

The impact of rejuvenating the volleyball team on competition performance results

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Abstract:

Rejuvenating the roster of volleyball team players is an inevitable process that does not always proceed smoothly. Aim: To analyze the impact of rejuvenating the main roster of volleyball team players on sports results. The study involved volleyball players from the men's teams of Brno (Czech Republic), Taraz Dzhabbil (Kazakhstan), and Podillia (Ukraine). The total number of athletes was 104 ($n = 104$), including young volleyball players under 23 years of age ($n = 37$). Methods: Analysis of scientific and sports literature; monitoring of the team's age composition; comparison method; grouping method; method of generalizing indicators; statistical analysis method; method for evaluating quantitative indicators; expert assessment method; mathematical methods for determining the reliability of results. Results. Analysis of the performance indicators of the volleyball team "Brno" shows that in the games of the 2022/2023 season, young players participated in 10.08% their efficiency was 17.88% ($p < 0.05$). In the games of the 2023/2024 season, young players participated in 39.19% of tactical and technical actions, their efficiency was 35.99% ($p < 0.01$) which improved the team's results. Analysis of the performance indicators of the volleyball team "Taraz Dzhabbil" shows that in the games of the 2023/2024 season, young players participated in 13.19% of actions, their efficiency was 14.01% ($p < 0.05$). Young players took part in 27.03% of the team's tactical and technical actions. Their effectiveness was 5.81% ($p < 0.05$). There was a process of unbalancing the team, which led to a decrease in sports results. Comparative analysis of the tactical and technical actions of young volleyball players of the Podillia team in the 2022/2023 and 2023/2024 seasons showed high effectiveness of their actions. The results of the participation of young players were within 43.88÷45.58%, which indicates the constant involvement of young people in game actions. The effectiveness of the group of young players was within 22.26÷26.44% ($p < 0.01$). Conclusions. The introduction of young players to the main composition of a professional volleyball team is a complex, dynamic process of adapting players to the peculiarities of tactical and technical actions in a new team. Rejuvenation of the team can lead to changes in the quality of the team's tactical and technical actions and, as a result, to an improvement in results or their deterioration.

Key Words: volleyball team, effectiveness of tactical and technical actions, young players, rejuvenating the contingent of the team.

Introduction

Volleyball, as a dynamic and high-energy game, requires players not only technical skills, but also physical endurance, psychological readiness, game variability and the ability to adapt to rapid changes (Afanasiieva et al., 2019). However, most volleyball clubs experience the problem of gradual "aging" of the players of the main contingent of the team, which affects the decline in sports results and competitiveness in the national championship and performances at international competitions (López-Serrano et al., 2022). Rejuvenation of the volleyball team is an inevitable process of developing a sports club and maintaining high sportsmanship of players (Wong & Qiu, 2024). It is desirable that the rejuvenation of the volleyball team does not lead to a rapid decline in sports results (Shlonska et al., 2024). That is why the coaching staffs of volleyball clubs have different views on the technology of rejuvenating the main contingent of the team. Usually, coaches choose the following approaches: gradual introduction of a young player to the main

contingent of the team; search for a young player for a specific position; introduction of a group of young players who have experience of team interaction in junior competitions; forced substitutions due to injuries of the main team players or transfers of players to other teams (Sheppard et al., 2012; Mozolev et al., 2023).

Modern professional volleyball in many countries of the world has a large number of supporters and is considered an attractive “business project” in which a large amount of money is invested (Wiśniewski, 2017). This allows club management and coaching staff to constantly search for the best players in different countries of the world, as well as to identify young talents at an early stage and sign long-term contracts with them (Albaladejo-Saura, et al., 2023; Wyszynski, 2024; de Oliveira et al., 2025). Examples are the championships of Poland, Italy, South Korea, Turkey, Japan, etc. The search, formation and growth of young talents is a complex process, therefore, a pyramidal system of identifying and developing talents of young volleyball players has been created in these countries. Such a system stimulates coaches to search for talents at the local, regional and national levels (Rubajczyk & Rokita, 2020). For the development of talent and effective formation of playing skills of a volleyball player, it is important to play matches at a high sports level. The most capable volleyball players aged 14-17 have the opportunity to get into specialized sports training centres or to the youth teams of the best sports clubs (Śliwa, et al., 2021; Vella et al., 2025).

We believe that the issue of rejuvenating volleyball teams is better studied in championships where clubs have a much smaller budget. In such clubs, the process of transitioning promising players to other, more attractive championships is constantly taking place. As a result, in such volleyball clubs, rejuvenation of the main team composition is carried out with a certain cyclicity (Varghese, et al., 2022). At the same time, the management of volleyball clubs usually does not reduce the team’s tournament tasks. That is, there is a certain contradiction between the fact that the best players leave the team, and in their place come young players who need time to adapt, and the need to preserve the sporting achievements of previous years. The team’s coaching staff faces the question of how to fulfil the task? There is no unambiguous answer to this question in scientific and special literature. That is why there is a need to conduct a scientific research of the problem of rejuvenation of the main composition of the volleyball team in different countries of the world.

We analysed the championships of the Czech Republic, Hungary, Ukraine, Romania, Croatia, Montenegro, and Kazakhstan. Volleyball clubs in these countries are constant suppliers of high-level players for higher-class teams. The analysis conducted for the period 2020-2025 allowed us to select teams that are the largest stable suppliers of young players for other volleyball teams, and therefore are forced to rejuvenate their team composition. Such teams are: Brno (Czech Republic); Taraz Dzhambil (Kazakhstan); Podillia (Ukraine).

The Aim. To analyze the impact of rejuvenating the main roster of volleyball team players on sports results.

Material & methods

To obtain the necessary information, general scientific theoretical and empirical methods of scientific research were used. Theoretical research methods were used to analyse scientific, educational, methodological and special sports literature, data from the Internet resources in order to clarify the current state of the problem under study, its systematization and generalization. Analysis of scientific and methodological sources allowed us to consider modern views on the problem of team rejuvenation, coaching management and adaptation of young players to performances in professional clubs. The theoretical analysis of the features of training young players in various clubs around the world was conducted. Sources on the topic of the research were analysed from scientific and metric data Scopus, Web of Science Core Collection, Google Scholar.

Empirical research methods allowed for the collection and analysis of the necessary information, which made it possible to objectively assess the phenomena under study, establish their causes and consequences, and clarify existing patterns. Empirical research methods included: monitoring the transition of young players to professional teams – allowed to establish qualitative changes in the composition of volleyball teams; monitoring the age composition of the team – allowed to establish the ratio of young and experienced players; comparison method – was used to assess the results of team performances in the domestic championship of the country; grouping method – was used to classify the performed qualitative and erroneous technical actions of players; method of generalization of indicators – included processing of statistical data of individual players’ actions and their transformation into generalizing indicators of the effectiveness of team actions; method of surveying coaches and players – allowed to analyse subjective judgments about the influence of the team rejuvenation process on the results of performances in competitions.

To assess the reliability of the results, we used the program “Data Volley 4 Professional” and special research methods: component analysis method; ranking method; statistical analysis method; method of assessing quantitative indicators of the effectiveness of tactical and technical actions of volleyball team players, mathematical methods for determining the reliability of the results obtained, expert assessment method.

Participants. The research involved volleyball players from professional male teams. Total number of sportsmen (n = 104). Among them: experienced volleyball players over 23 years old (n = 67); young volleyball players under 23 years old (n = 37). Distribution of players by team:

– volleyball team “Brno” (Czech Republic) season 2022-2023, total number of players (n = 17); young players under 23 years old (n = 5); season 2023-2024, total number of players (n = 17); young players under 23 years old (n = 6);

– volleyball team “Taraz Dzhabil” (Kazakhstan) season 2023-2024, total number of players (n = 15), young players under 23 years old (n = 4); season 2024-2025, total number of players (n = 15); young players under 23 years of age (n = 6);

– volleyball team “Podillia” (Ukraine) season 2022-2023, total number of players (n = 20); young players under 23 years old (n = 7); season 2023-2024, total number of players (n = 20); young players under 23 years old (n = 9).

Organization of Research. We analyzed the games of the final series, the results of which were decisive for the distribution of places in the overall Championship standings. These games were played with the closest rival in terms of points scored, that is, with a team that was on the same level as the studied teams in terms of the level of skill of the players.

Data collection and analysis. The effectiveness of the players’ technical actions was assessed by a group of experts. The experts were qualified volleyball specialists (n=12), including: 4 coaches of youth teams; 4 coaches of professional teams; 4 experienced players who participated in the Championships of different countries of the world. The agreement between the experts according to the Cohen’s Kappa indicator was 0.86 (Warrens, 2014). Experts analysed all the players’ technical actions, which were divided into the following groups: innings, receiving the ball after the opponent’s innings, attack efficiency, blocking efficiency, defence efficiency (innings the ball after the opponent’s attackers and fake shots, insuring their players during the attack). Players’ technical actions were evaluated as positive (+) and unsuccessful (-).

The overall effectiveness of technical and tactical performance indicators of qualified volleyball players in competitive activities was determined by formula (1) (Silka & Paevsky, 2017):

$$E = \frac{Ns - Nm}{N} \times 100\% \quad (1),$$

where, E – effectiveness of tactical and technical actions of the player; Ns – number of successful actions of the player; Nm – number of erroneous actions of the player; N – total number of technical actions of the player.

The overall result of the effectiveness of the group of young (experienced) players of the team was determined by the formula (2):

$$Eg = \frac{\sum_{n} E_1 + E_2 + \dots + E_n}{n} \quad (2),$$

where, Eg – the overall result of the effectiveness of the group of players; E – the indicator of the effectiveness of the tactical and technical actions of each player of the group; n – the number of players of the group.

Results

Comparative analysis of the effectiveness of tactical and technical actions of young players of the Brno volleyball team (Czech Republic) in the final games of the 2022/2023 and 2023/2024 seasons is provided in Table 1. The following players participated in these games: in the 2022/2023 season, the total number of players (n = 14), young players under the age of 23 (n = 4); in the 2023-2024 season, the total number of players (n = 13); young players under the age of 23 (n = 6).

Table 1. Indicators of tactical and technical actions of players of the Brno volleyball team (n = 27)

Indicators of technical actions of team players	2022/2023 season number of games (n = 5)					2023/2024 season number of games (n = 5)				
	Number of technical actions	Players over the age of 23		Players under the age of 23		Number of technical actions	Players over the age of 23		Players under the age of 23	
		(+)	(-)	(+)	(-)		(+)	(-)	(+)	(-)
Innings	368	248	71	33	16	354	209	39	70	36
Receiving	295	237	21	34	3	350	113	13	198	26
Attack	419	178	216	12	13	452	152	178	54	68
Blocking efficiency	197	80	89	6	22	204	64	90	16	34
Defence effectiveness	220	165	43	4	8	242	92	24	89	37
Total	1499	908	440	89	62	1602	630	344	427	201
Contribution to overall team actions (%)		60.57	29.35	5.95	4.13		39.35	21.46	26.65	12.54
		89.92		10.08			60.81		39.19	
Player group efficiency Eg (%)		34.72		17.88			29.36		35.99	

Analysis of the indicators of the general team actions of the Brno volleyball team shows that in the final games of the 2022/2023 season, young players under the age of 23 participated in only 10.08% of the team's tactical and technical actions, their efficiency was 17.88% ($p < 0.05$). Experienced players over 23 years of age were involved in 89.92% of the team's tactical and technical actions with an efficiency of 34.72% ($p < 0.01$). This fact indicates that the head coach of the team gave preference to more experienced volleyball players and used young players only sporadically, usually at the beginning of sets. Experienced players were involved in solving key episodes of the game (achieving an advantage at the end of sets, eliminating the opponent's lead). The effectiveness of technical actions of young players was half as low as the effectiveness of actions of experienced players, which indicates the correctness of the chosen tactics of involving young players to achieve a sporting result.

A different situation was observed in the games of the 2023/2024 season. Young players under the age of 23 participated in 39.19% of the team's tactical and technical actions, their efficiency was 35.99% ($p < 0.01$), while experienced players over 23 years old were involved in 60.81% of the team's tactical and technical actions with an efficiency of 29.36% ($p < 0.01$). This fact indicates that the coaching staff tried to involve young volleyball players in the game as much as possible compared to the previous season. Experts note that there was a clear tendency for young players to engage in attacking actions after performing a high-quality ball reception. Therefore, the level of effective actions of young players was higher than that of experienced players. At the same time, the head coach of the team, in order to achieve a sporting result, still gave preference to experienced volleyball players, who performed 1.5 times more tactical and technical actions at the competitions and were maximally involved in the completion of key episodes of the game. The data in Table 1 indicate that the level of effectiveness of tactical and technical actions of young players of the Brno volleyball team has significantly improved compared to the previous season.

Comparative analysis of the effectiveness of tactical and technical actions of young players of the Taraz Dzhabbil volleyball team (Kazakhstan) in key games of the 2023/2024 and 2024/2025 seasons is provided in Table 2.

The following players participated in these games: in the 2022/2023 season, the total number of players ($n = 13$), young players under 23 years of age ($n = 3$); in the 2023-2024 season, the total number of players ($n = 3$); young players under 23 years of age ($n = 5$).

Table 2. Indicators of technical performance of the players of the Taraz Dzhabbil volleyball team ($n = 26$)

Indicators of technical actions of team players	2023/2024 season number of games (n = 5)					2024/2025 season number of games (n = 5)				
	Number of technical actions	Players over the age of 23		Players under the age of 23		Number of technical actions	Players over the age of 23		Players under the age of 23	
		(+)	(-)	(+)	(-)		(+)	(-)	(+)	(-)
Innings	444	332	59	37	16	402	259	47	79	17
Receiving	285	136	108	22	19	363	114	109	64	76
Attack	369	166	165	21	17	453	178	182	36	57
Blocking efficiency	253	147	64	24	18	288	96	128	23	41
Defence effectiveness	219	148	38	14	19	277	117	71	53	36
Total	1570	929	434	118	89	1783	764	537	255	227
Contribution to overall team actions (%)		59.17	27.64	7.52	5.67		42.85	30.12	14.30	12.73
		86.81		13.19			72.97		27.03	
Player group efficiency Eg (%)		36.32		14.01			17.45		5.81	

Analysis of the indicators of the general team actions of the volleyball team "Taraz Dzhabbil" shows that in the key games of the 2023/2024 season, young players under the age of 23 participated in only 13.19% of the team's tactical and technical actions, their efficiency was 14.01% ($p < 0.05$). Experienced players over 23 years old were involved in 86.81% of the team's tactical and technical actions with the efficiency of 36.32% ($p < 0.01$). This fact indicates that the successful performance of the volleyball team "Taraz Dzhabbil" in the key games of the 2023/2024 season was due to the skilled actions of experienced players. The efficiency of the technical actions of young players was significantly lower than the efficiency of the actions of experienced players, which forced the coaching staff to rotate young players for more skilled volleyball players.

In the 2024/2025 season, the Taraz Dzhabbil volleyball team significantly rejuvenated the main team. The team's renewal was more than 25%. Analysis of the team's performance showed a significant decrease in

sports results. Comparative analysis of the tactical and technical actions of the team's players showed that in the 2024/2025 season, young players under the age of 23 participated in 27.03% of the team's tactical and technical actions, compared to 13.19% in the 2023/2024 season. This indicates that young players were twice as often used in the decisive games of the championship. At the same time, the effectiveness of their actions was only 5.81% ($p < 0.05$) compared to 17.45% ($p < 0.01$) in the previous season. This fact indicates the unpreparedness of young players for games at a higher sports level. It should be noted that the efficiency level of experienced players also decreased from 36.32% ($p < 0.01$) in the 2023/2024 season to 17.45% ($p < 0.01$) in the 2024/2025 season. Such indicators show that a process of unbalancing the team has occurred, which led to a rapid decline in sports results (from first place in the 2023/2024 season to seventh place in the 2024/2025 season).

The indicators of the effectiveness of tactical and technical actions of young and experienced players of the volleyball team "Podillia" (Ukraine) in the final games of the 2022/2023 and 2023/2024 seasons are given in Table 3. The following players participated in these games: in the 2022/2023 season, the total number of players ($n = 17$), young players under the age of 23 ($n = 5$); in the 2023-2024 season, the total number of players ($n = 16$); young players under the age of 23 ($n = 7$).

Table 3. Indicators of technical performance of the players of the volleyball team "Podillia" ($n=33$)

Indicators of technical actions of team players	2022/2023 season number of games ($n = 5$)					2023/2024 season number of games ($n = 5$)				
	Number of technical actions	Players over the age of 23		Players under the age of 23		Number of technical actions	Players over the age of 23		Players under the age of 23	
		(+)	(-)	(+)	(-)		(+)	(-)	(+)	(-)
Innings	508	223	31	208	46	384	225	28	103	28
Receiving	444	213	64	102	65	308	87	65	83	73
Attack	533	160	149	109	115	393	84	103	120	86
Blocking efficiency	276	84	91	34	67	212	67	55	52	38
Defence effectiveness	256	83	34	88	51	230	88	29	82	31
Total	2017	763	369	541	344	1527	551	280	440	256
Contribution to overall team actions (%)		37.83	18.29	26.82	17.06		36.08	18.34	28.81	16.77
		56.12		43.88			54.42		45.58	
Player group efficiency Eg (%)		34.81		22.26			32.61		26.44	

Comparative analysis of the tactical and technical actions of young players of the volleyball team "Podillia" in the final games of the 2022/2023 and 2023/2024 seasons showed the high effectiveness of their actions, which is confirmed by statistical indicators. The results of the participation of young players in the tactical and technical actions of the team were within 43.88÷45.58%, which indicates the constant involvement of young volleyball players in game actions regardless of the score and complexity of the sports competition. The effectiveness of the group of young players was within 22.26÷26.44% ($p < 0.01$), which is quite high for young professional volleyball players. This fact indicates that the team "Podillia" has established work with young players and a process of systematic rejuvenation is taking place without reducing sports results.

Analysis of the actions of volleyball players in the 2022/2023 season showed lack of confidence of young players during the serve and completion of the attack. At key moments of the game, young volleyball players were unable to cope with the psychological load and realize their chances of winning matches. In the 2023/2024 season, the team "Podillia" played with fewer mistakes than the opponent, while young volleyball players made a greater contribution to the team's victory. Analysis of the games shows that young volleyball players in the decisive moments of the game showed greater efficiency in performing tactical and technical actions, demonstrated psychological resilience and responsibility for the result. The stability of young players in the decisive games of the 2023/2024 season contributed to the improvement of the sports results of the team "Podillia".

Dicussion

Modern trends in the development of sports indicate the influence of globalization processes, among which scientists especially highlight changes provoked by the migration of athletes. The lack of substantiated data on the peculiarities of migration processes and rejuvenation of volleyball teams necessitates a separate research of this problem, which requires additional study and analysis (Sushko, & Sobolev, 2020; Chunmei, 2021). A feature of our research is the analysis of problems associated with the transition of young players to professional volleyball teams, the establishment of statistical indicators of their contribution to achieving sports results.

During the team's preparation for the competition, each coach builds tactical models of players' actions, taking into account the physical condition of the players and the level of their sportsmanship (Mozolev & Kovalcuk et al., 2023). The higher the level of professional preparedness of the teams participating in the competition, the more intense the sports competition, the higher the requirements for the tactical and technical preparedness of the players (Kovalcuk et al., 2023). The large number of games in the Championships and the National Cup puts a significant physical load on volleyball players. Accordingly, there are periods of player fatigue, deterioration of their physical form, and sometimes injuries (Suárez et al., 2020). The team coach faces the problem of high-quality replacement of players without reducing the sports result. In each volleyball team there are reserve players, the level of skills of which is usually lower than that of the players of the main team. Depending on the score and importance of the game, the coach can bring on both an older and a younger player. The coach brings on an experienced player to solve a specific tactical task. The coach brings on a young player in order for the volleyball player to gain playing experience and further prepare for successful performance in a professional team (Costa et al., 2018; Sun & Zhang, 2025). That is, the coach consciously takes a risk, but provides the opportunity for the young player to demonstrate his technical and tactical abilities in games at a higher professional level. Young players do not always manage to demonstrate their playing skills in the best way. The process of training a young player for effective actions in the main team can take from several months to several years (Oliynyk et al., 2021).

For the successful training of young players and their further adaptation to the conditions of playing in a professional volleyball club team, it is necessary to have a developed infrastructure and a group of qualified coaches who have experience working with young volleyball players (Conejero Suárez et al., 2020). The specifics of the work of a youth volleyball team coach include the presence of such professional qualities as: perseverance, hard work, the ability to overcome difficulties, identify and correct mistakes, communicate and take into account the psychological characteristics of the players, show patience and psychological resilience, promptly intervene and adjust the training process, explain the features of technical and tactical actions in various game situations in an accessible way, be able to motivate and set up the players for victory (Coutinho et al., 2021; Jin et al., 2022; DeBoer, 2025). Ideally, the coach should be an authority and an undisputed leader for the players of the youth team. It is desirable that his or her views on the technical and tactical training of volleyball players coincide with the vision of the head coach of a professional team. This approach ensures the earliest integration of young players into the requirements of a professional team (Liu, et al., 2025).

An important element in the training of a young player is the ability of the youth team coach to plan the training process taking into account the potential prospects for the further development of each player. That is why, when recruiting a team, coaches pay special attention to the formation of technical and tactical skills of young volleyball players, the development of their game thinking, and the ability to predict the further development of game actions (Lopes et al., 2016; Imas et al., 2018; Quvondiqov & Alisherovich, 2022). During the period of performances for the youth team, players are first divided by game roles. Thus, targeted training of the player for a specific game position begins to form. Undoubtedly, during the training period in the youth team, the coach can change the volleyball player's playing role several times, determining the most optimal and promising position for the player for his performance in the professional team (Budak et al., 2017; Conejero Suárez, et al., 2020).

Modern professional volleyball is a sports game where the absolute majority of players have a body length of more than 190 centimetres. Therefore, for children's volleyball coaches, the ability to determine the anthropometric development prospects of their players is important (Melchiorri et al., 2017; Khomenko & Zaitseva, 2024). This is a rather complex process associated with various sensitive periods of intensive physiological and physical development of athletes. The coach of a youth volleyball team, using his or her intuition and experience, searches for and selects the most promising players to prepare them for the professional level (Chunmei, 2021). A tall player is a rarity, so the youth team coach needs to pay additional attention to the physical and technical training of such volleyball players (Novikov et al., 2018). With the accelerated growth of the musculoskeletal system, which is accompanied by a lag in the physical development of athletes, the standard loads for tall volleyball players will be excessive. It is unacceptable to boost their physical and technical training and allow unprepared ones to participate in competitions (Kozina et al., 2023). With gradual maturation, tall volleyball players catch up with other players in physical, technical and tactical training and become the backbone of the team (Hnatchuk et al., 2018).

Despite the promising growth and body weight indicators of young volleyball players, their data should always be considered in close connection with the parameters of sports equipment, the functional capabilities of the most important body systems, the mental characteristics of the athlete. The coach's ability to predict the psychological compatibility of the players in the team and prevent the deterioration of the psychological microclimate in the team is sometimes crucial for the further professional growth of young players and their contribution to the future success of the entire team (Jiang et al., 2024; Hassan & Abdulkareem, 2025).

A difficult period in the career of young players is the transition from the youth to the adult level of competition. New, more stringent requirements for volleyball players of a professional team can become an

additional physical and psychological burden. The training process with a new coach who has a different working style, his or her own vision of the tactical scheme of building the game of a professional team and other requirements for players affect the speed of adaptation of young volleyball players (Tertuliano et al., 2018). The content of training of professional teams differs from the content of training of youth teams. In professional teams, more attention is paid to tactical schemes of interaction of players in different game situations and much less to training individual technical elements (Hnatchuk et al., 2018; Bloshchynsky et al., 2019; Wong & Qiu, 2024). For young volleyball players, this also causes additional difficulties, since the skills of performing technical actions in game situations are not stable enough, which affects the reliability of their performance during competitions.

Rejuvenating the volleyball team's players is an objective process of development. Bringing young players to the main team should be done judiciously, gradually, giving athletes more and more playing time, responsibility, independence, and initiative (Campos et al., 2016).

Conclusions

1. Analysis of the performance indicators of professional volleyball teams in championships in different countries of the world shows that significant rejuvenation of the players of the main team can lead to significant changes in the quality of the team's tactical and technical actions and, as a result, to improved performance results in competitions, as well as to negative results.

2. Based on the research conducted, we state the following:

- preparing a young player to play in the main part of a professional volleyball team is a long-term process that includes: searching for young men with promising anthropometric data; targeted development their technical and tactical actions necessary for a professional volleyball player; development of skills of individual and collective actions in the team; formation of psychological resilience (the ability to perform technical actions without errors in a stressful situation); development of strong-willed qualities;

- rejuvenation of the volleyball team is an objective and inevitable process of team development to maintain it at a high professional level;

- introduction of young players to the main part of a professional team is a complex, dynamic process of adapting players to the peculiarities of tactical and technical actions in a new team, which takes from several months to several years;

- different coaches have different views on the process of team rejuvenation, the main ones are: gradual introduction of a young player to the main team; search for a young player for a specific playing position; introduction of a group of young players who have experience of team interaction in junior competitions; forced substitutions due to injuries of the main team players or transfers of players to other teams;

- rejuvenation of the main part of the volleyball team can lead to a temporary decrease in sports results;

- for successful rejuvenation of the main part of players of a professional volleyball team, a sports club needs to have an extensive infrastructure, highly professional coaches of the children's and youth teams, who have the same views with the head coach of the professional team on the process of development of the volleyball club and the technology of training young players for the main team.

Conflicts of interest The authors have no conflicts of interest to declare.

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