für Leistungsvolleyball*. Aachen: Mayer & Meyer Verlag.
- PAUKNEROVÁ, D. et al. (2006). *Psychologie pro ekonomy a manažery*. Praha: Grada Publishing.
- PERIČ, T. (2012). *Sportovní příprava dětí*. Praha: Grada.
- PUNCHE, K. F. (2008). *Základy kvantitativního řešení*. Praha: Portál.
- SURYNEK, A., KOMÁRKOVÁ, R., KAŠPAROVÁ, E. (2001). *Základy sociologického výzkumu*. Praha: Management Press.
- ŠAFAŘÍK, V. (2012). Je raná specializace v tenisu opodstatněná? *Tělesná Výchova a Sport Mládeže*, 78, 1, p. 20–23.
- ŠAFAŘÍKOVÁ, J. (1998). *Házená. Edice metodických textů pro školní i mimoškolní tělesnou výchovu a sport 11–15letých žáků*. Praha: NS Svoboda.
- ŠRÁMEK, M. (2011). *Vedení tréninkového procesu v ČR u mládežnické volejbalové kategorie*. Bakalářská práce, Paestra.
- TÁBORSKÝ, F. et al. (2007). *Základy teorie sportovních her*. Praha: Univerzita Karlova.
- ZAPLETALOVÁ, L., PŘIDAL, V., TOKÁR, J. (2005). *Volejbal, učebné texty pre školenie trénerov I. stupňa*. Bratislava: Slovenská federácia volejbalu.

SPECIALIZOVANÝ TRÉNINK DĚTÍ A MLÁDEŽE VE VYBRANÝCH SPORTOVNÍCH HRÁCH

JAROSLAV BUCHTEL, TOMÁŠ KOČÍB, MARTIN TŮMA

SOUHRN

Studie má dva základní cíle. Prvním je analýza osobních charakteristik trenérů působících u družstev mládeže v klubech hrajících první a druhou nejvyšší soutěž dospělých v házené, tenisu a volejbalu. Rozbor je proveden z hlediska kritérií věkových, úrovně edukace a pohlavního složení. Druhým cílem je analýza průběhu sportovní přípravy dětí a mládeže v uvedených sportovních hrách z hlediska respektování svazových doporučení týkajících se obsahu tréninku v jednotlivých věkových kategoriích včetně zjišťování názorů na počátek specializovaného tréninku pro jednotlivé hráčské funkce.

Výzkumný soubor tvořilo celkem 234 trenérů (102 volejbal, 69 tenis, 63 házená) kteří odpověděli na zaslaný nestandardizovaný dotazník s polouzavřenými a uzavřenými otázkami (celková návratnost činila 67 %). Použitý dotazník obsahoval osm identifikačních a pět meritorních otázek. Kvantitativní charakteristiky jsou vyjádřeny v absolutních a relativních četnostech, pro přehlednou prezentaci výsledků jsme využili grafického znázornění odpovědí. Otázka se týkala hráčů a hráček startujících v soutěžích v kategoriích od cca 8 do 19 let.

Co se kádrového složení týče, převážnou část sledované skupiny tvoří trenéři věkové kategorie 30–45 let, přičemž žen je asi jedna čtvrtina celého souboru. Výrazné rozdíly mezi jednotlivými hrami jsme našli v oblasti edukační. Zatímco v tenisu a volejbalu tvoří vysokoškolsky vzdělaní trenéři nadpoloviční většinu (65, resp. 76 %), v házené je jejich podíl jen cca 40 %. Stejně tak rozdílné je i zastoupení učitelů TV v rámci jednotlivých sportovních her – 83 resp. 76 % v tenisu a volejbalu oproti 29 % v házené. V tenisu je velmi nízké zastoupení trenérů, kteří se věnují dorostenecké kategorii (6 %). Rozdíly jsme našli i v názorech na nutnost existence

přípravek, tj. kategorií, které předcházejí mladšímu žactvu. Za nezbytnou ji považují především trenéři tenisu. Naopak výraznou shodu nacházíme v názorech na problematiku rané specializace – o její výhodnosti je přesvědčena jen úzká menšina trenérů (8 %). Trenéři volejbalu a tenisu se shodují v začátku specializace dle hráčských funkcí v kategorii staršího žactva, ve skupině tenisových trenérů nelze preferenci jedné věkové kategorie určit.

Klíčová slova: trénink dětí a mládeže, vzdělání trenérů, věkové kategorie, raná specializace

Jaroslav Buchtel
buchtel@ftvs.cuni.cz