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Indicators of athletes' effectiveness as a basis of team tactical training in women epee fencing

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Abstract

Introduction. The work studied the indicators of athletes' effectiveness in women epee fencing and the opportunity of their implementation into tactical training. According to the current researches, tactical training in team fencing is not substantiated. Aim of Study. This study aimed to compare the indicators of athletes' effectiveness of the world's top-8 women epee fencers during the season 2015-2016 in individual and team competitions and to substantiate the possibility of their use in tactical training. Material and Methods. We have recruited 8 coaches in fencing. They had to rank the components of tactical training (directions, means, methods, control tests, indicators of athletes' effectiveness). Then we analyzed the protocols and video recordings of top-8 epee fencers during the season 2015--2016 (321 bouts in individual and 207 – in team events). To estimate their effectiveness in individual and team events we used several indicators (total number of bouts, the number of won bouts, defeats, draws, and their pattern). Results. Despite the indicators of the athletes' effectiveness are high in both individual and team competitions, the ratio between them is different. Six out of eight athletes showed higher effectiveness in individual events. The difference between those indicators in individual and team performances ranged from 10.27% to 22.12%. Only two athletes performed more successfully in team matches. The difference between the indicators of their effectiveness was 7.80 and 7.05%, respectively, in favor of team competitions. Conclusions. According to the indicators of athletes' effectiveness, tactical training should be based on the use of the role models of athletes. Each role model illustrates the ability to realize athletes' potential in an individual and team standings. The role models are the following: "universal fighters", "individual fighters", "team fighters", "individual fighters with team potential".

KEYWORDS: training, preparedness, competition, team, tactical skills.

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Introduction

Exacerbation of competition in the international arena, changes in competition rules, the increase of the popularity of various tournaments in the sports season and the prestige of winning medals at the Olympic Games and World Championships, the emergence of material incentives encourage coaches to seek new training approaches [1, 4, 5, 23]. According to fundamental sources [20], the specificity of the sport is an important factor that determines the structure of the athlete's training.

The peculiarity of fencing is that, at competitions of the highest level, athletes perform not only in the individual but also in the team events. According to the current FIE (International Fencing Federation) qualification requirements, at the Games of the XXXII Olympiad

in Tokyo, 12 sets of medals will be drawn – 6 in individual and team competitions. In comparison, at the previous Olympics, the number of medal sets was 10 [10]. Thus, the effort of coaches and athletes is largely focused not only on preparing to win a medal in individual competitions, but also on preparing the team during the season.

Tactical training of the team is one of the most essential parts of this process [2, 3, 6, 8, 22]. The practical experience illustrates that tactical training for individual and team competitions has some differences [29]. First of all, it is connected with the competition rules and formulas for individual and team matches. The formulas of competitions are similar for three weapons – epee, foil, and saber. The individual competition consists of two rounds: preliminary round and direct elimination. In the preliminary round, athletes are divided into groups and compete inside them. Each bout lasts 3 minutes or until the score of 5 points. In direct elimination athletes with higher ranking compete against athletes with a lower ranking. In foil and epee competitions each bout consists of 3 periods of 3 minutes and until the score of 15 points. In saber fencing, the bout consists of 2 periods until 15 points (the time doesn't matter because the dynamics of performance is very high). If an athlete wins a bout in direct elimination, he or she moves on to the next round of the competition. If he or she fails, he or she finishes the tournament.

In team competitions, there is only a direct elimination round. The couples of rival-teams are composed according to the International Team Ranking. The team consists of three participants (and one reserve participant) and should win a match against the other team to move to the next round. Contrary to the individual tournament, after one failure (when defeated in one match) the team continues the tournament and competes in other matches. A team match is a kind of relay – it consists of 9 individual bouts (3 participants of one team should compete against 3 athletes from another team) until 45 points. In foil and epee, each bout lasts 3 minutes until 5 touches. In saber, there is no time limit. In some cases, the athlete is allowed to score more hits in the personal bout (for example, if the previous team member didn't score 5 points). That is why the result of the team depends on the efficiency of each team member [4, 7, 13, 15, 16].

That is why the main difference between tactical training for individual and team bouts is the formation of a strategy for the whole competition and tactics for particular bouts (in preliminary round or direct elimination). In individual competitions, the athlete tries to win as many bouts as possible because the amount of victories influences his or her ranking in the next round – direct elimination. The pattern of scored and received hits in each bout is important but the amount of victories is more essential. In direct elimination, the array of scored and received hits doesn't matter (the winner is an athlete who scored more during 3 periods of 3 minutes or is the first who scored 15 hits). The athlete tries to win the bout, spending less energy. If the situation is favorable and the athlete confidently maintains the advantage during the bout (for example, with the weaker opponent), he or she can try to perform various technical and tactical actions to test their reliability and effectiveness. It is important not to spend too much energy, because it will be needed in the next bouts. In team matches the strategy is different. As the match is a kind of relay, it is important to use the most appropriate tactical scheme and to arrange the team members so that the last bout is conducted by the strongest and most reliable, also in a psychological context, athlete (leader). If the team lags before the last match, the leader should do everything possible to eliminate the difference and win. The other participants should do their best to support him to provide the advantage to the whole team. To do this, in each bout, they can not only strive to win but also to receive fewer hits from the rival. In some cases, a draw is also a positive contribution to the team result.

There are also some differences in tactics depending on the kind of weapon. In epee and foil the density of the bout is lower, so athletes need to distribute their effort properly for the whole match. In saber, the dynamism of the bout is higher, so athletes need to react faster to the actions of the opponent. Fast decision-making is essential for all weapons, but in saber – more.

The differences in refereeing matches and scoring in each weapon also reflects the choice of tactics. In foil, the athlete may hit only the torso, neck, groin, and back. In saber touches beneath the waist do not count (the mask and hands are also affected surface). In epee, when athletes strike each other simultaneously, they both get a point. In foil and saber, if the athletes strike each other at the same time, the referee will use the "right of way" rule, awarding the point to the competitor who began the attack first (but there may be exceptions according to the competition rules). That is why each technical action should be prepared carefully. Athletes use deceptive movements and masking actions to hide their real intentions.

Given this, the choice of tactics for individual bout differs from team matches. In individual competition this choice is mainly based on the athlete's tactical style, while in team bouts – also on the general situation

during team match [17, 21, 25, 26]. That is why setting tactical tasks for a particular bout in individual and team competitions should also be different.

In this context, the peculiarities of the participants' interaction in team fencing events could be compared with sports games, where the development of technical and tactical game schemes is based on the use of each player's advantages or compensation of his or her weaknesses. This approach allows for achieving high results at competitions of different levels. Besides, it is important to take into account different characteristics of each athlete (physical abilities, technical and tactical skills, moral and intellectual qualities, authority and position in the team) and the abilities of the whole team (its national or international ranking, experience, tasks for a season, etc.) [18, 19, 22].

According to these issues, a team structure is formed (a kind of special hierarchy of relations between team members during the competition), where each member has a certain role model and status. Thus, training tasks in sports games aim at team unity and collaboration, that is why special interactions between individual players, their groups, and the whole team should be formed [17, 18, 19, 22]. In typical sports games, the athlete mainly acts under a certain game position (for example, forward, halfback, goalkeeper) during the match or season, while in fencing each of the team members might change his or her role according to the team strategy in particular competition [26, 27, 28].

Analysis of the competitive performance in fencing shows that the strongest and the most experienced athlete is not always successful in team competitions [6]. Instead, a mid-level fencer who is not usually successful in individual competitions could demonstrate leadership qualities in team events and effectively fight against various opponents [27, 28].

However, the analysis of scientific papers indicates that tactical training for team events in fencing is not properly substantiated. The majority of the researches is devoted either to the criteria for selecting athletes to the team based on the analysis of competitive performance or to the improvement of athletes' tactical skills for individual competitions [2, 4, 27, 28]. Moreover, the emphasis is made on studying and improving the most effective technical and tactical actions that could be used against particular opponents [7, 8, 9, 15]. At the same time, the attention is paid only to the performance in individual events. The main indicators are the amount of various technical and tactical actions, their effectiveness against different opponents, cinematic characteristics of technics (speed, power, pace, accuracy, etc.) [3, 4, 9, 13, 14]. In our opinion, the comparison of fencers' performance in individual and team competitions is the basis for improving tactical training and one of the areas that require more detailed study. The urgency of the study is also connected with the growing prestige of team competitions (the Olympic Games, World and European Championships, World Cup Events) and recent changes in competition rules.

Aim of Study

The purpose of the research was to compare the indicators of athletes' effectiveness of the world's top-8 women epee fencers during the season 2015-2016 in individual and team competitions and to substantiate the possibility of their use in tactical training.

Material and Methods

Our research included a few stages. Theoretical analysis and generalization were used during work with literary sources on the identification of the main problems of tactical training in fencing.

The next step included an expert assessment devoted to the issues of tactical training (February–August 2019). The experts (n = 8) were well educated (4 among them held Ph.D. diplomas) and experienced – 2 coaches of the national teams (one of the Ukrainian national team, one of the USA national team), 2 world category referees, and 2 athletes – national team's members. On average, experts had almost 15 years of experience in training fencers of different ages.

The questionnaires were administered to the experts in two different ways. Five questionnaires were administered in a paper form and filled under the supervision of the researcher. The other three questionnaires were distributed by e-mail. Each expert was asked to rank the components of tactical training in each section. The number of components in sections ranged from 5 to 10. Rank 1 was always considered the most significant. The highest rank indicated the least important component (eg. in section with 9 components, rank 9 was the least important). The total questionnaire included 6 sections concerning different aspects of tactical training. The experts' answers to the first 5 sections of the questionnaire were deeply analyzed in our previous paper [29]. The results of this article are based on expert's answers to Section 6: Team tactical training (Appendix). That section consisted of 3 questions. Experts were asked to comment on their answers or to offer their own.

To confirm the accuracy of the answers, the concordance coefficient was determined (W). The statistical significance of the concordance coefficient was verified using the

χ^2 criterion (Pearson's chi-squared test). According to Shiyan, Edinak, Petryshyn [24], the critical value of the concordance coefficient was defined as $W = 0.5$. Therefore, at $0.69 > W \geq 0.5$, the agreement of experts' opinions was evaluated as average, at $W \geq 0.7$ as high (strong), and at $W > 0.5$ as low (weak).

We discovered that 100% of experts insisted on the differentiation of tactical training for individual and team events. Among the indicators of competition performance which should be taken into account when preparing for team events, the most essential is the number of wins, defeats, and draws (average rank 1.48; $W = 0.8$, $p < 0.05$). In addition to this, 50% of experts explained that in team matches the victory of an athlete in a personal duel does not always guarantee a team victory. They added that the desire to get fewer points from the opponent and to score as much as possible is more important. Therefore, in some situations, a draw in a personal duel has a positive effect on the team match. That is why one of the most important tasks in team tactical training is a proper task-setting separately for one duel or team match, round of competition (preliminary or direct stage), and season (the average ranks of the tasks were 2.12; $W = 0.79$, $p < 0.05$). 37.5% of experts added that there should be some sets of tasks – separately for each team member according to their experience and abilities and for the whole team. In addition, 37.5% of experts offered to take into account the additional indicators of competition performance such as the number of bouts in which the athletes participated during the season. This information is essential to estimate the athletes' effectiveness and their contribution to the team's achievements.

The next step of the research was a pedagogical observation (November 2019 – April 2020). We analyzed the protocols and video recordings of six Ukrainian national team members (Y. Sh., A. P., K. P., A. J.-F. B., A. I., O. K.) during the season 2014-2015. It revealed that the athletes' effectiveness in individual and team events was different [6]. Their effectiveness was estimated by the number of bouts in individual and team competitions during the season, the ratio between won bouts, defeat bouts, and draws. It was found that some athletes who achieved high results in individual competitions (World and European Championships) were not successful in team events. We have suggested that this situation may be typical not only for Ukrainian athletes but also for top fencers. The next stage of the research aimed to confirm or refute that assumption.

We analyzed the protocols and video recordings of competitions in epee fencing during the season 2015--2016 (321 bouts in individual and 207 – in team events). Our attention was focused on the performance of the eight top athletes according to the FIE Ranking (International Fencing Federation). Among them: R. F. (Italy), A. N. (Italy), E. S. (Hungary), T. L. (Russian Federation), A. S. (Republic of Korea), Y. S. (People's Republic of China), W. X. (People's Republic of China), A. P. (Romania).

Evaluation of athletes' effectiveness in individual and team competitions differed slightly. During the 2015--2016 season, the athletes participated in 14 individual tournaments: Grand Prix series, World Cup Events, continental competitions (European and Asian Championships), the World Championships, and the Games of the XXXI Olympiad. According to the FIE rules, the 16 best athletes in the world rankings do not participate in the preliminary (qualifying) round of individual competitions. They start their performances with the 1/32 stage of the competition in the round of direct elimination (automatically get to the list of "top-64"), so all bouts are held to 15 points. According to the specifics of individual competitions and experts' opinions, we took into account the ratio between the number of won matches and the total number of bouts.

To determine the indicators of athletes' effectiveness in team events, we analyzed their performance at three main tournaments of the 2015-2016 season – the World Championship in Moscow (Russian Federation), European Championship (Torun, Poland), the Games of the XXXI Olympiad (Rio de Janeiro, Brazil). We analyzed the ratios between the numbers of victories (won bouts), defeats, and draws and the total number of bouts in all matches. We calculated a ratio between the number of victories and the total number of bouts held in individual competition (Victory/Total, individual); a ratio between the number of victories and the total amount of bouts held in team competition (Victory/Total, team); a ratio between the number of defeats and the total amount of bouts held in team competition (Defeat/Total, team); a ratio between the number of draws and the total amount of bouts held in team competition (Draw/Total, team). Such calculations were made personally for each athlete.

Statistical processing of the data was carried out using the standard Statistica 7.0 program. To compare the experts' answers on a questionnaire we used the average rank (arithmetic mean of all ranks assigned to a particular position of tactical training issues in each question). To confirm the accuracy of their answers, the concordance coefficient was determined (W). The statistical significance of the concordance coefficient

was verified using the χ^2 criterion (Pearson's chi-squared test). The level of significance was set at $p < 0.05$. The indicators of athletes' effectiveness were calculated using the Microsoft Excel program (version 2016).

Results

It was revealed that the effectiveness of the top-8 women epee fencers during the 2015-2016 season in individual events is high – from 57.58 to 73.91% (Table 1, Figure 1). In team competitions, the best pattern of the number of defeats and draws was performed by T. L. (12.90% defeats and 29.03% draws), Y. S. (9.09 and 12.12%, respectively), W. X. (12.12 and 24.24%, respectively). Other athletes failed to minimize the number of defeats in individual duals during team matches (Table 1, Figure 2).

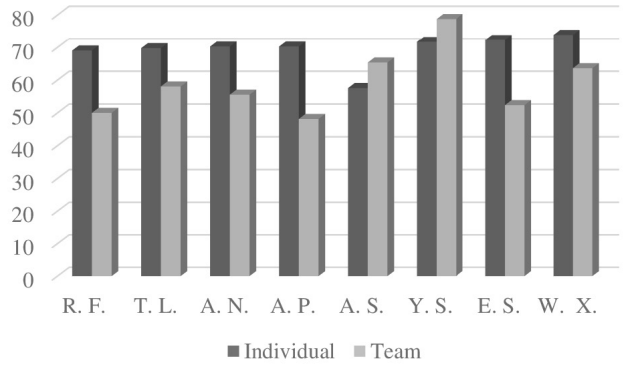
Table 1. Effectiveness of the top-8 women epee fencers in team competitions in the 2015-2016 season (n = 8)

No.	Athlete	The indicators of athlete's effectiveness			
		Individual events	Team events		
		Victory/ Total (%)	Victory/ Total (%)	Defeat/ Total (%)	Draw/ Total (%)
1	R. F.	69.05	50.00	44.44	5.56
2	T. L.	69.77	58.06	12.90	29.03
3	A. N.	70.27	55.56	33.33	11.11
4	A. P.	70.27	48.15	29.63	22.22
5	A. S.	57.58	65.38	26.92	7.69
6	Y. S.	71.74	78.79	9.09	12.12
7	E. S.	72.34	52.38	38.10	9.52
8	W. X.	73.91	63.64	12.12	24.24

Although the indicators of the athletes' effectiveness are high in both individual and team competitions, their array is different. Six out of eight athletes showed higher effectiveness in individual events (R. F., T. L., A. N., A. P., E. S., W. X.). The difference between studied indicators in individual and team performances ranged from 10.27% to 22.12%. At the same time, it was the highest for the following athletes: R. F., T. L., W. X. (19.05-22.12%). In comparison, only two athletes – A. S. and Y. S. – performed more successfully in team matches. The difference between the indicators of their effectiveness was 7.80 and 7.05%, respectively, in favor of team competitions.

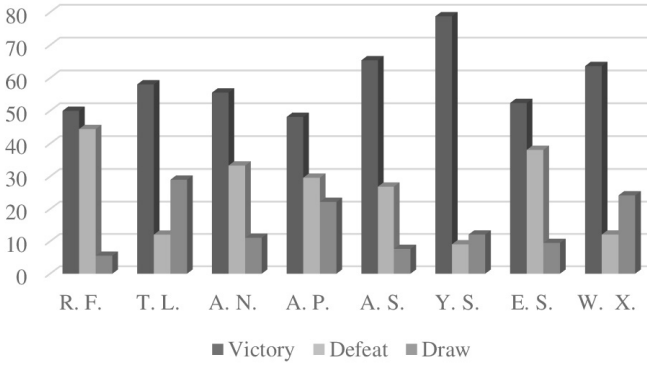
The best pattern between victories, defeats, and draws in team events was revealed for Y. S. (78.79%; 9.09%; 12.12% respectively) and W. X. (63.64%; 12.12%; 24.24% respectively). The worst pattern of those indicators was demonstrated by R. F. (won bouts – 50.00%; defeats – 44.44%; draws – 5.56%), A. N. (55.56%; 33.33%; 11.11% respectively), and E. S. (52.38%; 38.10%; 9.52% respectively).

The difference in the number of individual bouts was connected with the specifics of athletes' performance in individual and team competitions. Some team members may not perform at all stages of the competition or



Note: The indicators of athlete's effectiveness: individual – a ratio between the number of victories and total amount of bouts held in individual competition (%); team – a ratio between the number of victories and total amount of bouts held in team competition (%)

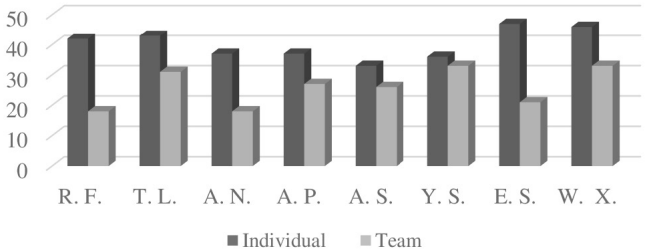
Figure 1. The comparison of the top-8 women epee fencers' effectiveness in individual and team competitions in the 2015-2016 season (n = 8)



Note: The indicators of athlete's effectiveness: victory – a ratio between the number of victories and total amount of bouts held in team competition (%); defeat – a ratio between the number of defeat bouts and total amount of bouts held in team competition (%); draw – a ratio between the number of draws and total amount of bouts held in team competition (%)

Figure 2. The comparison of the top-8 women epee fencers' effectiveness in team competitions in the 2015-2016 season (n = 8)

compete only against particular opponents following the team's strategy. At the same time, a great amount of bouts in team events confirms that the athlete is effective and can influence positively the result of team matches. We analyzed the protocols of team competitions and discovered that the fewer amount of team bouts was caused by the following reasons: 1) the athlete performed in team match unsuccessfully and the coaching staff made a replacement (a reserve athlete continued further bouts and matches instead of an unsuccessful colleague); 2) an athlete didn't participate in the team tournament, but she took part in individual event a day before; 3) the team was defeated at earlier stages of the tournament (Figure 3).



Note: The number of bouts is represented as absolute value. Individual – the total number of bouts performed by each athlete in individual events in the 2015-2016 season; team – the total number of bouts performed by each athlete in team events in the 2015-2016 season

Figure 3. The number of bouts performed by the top-8 women epee fencers in individual and team competitions in the 2015-2016 season (n=8)

As shown in Figure 3, some athletes participated in a great number of bouts in individual events, but the amount of performed bouts was low in the team competition. This situation is typical for R. F. (42 and 18 bouts respectively), A. N. (37 and 18 bouts respectively), E. S. (47 and 21 bouts respectively).

Discussion

In most scientific papers on fencing, the main subjects of the research are the ways to improve various aspects of athletes' training and to determine the prerequisites for their successful implementation during individual competitions [12, 15, 16, 21]. At the same time, the specifics of athletes' actions in team events and preparation for them are mentioned fragmentally [6, 7, 27, 28]. As for team competitions, the subject of research is usually connected with athletes' selections taking into account different indicators. These indicators include the level of athletes' preparedness (physical abilities, technical and tactical skills, psychological qualities), the position in the national or international ranking, the achievements in different competitions, and sports experience. Moreover, the success in team competitions in fencing depends both on the efficiency and effectiveness of athletes. In sports literature, the concepts of efficiency and effectiveness have different interpretations. The effectiveness is often considered as the performance of a certain result – demonstrating the best time on a distance in swimming, scoring a goal in football, lifting a certain weight in powerlifting, getting high points in rhythmic gymnastics, winning a medal, etc. [20, 21]. Instead, efficiency is characterized by closeness to the sample, which is chosen to have the most rational version of the technique, determined based on biomechanical, physiological, psychological, aesthetic considerations [20]. Some authors insist that effectiveness might be considered as a component of efficiency [7, 8, 27]. For example, basketball, volleyball, and football experts analyze player's efficiency using calculation of the general amount of technical and tactical actions, the amount of successful and erroneously performed actions during the game, correlation between offensive and attacking actions [18, 22, 23]. In comparison, in fencing effectiveness of technical and tactical actions is measured by matching the number of performed actions and actions that affected the opponent and allowed to score a hit [7, 8, 17, 21].

As for tactical training, it is usually devoted to the improvement of tactical skills in combination with technical, decision-making, and the choice of action during individual duels [21, 25, 26]. The most fundamental research devoted to tactical skills in fencing during the last 10 years was made by Ryzhkova [21]. The author also used an expert assessment for the determination of the most essential components of tactical preparedness and developed several technologies for the formation and improvement of athletes' tactical skills at different stages of long-term training [21]. The effectiveness of such technologies was revealed in pedagogical experiments. In our opinion, this research is very useful for fencers, but it doesn't take into account the specifics of team training and aims only to successful participation in individual events.

At the same time, a great number of issues of tactical training remain undiscovered. It concerns the formation of team strategy for the season, the use of tactical schemes in team matches against different opponents, the sequence of team-members' performance during a team match, goal setting for the whole team competition, team match, individual duel or its fragment.

From this point of view, tactical training in fencing is slightly similar to ball games (football, basketball, volleyball). In such sports, each team member has special duties during the match according to his or her position [5, 18, 19, 22, 23]. Practical experience in fencing indicates that team members also have special duties, but fencer's position during team events may differ (in one team match he or she may perform as a leader, in other matches – as an assistant of the leader). The choice of position for a particular match depends on many factors: the level of preparedness of team members, the composition of the rival team, stage and level of competition. Equally important is the psychological aspect – usually, the position of a leader is taken by reliable athletes who are able to withstand psychological pressure in case of backlog and are willing to bear great responsibility [27, 28]. Practice shows that even elite athletes with a high international ranking are not always ready to act as a leader in team competitions.

Unfortunately, the positions and duties of team members in fencing are not described in scientific papers at all. There are some classifications of individual competition styles based on the choice of technical and tactical actions, psychological abilities (motor reaction time), or affiliation to the traditional schools (Italian, French, Hungarian, etc.) [2, 7, 8, 12, 17]. However, there are still no classifications of tactical styles that are used in team competitions. In our opinion, this knowledge is essential for the formation of team strategy during the season, tactical schemes for different stages of competitions (preliminary stage or direct elimination), and matches with various opponents. From this point of view, analysis of the athlete's effectiveness in team events in comparison with individual tournaments is actual.

The results of our study indicated that elite women epee fencers realize their potential in different ways depending on the type of the event (individual or team standing). The 2015-2016 season was a pre-Olympic period, that is why each of the top-8 fencers solved different tasks in competitions. The tasks could be connected with their place in the world rankings at the time of the next tournament and the prospects of individual or team Olympic qualification. At the same time, the athletes had to perform as successfully as possible in almost every tournament, as the points gained in it could significantly affect not only the place of a particular athlete in the personal world rankings but also the rotation of the national team.

The success of some athletes in individual competitions and their failures in team events could be attributed to the following reasons. We can assume that by the decision of the coaching staff of R. F. and A. N. were focused on individual qualification for the 2016 Olympics. That is why their performance in team matches was used to implement other tactical tasks (studying potential rivals, finding the optimal manner of fighting with different opponents, hiding their preparedness, etc.). From the opposite point of view, the inability of their national team to qualify for the Games of the XXXI Olympiad may be caused by errors in the distribution of functional responsibilities between team members in matches with various teams.

The analysis of athletes' effectiveness in the 2015-2016 season (the comparison between the number of won bouts, defeats, and draws in team events with their performance in the individual competition) allowed us to determine the role models for team members depending on the success of their performance in individual and team competitions. These roles are the following:

1. "Universal fighters". Such fencers are highly effective both in individual and team competitions (in our research the difference between the indicators of their effectiveness ranged from 7.05 to 10.27%). In our research, such role models were typical for Y. S. and W. X. Both athletes have won medals in individual and team competitions at all greatest tournaments of the season (the Games of the XXXI Olympiad, World and Asian Championships), and the difference between the indicators of their effectiveness in individual and team events is small. They are able to win medals and to make a significant contribution to the team result. "Universal fighters" are essential in the Olympic qualification, as the inclusion of such athletes in the national team guarantees a high chance of winning both personal and team Olympic licenses and medals.

   In our opinion, one of the main tasks of tactical training for "universal fighters" is to distribute their effort and to maintain their physical conditions during the individual tournament and not to exhaust all potential prematurely. From a tactical point of view, in unimportant matches during team competition (for example, against a weak opponent), these athletes may not participate in order to save their opportunities for the bouts with more experienced rivals. Preparing for the highest level competitions, such athletes must face complex tactical tasks – providing an advantage for the team, leveling a large difference in the score (when the rival team is leading during the match), using the arsenal of technical and tactical actions as wide

as possible, search for untypical combinations of actions for which the opponents are not ready.

2. "Individual fighters". These athletes purposefully put more effort into successful performance in individual competitions and consciously neglect to participate or to succeed in team competitions. In our research, such role models were typical for R. F., A. N., E. S., and A. P. These athletes show much higher rates of individual performance in individual competitions, and in the team competitions, the number of defeats exceeds the number of draws. From a tactical point of view, their performance in team competitions is associated with certain risks, even if they stepped on the medal podium the day before in the individual tournament. The inclusion of such fencers in the national team provides a great chance to win medals in the individual competition, but it does not guarantee success in a team tournament. Their effectiveness in the Olympic team qualification depends on different factors.

   From a tactical point of view, such athletes should prepare exclusively for individual competitions. In team events, the best for them is to support the leader. Tactical training should focus on improving tactical skills, tactical schemes, and technical actions that will effectively beat experienced athletes. In comparison with "universal fighters", the number of such schemes and actions may be lower.
3. "Team fighters". Such fencers achieve high results in team competitions, but in individual standings, their performance is less successful. In our research such a role model was typical for A. S. Unlike "individual fighters", these athletes are able to maximize their potential in team matches. Whatever their performance is in the individual tournament, their contribution to the team's result is perhaps the largest among other team members. Practice shows that based on the tactical point of view, these athletes are not always included in the national team performing in the individual events, but they are involved when participating in a team tournament. Therefore, according to the decision of the coaching staff, two different teams may be declared for competitions (the first one – to perform in the individual event, the second one – to compete in a team).

   According to the specifics of the competition rules (each team bout lasts for 3 minutes and is more intensive than in individual events), the task of tactical training of these athletes is to develop the ability to score the maximum number of points within 3 minutes. The arsenal of technical and tactical actions may not be wide, but they should be reliable and effective against various opponents. Such athletes need to train as team leaders with the greatest responsibility.

We can also mention the role model of "individual fighters with team potential". They usually demonstrate high results in individual competitions, but occasionally or by the decision of the coaching staff can direct their efforts to successful team performance (for example the need for Olympic team qualification). In our research, such a role model was typical for W. X. and T. L. The difference between the indicators of individual performance of these athletes in individual and team competitions is less pronounced than in the previous group. At the same time, the number of draws is higher than the number of defeats. As rule, such fencers may achieve high results in individual events. However, if they are not successful during the season, the coaching staff may persuade them to neglect individual events and to concentrate on team competitions.

We didn't investigate the psychological aspects of obtained results, therefore it is a limitation of this study, and at the same time the prospective for further work. However, we can assume that the difference between athletes' effectiveness in individual and team events may depend on psychological variables. On the one hand, in individual competition athlete should take responsibility only for himself (herself). That is why he or she tries to do everything possible to succeed. In team events the situation is different. Some athletes feel the support of other team members, so they act more confidently in individual fights, even when the rival is much more experienced. It is important for them not to let other athletes down and do everything possible to get a team victory. Even if such athletes perform unsuccessfully in the individual tournament, they mobilize and perform excellently in team bouts. Even middle-class athletes can be so eager to do everything possible for the team that they beat the titled rivals with a big advantage (although the day before, in the individual tournament, they could have lost against these rivals with a big gap). Instead, there is a category of athletes who do not withstand psychological pressure, especially if it is necessary to take responsibility for the team. They can't end the team match (the last and the most important bout) because they are very insecure out of excitement. Therefore, not always a strong athlete acts as a leader.

Conclusions

Based on our results there are four models of fencers: "universal fighters", "individual fighters", "team fighters",

and "individual fighters with team potential". In our opinion, this classification should be the basis for developing a strategy to prepare the team for competition during the Olympic cycle and season. Moreover, tactical training of athletes for individual and team competitions should differ depending on their current performance. The results of our research could be useful for fencing coaches, regardless of weapon type.

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Conflicts of Interest
The authors declare no conflict of interest.

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Appendix

Dear expert!
We ask you to express your opinion regarding the tactical training of elite athletes in your kind of sport (Olympic combat sports).

Full name: .....; age: .....;
kind of sport: .....; qualification: .....;
coaching category: .....;
scientific degree: .....;
experience as a coach and/or teacher: .....;
place of work: .....

Section 6*. TEAM TACTICAL TRAINING

Indicate the importance of differentiation tactical training in individual and team competitions.

Yes, tactical training for individual tournaments should differ from tactical training for team events	
No, tactical training for individual and team events may be similar	

Comment your answer .....
.....
.....

Indicate the indexes of competition performance which should be taken into account when preparing for team events, ranging from 1 (most significant index) to 7 (least significant index).

No.	Indexes of competition performance	Rank
1.	The layout of wins, defeats and draws	
2.	The result in tournament (winning a medal or particular place)	
3.	The amount of effective actions:	
	– attacks	
	– defensive actions	
	– actions in different affected zones (depending on weapon)	
	– actions made in different zones of the fencing piste (depending on weapon)	
	Your offer:	

Comment your answer .....
.....
.....

Indicate the importance of tasks in team tactical training ranging from 1 (most significant task) to 8 (least significant task).

No.	Tasks	Rank
1.	A proper task-setting separately for one duel or team match	
2.	A proper task-setting separately for round of competition (preliminary or direct stage) or season	
3.	The choice of tactical style of each team-member	
4.	The analysis of competition performance of potential rivals	
5.	The formation of tactical style for the whole team	
6.	Determining the optimal sequence of participants' performance during the team match	
7.	Preparation of team members for performances in the most responsible bouts of the match	
	Your offer:	

Comment your answer .....
.....
.....

Date ..... *Signature* .....

Thank you for your help!

* Sections 1-5 are available in our previous article [Zadorozhna O, Briskin Yu, Pityn M, Perederiy A, Neroda N. Tactical training of elite athletes in Olympic combat sports: practice and experience. Trends Sport Sci. 2020;27(2):71-85. doi:10.23829/TSS.2020.27.2-4].