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## MIGRATION OF HIGHLY QUALIFIED VOLLEYBALL PLAYERS (BASING ON THE MATERIALS OF THE OLYMPIC GAMES TOURNAMENTS 1988– 2016)

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C – data analysis and interpretation; D – paper writing; E – paper editing;  
F – paper final adoption.

### Abstract

*Introduction.* Modern sport development trends point the influence of globalisation processes among which specialists mainly highlight the changes that athletes' migration provokes. Lack of information about the peculiarities of migration processes in volleyball leads to the identification of a problematic issue which requires study and analysis.

*Aim* is to study the migration of highly qualified volleyball players and the performance effectiveness of their national teams in a retrospective review of Olympic volleyball tournaments taking into account quantitative indicators for legionnaires participation.

*Material and methods:* analysis and synthesis of scientific and methodological literature and Internet data, comparative and historical research method, content analysis, methods of mathematical statistics.

*Results.* The effectiveness of the men's national teams performance in the final part of the Olympic volleyball tournaments for the period 1988-2016 is analysed. Migration was considered as a significant factor influencing the effectiveness of highly qualified volleyball players competitive activity basing on the materials of the national teams performance in the Olympics Games volleyball tournaments. The quantitative and qualitative indicators dynamics of the athletes-legionnaires participation in the national teams and approaches to the formation of teams regarding their representation are determined.

*Conclusions.* Studying migration issues of highly qualified volleyball players basing on their participation in the Olympic volleyball tournaments for the period 1988-2016 allowed us to identify growth and decline trends in quantitative and qualitative indicators of the legionnaire players participation in national teams and explain them for club teams development by modern trends strategies. Characteristic features for the male volleyball national teams formation which are presented in percentage values were identified and justified

**Keywords:** migration, volleyball, globalization, national team, Olympic Games.



**Introduction.** The peculiarities of development of modern sport in the world indicate there are globalization processes being impossible to ignore [1, 11, 14]. The specialists concerned about the issues of training highly qualified athletes are united with views on drastic changes of high performance sport having captured it [2-4, 6, 13].

General characteristic features for approaches to sport development in the world led to erasing the sporting boundaries between countries. Their openness towards the athletes' migration caused new needs in changes of the main event formats (continental events, cup tournaments, championships) [5, 15].

Volleyball was not an exception having undergone significant changes in official rules over recent years aimed on popularization and spectacularity impressing a loyal fan with aggressive spikes, powerful serves and high level of tall athletes' individual skills [3, 15].

Modern tendencies of game development indicate the impact of globalization processes among which scientists particularly distinguish the changes provoked by migration of highly qualified volleyball players [2, 8, 12].

Lack of available material on the peculiarities of migration processes occurrence in volleyball leads to the distinguishing of a problematic issue requiring study and analysis.

**The aim of the study** was to study the migration of highly qualified volleyball players and the performance efficiency of their national teams in a retrospective review of Olympic volleyball tournaments taking into account quantitative indicators for legionnaires' involvement.

## **Material and methods of study.**

*Study contingent:* men's national teams of Olympic volleyball tournaments.

*Methods of study:* analysis and generalization of the data from scientific and methodological literature and Internet, comparative and historical research method, content analysis, methods of mathematical statistics.

*Study organization:* Available material on the problematics of migration of highly qualified volleyball players based on materials of the Olympic volleyball tournaments for the period 1988-2016 was systematized and interpreted.

The quantitative and qualitative indicators of participation of the athletes having taken part in the other countries' championships (legionnaires) in the national teams' line-ups were determined; the priority directions of migration as well as the athletes' concentration were indicated..

**Results of the research and discussion.** An especial place in global transformation processes of planetary scale is taken by migration as a factor having the most significant impact on high performance sport and forming its popularity at nowadays stage of development [2, 8, 10].

It is common knowledge that migration processes were not confined by the amount of professional and Olympic sports but vigorously capture young athletes by future prospects.

At different stages of sports improvement suggestions to change the training, studying or living place make progressive athletes of different ages and kinds of sport choose their own way. Yet, this is professional sport which is worth consideration because of general



migration tendencies having different initial basis of circumstances for the legionnaire's career start.

The scientists studying the issue of the athletes' migration explain and generalize the reasons for migration with positive changes prospects [2, 7]:

- pay increase (the change of the employer leads to economic growth);
- optimization of educational and training opportunities and competitive process (funding of the necessary amount);
- improvement of living conditions for the family (prospect to change citizenship);
- opportunity to achieve high results (fame, new contracts, promotional projects);
- opportunity for efficient career development by changing the trainer, partners, or requirements.

Every athlete has their own history of life events line making them choose changes not always becoming reasonable but every athlete aims to reach the tops of individual skills realization and to win in the Olympic Games, or at least take part in them and get opportunity to compete with the best athletes of the world. That is why studying the peculiarities of migration of highly qualified volleyball players it is reasonable to be considered and analyzed based on their performance in the Olympic tournaments.

Based on studying available scientific researches results of state specialists in different kinds of sports it was defined [2, 9, 11] that migration had gained considerable forms in late previous century (from isolated and

dependably insignificant cases to values of approximately 50%). Accordingly, for retrospective analysis of the results of men's national teams' performances in Olympic volleyball tournaments the study of the results of the previous 8 Olympic Games for the period 1988-2016 was determined [16]: 1988, Seoul, Korea; 1992, Barcelona, Spain; 1996, Atlanta, USA; 2000, Sydney, Australia; 2004, Athens, Greece; 2008, Beijing, China; 2012, London, Great Britain; 2016, Rio de Janeiro, Brazil.

The mentioned period is worth consideration and analyzing by terms of before (years 1988-2000) and after (years 2004-2016) the millennium because of different peculiarities of world volleyball development characterized by vigorous evolution of official game rules and significant change in approaches to organization of educational and training as well as competitive processes caused by global changes having captured modern sport.

We can admit the peculiarity of the first period the lack of constant leaders in the final tournament table for the period 1988-2000 (*table 1*).

The analysis of the results given in table 1 affords ground to note about heredity of generations within analyzed period, generally, for two Olympic cycles ahead which is proved by the results of the final fours. The 4 place of the Brazil national team in 1988 (Seoul, Korea) had improved in 1992 (Barcelona, Spain) to gold in the Olympic Games, at the same time at the two sequent Olympic volleyball tournaments (1996, 2000) the team had taken the places 5 and 6, respectively.

**Table 1. Composite results of the final tournament tables of men's volleyball teams' competitions the Olympic Games 1988-2000**

| Year<br>Place | 1988        | 1992        | 1996        | 2000        |
|---------------|-------------|-------------|-------------|-------------|
| 1             | USA         | Brazil      | Netherlands | Yugoslavia  |
| 2             | USSR        | Netherlands | Italy       | Russia      |
| 3             | Argentina   | USA         | Yugoslavia  | Italy       |
| 4             | Brazil      | Cuba        | Russia      | Argentina   |
| 5             | Netherlands | Italy       | Brazil      | Netherlands |
| 6             | Bulgaria    | Japan       | Cuba        | Brazil      |
| 7             | Sweden      | CIS         | Bulgaria    | Cuba        |
| 8             | France      | Spain       | Argentina   | Australia   |
| 9             | Italy       | South Korea | USA         | Spain       |
| 10            | Japan       | Canada      | South Korea | South Korea |
| 11            | USA         | Brazil      | Netherlands | Yugoslavia  |
| 12            | USSR        | Netherlands | Italy       | Russia      |

In 1992 and 1996, the Netherlands national team demonstrated vigorous rise of the result having gained silver and gold of the main sporting events, but further showed fall to 5 place in 2000 and 10 place in 2004 (*table 2*). In 1996 (Atlanta, USA), the national volleyball teams of Yugoslavia and Russia took 3-4 places, respectively, and at the sequent

Olympic tournament they fought with each other for the title of the Olympic champion.

The analysis of the last four men's Olympic volleyball tournaments is worthy of separate attention of scientists taking into account the peculiarities characterizing the results of these competitions (*table 2*).

**Table 2. Composite results of the final tournament tables of men's volleyball teams' competitions the Olympic Games 2004-2016**

| Year<br>Place | 2004        | 2008      | 2012      | 2016      |
|---------------|-------------|-----------|-----------|-----------|
| 1             | Brazil      | USA       | Russia    | Brazil    |
| 2             | Italy       | Brazil    | Brazil    | Italy     |
| 3             | Russia      | Russia    | Italy     | USA       |
| 4             | USA         | Italy     | Bulgaria  | Russia    |
| 5             | Argentina   | Bulgaria  | Argentina | Argentina |
| 6             | Greece      | China     | Germany   | Canada    |
| 7             | Poland      | Poland    | Poland    | Iran      |
| 8             | Serbia      | Serbia    | USA       | Poland    |
| 9             | France      | Germany   | Australia | Egypt     |
| 10            | Netherlands | Venezuela | Serbia    | France    |
| 11            | Australia   | Egypt     | Britain   | Cuba      |
| 12            | Tunisia     | Japan     | Tunisia   | Mexico    |



**Table 3. Quantitative and qualitative indicators of the migration of highly qualified volleyball players based on the materials of the final Olympic volleyball tournaments in 2004-2016, n=576**

| Place   | Years of the Olympic volleyball games |                |        |           |                |        |            |                |        |           |                |        |
|---|---------------------------------------|----------------|--------|-----------|----------------|--------|------------|----------------|--------|-----------|----------------|--------|
|   | 2004                                  |                |        | 2008      |                |        | 2012       |                |        | 2016      |                |        |
|   | country                               | legionnaires   |        | country   | legionnaires   |        | country    | legionnaires   |        | country   | legionnaires   |        |
|   |                                       | n <sub>1</sub> | %      |           | n <sub>1</sub> | %      |            | n <sub>1</sub> | %      |           | n <sub>1</sub> | %      |
| 1   | Brazil                                | 4              | 33.3%  | USA       | 12             | 100%   | Russia     | 0              | 0%     | Brazil    | 4              | 33.3%  |
| 2   | Italy                                 | 0              | 0%     | Brazil    | 10             | 83.3%  | Brazil     | 1              | 8.3%   | Italy     | 1              | 8.3%   |
| 3   | Russia                                | 3              | 25%    | Russia    | 0              | 0%     | Italy      | 1              | 8.3%   | USA       | 12             | 100%   |
| 4   | USA                                   | 12             | 100%   | Italy     | 0              | 0%     | Bulgaria   | 9              | 75%    | Russia    | 0              | 0%     |
| 5   | Argentina                             | 7              | 58.3%  | Bulgaria  | 9              | 75%    | Argentina  | 3              | 25%    | Argentina | 6              | 50%    |
| 6   | Greece                                | 0              | 0%     | China     | 0              | 0%     | Germany    | 9              | 75%    | Canada    | 12             | 100%   |
| 7   | Poland                                | 3              | 25%    | Poland    | 3              | 25%    | Poland     | 2              | 16.6%  | Iran      | 0              | 0%     |
| 8   | Serbia                                | 8              | 66.6%  | Serbia    | 12             | 100%   | USA        | 12             | 100%   | Poland    | 1              | 8.3%   |
| 9   | France                                | 4              | 33.3%  | Germany   | 9              | 75%    | Australia  | 10             | 83.3%  | Egypt     | 0              | 0%     |
| 10  | Netherlands                           | 3              | 25%    | Venezuela | 8              | 66.6%  | Serbia     | 12             | 100%   | France    | 8              | 66.6%  |
| 11  | Australia                             | 9              | 75%    | Egypt     | 1              | 8.3%   | G. Britain | 12             | 100%   | Cuba      | 1              | 8.3%   |
| 12  | Tunisia                               | 0              | 0%     | Japan     | 0              | 0%     | Tunisia    | 0              | 0%     | Mexico    | 2              | 16.6%  |
| Total indicators of the athletes-legionnaires amount, number, % |                                       |                |        |           |                |        |            |                |        |           |                |        |
| Total   |                                       | 53             | 36.8 % |           | 64             | 44.4 % |            | 71             | 49.3 % |           | 47             | 32.6 % |

The retrospective analysis of the places taken by the teams-participants of the great final (places 1-4) of four latest volleyball tournaments at the Olympic Games indicates quite stable performance results of the national teams.

Four teams consistently wage struggle for the medals of the highest order: Brazil, Italy, USA and Russia, in 2012 alone (London, Great Britain) the Bulgaria team managed to get into semi-final. The data from table 2 show the dominance of the Brazilian volleyball school. And, although it is real to compete with the Brazilians, which was proved by the USA team in 2008 in Beijing (China), and the Russia team in 2012 in London (Great Britain), the gap in point equivalent became little.

It was determined that the period of the beginning of massive migration of volleyball players is relevant to consider the XXIV Olympic Games 2004 (Athens, Greece).

The substantiated preconditions of

such state are the following:

- favorable political situation, simplified procedure of receiving the necessary documents for employment abroad;
- development of democratic views at the sporting migration processes;
- changes of regulation standards for highly qualified athletes – «migrants» and «legionnaires» to ease receiving of employment visa, permission for living and other necessary documents.

A strong evidence for confirmation of the mentioned migration changes can be the example when for the period 2000 – 2012 the number of athletes taking part in the Olympic tournaments rose greatly and acquired characteristics of 49,3 % legionnaires in 2012 (London, Great Britain) (table 3).

In figure 1 the quantitative indicators of players-legionnaires' participation in the line-ups of 12 national teams having taken part in the 2004-2016 Olympic Games tournaments are presented.

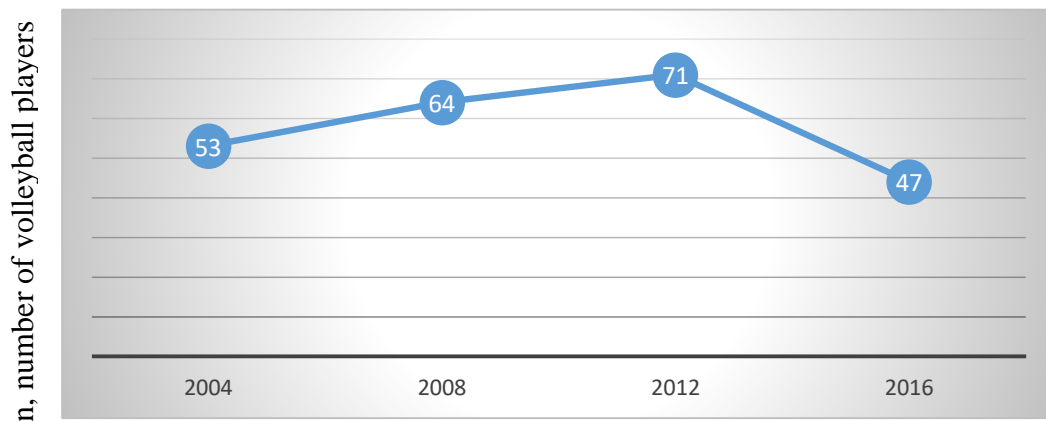


Fig. 1. The dynamics of quantitative indicators of the athletes-legionnaires' participation in the 2004-2016 final Olympic Games tournaments (volleyball, men), n=576

The fall of the qualitative legionnaires' representation in the national teams, 2016, in Rio de Janeiro requires scientific explanation. In contrast to the previous Olympic volleyball

tournaments, where the clubs' clues were directed towards temporary prospect, and that was displayed in the teams' formation with players not having taken part in national championships, in Rio de Janeiro



the fall to 47 athletes was observed (see pic.1), which was caused by the club teams' change in tendencies towards changes in approaches to development strategy, namely, training of native reserve and development of national volleyball schools.

Thorough analysis of the study results presented in table 3 is worth particular attention. During three latest Olympic cycles, for the period of 2008-2016 in the line-up of the Russian national team there were no athletes-legionnaires, and the gold medals in 2012 (London) prove the high level of their national championship, opportunity to create a worthy competition within the state, and funding of the clubs preventing the national team athletes from searching the contracts abroad.

The statistics (100%) of the indicators of the legionnaires' participation in the USA national team's line-ups in four latest Olympic volleyball tournaments is meaningful for studies. The policy of the teams' line-ups' formation with the players gaining competitive experience during the season defending the colors of the other countries' clubs is just the opposite.

It is relevant to generalize the issue of volleyball national teams' line-ups' formation by the certain material of quantitative and qualitative indicators of the legionnaires' participation in the Olympic Games 2000-2016:

- the teams of Serbia, Canada, Australia, Bulgaria, and Germany directed their training vector towards the best legionnaires gaining experience outside holding the national championship;

- the teams of Italy, Tunisia, Japan, and Egypt were oriented on interaction with the players taking part in the national

championship;

- the teams of Poland, Argentina, and France expected 3-6 legionnaires in the national team forming the base of the team.

Studying priority directions of migration of highly qualified volleyball players did not allow us to reveal direct relationship of the volleyball players' qualification and their concentration in the best leagues of the world.

Relatively young and then not as massively organized selective work of sports agents with highly qualified volleyball players as it is done in basketball and football [7, 9] can serve a substantiated explanation of such state of the issue. But it is defined that Italy, Russia, Greece, Brazil, and Japan are attractive for migration of highly qualified volleyball players.

The scientists conducting the studies on drastic changes caused by globalization processes remark the necessity of these indicators' consideration to develop quality training process [2, 3, 6]. As the authors guess, the most significant component is namely the athletes' migration which has to be taken into account when aiming to demonstrate high efficiency level of performance in the international arena [2, 7, 9].

The problematic of the researchers' issues consists not in substantiating the necessity of taking migration processes into account, but in searching of new approaches to organization of educational and training process considering them.

The controversies emerging while formation of training before the main competitions are significant as scientific discussion: on one side – the necessity of involving the best athletes often spending the season in another country's club to the national teams is preemptory [7-8]; on the



other side – impossibility to fully consider the influence of uncontrolled changeable indicators of high performance migration completely (championships calendar of different countries, duration of acclimation, play time amount and gaining the necessary competitive experience in the season, etc.) [2, 3].

In spite of controversial stances, the foreign specialists had paid attention to the necessity of considering the factors of globalization processes in sports long time ago [10-14] which, we guess, is a basis for further studying and searching of new forms of considering migration processes.

### Conclusions.

1. Studying the issues of migration of highly qualified volleyball players based on their participation in the Olympic volleyball tournaments for the period of 1988-2016 allowed us to reveal the tendencies of constant growth of quantitative and qualitative indicators of

the athletes-legionnaires' participation in national teams to 49.3 % in 2012 (London, Great Britain), and for the first time to fall to 32.6 % in 2016 (Rio de Janeiro, Brazil) having been explained by modern tendencies of the club teams' development strategies.

2. The characteristic features of forming the line-ups of men's national volleyball teams were revealed: based on the legionnaires – 75-100% (USA, Serbia, Canada, Australia, Bulgaria, Germany); oriented at interaction with the players taking part in the national championship – 8.3 % of legionnaires (Russia, Italy, Tunisia, Japan, Egypt); and balance in the approaches related to legionnaires – 25-66.6 % (Poland, Argentina, France).

**Prospects for further research** are based on detailed continuation of studying the migration processes of highly qualified volleyball players considering the concentration of athletes in the best leagues of the world.

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