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THE REPORT AND ANALYSIS OF THE 2ND U21 EUROPEAN DEAF FOOTBALL CHAMPIONSHIP, STOCKHOLM, SWEDEN 2018

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ADAM MICHAŁ SZULC
Institute of Physical Education, Kazimierz Wielki University, Bydgoszcz, Poland

ABSTRACT
Purpose. Almost no studies have documented or analysed sporting events for deaf players at the elite level. The aim of the study was to report on the 2nd U21 European Deaf Football Championship, analyse selected offensive actions and compare them with the 1st European Deaf Sports Organization (EDSO) U21 Championship and Union of European Football Associations (UEFA) U21 events (2015 and 2017), as well as create a ranking of finalists of the deaf U21 tournaments.
Methods. Counting analyses were performed on the basis of video recordings from the stadiums of 1st and 2nd EDSO U21. Nineteen matches were analysed with reference to the number of goals, shots on target, and shots missed.
Results. The mean number of goals scored per match during the 2nd U21 (1st U21) Championship was 2.25 ± 2.27/team (1.81 ± 1.53). The number of shots on target and missed was 8.1 ± 5.7/team/match (6.9 ± 4.9) and 6.2 ± 3.9/team/match (5.4 ± 3.7). In 1st and 2nd EDSO Championships, the most offensive play was presented by the teams of Turkey, Poland, Russia, and Ukraine.
Conclusions. The winner of the tournament was the team with the highest shooting efficiency and the highest number of crosses in all matches. The analyses of the 2nd U21 can be useful for the organization of coaching. Organizers of events for deaf athletes, however, do not pay much attention to careful registration of the event materials and match statistics, which are very important for the promotion of events for deaf athletes.
Key words: deaf football, game analysis, shooting efficiency, crosses

Introduction

One of the first scientific works in match and sports analysis was published at the beginning of the 20th century by a sport journalist Hugh Fullerton. In the second half of the 20th century, technological development resulted in the use of modern technologies in sport to support the processes of training and of measuring sports competition (e.g. start sensors, cameras recording sprint run) [1]. The development of video devices and computer programs has made it possible to register and analyse sports competition in various disciplines [2]. In the case of soccer, scientific research [3–9] has included many analysed variables: number of goals, place where they were scored in each half, influence of the first goal on the final score, type of set plays (free kick, corner, penalty), total distance covered in low-to-moderate intensity, high intensity, very high intensity, successful passes, total duration of individual ball possession. In 2014, Sarmento et al. [3] reviewed the available literature on match analysis in male football of adults aged above 18 years. A systematic review of 2734 articles gave 53 papers that met the following inclusion criteria: relevant data concerning technical and tactical evaluation or statistical compilation and time-motion analysis in the English language. The largest development of match analysis took place after 2010 [3]. Nevertheless, only a few authors have been interested in the problem of deaf athletes and physical activity of deaf people. Milašius et al. [10] dealt with the motor skills of deaf players. The study included information on body height, body mass, body mass index, muscle mass, body fat mass, and reaction time, frequency of movements in 10 seconds, agility test. The aim of a study by Tsimaras et al. [11] was to assess the impact of 12-week dance training on aerobic

Correspondence address: Adam Michał Szulc, Institute of Physical Education, Kazimierz Wielki University, ul. Sportowa 2, 85-092 Bydgoszcz, Poland, e-mail: aszul@ukw.edu.pl

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capacity and muscular strength of deaf people. Kurková et al. [12] conducted a survey of deaf athletes participating in the Summer Deaflympics, European Championships, and the European Cup. Biju et al. [13] investigated 30 deaf students who took part in regular training of calisthenics in order to improve strength and speed. Szulc et al. [14] reported the results of pilot testing of deaf and hearing football players from the national team of Poland and the Polish female extraleague, respectively. The study concerned the body composition and selected motor skills. There are no scientific studies, reports, or analyses regarding international championships for deaf people.

The regulations applied during football tournaments for deaf athletes are the same as in the case of hearing footballers. The only difference is additional signals used by the referee simultaneously with the whistle, by raising a small flag. The matches of the national team can be played by footballers qualified on the basis of the current audiogram that indicates bilateral hearing loss at the level of at least 55 dB [15].

No studies have documented or analysed sporting events for deaf players at the elite level, including footballers who participated in European Deaf Sports Organization (EDSO) under U21 Championship.

Until now, two European Football Championship U21 tournaments for deaf males have been played: in Poland and Sweden. Hearing U21 footballers have played the final matches since 1978. Since the Union of European Football Associations (UEFA) U21 event in Poland in 2017, the tournament has involved 12 teams instead of 8. In the UEFA U21 Championship, in the final tournament, there are teams that have won the qualification for the Championship. For financial reasons, in the EDSO U21 category, deaf players are not qualified for this competition. Participation in the European Championship is based on the team's application and the declaration of the national Federation of Deaf Sports (e.g. in Poland: Polish Deaf Sport Association) that concerns covering the costs of participation in the Championship.

The aim of the work was to determine the offensive potential of teams participating in the 2nd EDSO U21 in Stockholm. The obtained results were compared with the level of offensive acts that took place during the 1st EDSO U21 in Wroclaw [16]. Additionally, the results of matches and offensive actions were compared with those reported during the UEFA Under 21 Championship in the Czech Republic (2015) [17] and in Poland (2017) [18]. On the basis of the results obtained, a ranking of men's deaf national teams up to the age of 21 was created. The aim of the ranking was to show the most reliable representation of the balance of power in European football for U21 deaf men. The ranking was determined with the consideration of the results of matches and offensive actions after the 1st and after the 2nd EDSO U21. The added value of the publication is to provide the reader with information of organizational nature and the results obtained by particular representations at individual stages of the 2nd EDSO U21 Championship.

Table 1. Characteristics of the teams who participated in the 2nd EDSO U21 European Deaf Football Championship, Sweden

Group	Team	Number of players	Mean age of players ± *SD* (years)	Coaching staff
A	Ukraine	17	19.2 ± 1.3	Kasitskyi L., Kozin V., Melnyk R.
	Russia	16	19.4 ± 1.2	Ivanov D., Gutko V., Mukhina N., Kravchenko V.
	Sweden	18	17.6 ± 1.3	Rangfeldt H., Attar A., Belcher R., Aly A., Bååth C., Lundberg J., Blomqvist J., Dywik C., Brunnbauer B., Lindevall S.
	Greece	18	18.1 ± 1.1	Giokas G., Milionis N., Minas E., Gerou E.
B	Turkey	21	18.6 ± 1.3	Metin A., Karcif R., Kaplan H., Aydin G., Türkmen D., Bağcioğlu M., Demir F., Erdoğan O.
	Belgium	17	19.4 ± 1.4	Giovannardi P., De Raeymaekers P., Wuytjens A., Remeysen F., Van Landuyt J., Van Tittelboom P., Peperstraete A.K., Franck D., Verstraete S.
	Poland	18	19.4 ± 1.5	Opaczewski A., Stempurski W., Kopiński A., Szulc A.M., Lasota K.
	The Czech Republic	17	18.0 ± 1.6	Crkovsky J., Dzilic M., Valasek P., Tvrdik J., Koliska J.

Table 1 presents the division into groups, number and age of players, and names of coaches of the teams who participated in the 2nd EDSO U21 European Deaf Football Championship in Sweden.

In the Swedish tournament, 42 footballers took part who played in 1st Championships (9 from Poland, 4 from Ukraine, 8 from Sweden, 10 from the Czech Republic, 4 from Turkey, and 7 from Russia). In 2017, 23rd Summer Deaflympics Games took place in Turkey. A few teams from Europe played in the Deaflympics Games, among others, Turkey, Russia, and Ukraine teams. The Olympic teams included footballers from teams that played in 1st U21 Championship: 5 players from Turkey, 3 from Russia, and 3 from Ukraine. Turkey and Ukraine won the gold and silver medals at the Summer Deaflympics in Samsun.

During the 2nd U21 Championship, European and Swedish football organizations were represented by EDSO, the Swedish Deaf Sports Federation (SDSF), Stockholm Football Federation, and Stockholm city. EDSO representatives were Luuk Ruinaard and Iosif Stavrakakis. The president of the organizational committee was Urban Mesch. The SDSF was represented by Joachim Sundström. All the matches were supervised by Swedish referees.

Material and methods

The 2nd U21 European Deaf Football Championship was played on August 1–11, 2018 in Stockholm, Sweden. The paper presents the results of the analysis of 19 matches: 11 matches in the A and B group, 2 semifinals, 2 matches for places 5–8, the matches for 5/6 and 7/8 position, the match for the 3rd place, and final. Analyses were based on video recordings from the stadium and concerned the following match statistics: time when goals were scored during the game, number of goals scored, shots on target, shots missed for the 1st and 2nd half. Shots on target represent a component of shots scored with a goal or completed by the goalkeeper's or defender's action, i.e. the ball blocked or kicked out. A successful cross is understood as a cross to the penalty area which ends with a shot towards the goal (on target or missed i.e. outside the goal). An unsuccessful cross ends with losing the ball possession, i.e. the ball goes outside the goal line, is blocked or is kicked out of the penalty area by the opponent's defenders, or the action is continued without threatening of the opponent's goal. The paper presents the number of corners, off-sides, goalkeeper's interventions, fouls committed, yellow and red cards, shots with the right leg, left leg, and head. The shooting efficiency of the teams was determined as the ratio of the number of goals scored and the number of shots on target and shots missed. The intervention of the goalkeeper was counted as any contact between the goalkeeper and the ball as a result of the opposing footballer playing. Statistical analysis of the test results was carried out with the Statistica 12 software as descriptive statistics: mean, sum, standard deviation, and maximum.

Ethical approval

The conducted research is not related to either human or animal use.

Results

Group A (Table 2)

The opening match was played by Sweden and Greece (3 : 0 – 12', 37', 46'). It was the only Swedish victory in the group. In the remaining games, the Swedish

Table 2. Analysis of group A and B matches

Group	Team	SOT	SM	SC	UC	C	O	GS1	GS2	GSRT	PS	W/D/L	PW
A	Ukraine*	24	19	12	70	18	2	4	2	6	7	2/1/0	1
	Russia*	24	18	15	62	18	2	3	3	6	6	2/0/1	2
	Sweden	14	16	16	46	10	0	3	3	6	3	1/0/2	3
	Greece	2	2	2	23	5	3	0	0	0	1	0/1/2	4
B	Turkey	48	30	31	69	25	19	11	6	17	9	3/0/0	1
	Belgium	29	13	16	41	16	19	8	5	13	4	1/1/1	2
	Poland	32	24	10	41	19	15	1	7	8	4	1/1/1	3
	The Czech Republic	7	8	6	29	11	9	1	1	2	0	0/0/3	4

SOT – shots on target, SM – shots missed, SC – successful crosses, UC – unsuccessful crosses, C – corners, O – off-sides, GS1 – goals scored in the 1st half, GS2 – goals scored in the 2nd half, GSRT – goals scored in regular time, PS – point scored, W/D/L – win/draw/loss, PW – place won by the team
* no video material or match statistics from the match Russia-Ukraine

team lost 2:3 against the Russian team (68', 79' : 20', 37', 43') and 1 : 4 with the Ukrainian team (22' : 6', 15', 38', 84'). The Greek team lost to the Russian team 0 : 3 (76', 79', 82'). In the match of Greece against Ukraine, a goalless draw was made. In the match for the 1st place in group A, the team from Ukraine won with Russia 2 : 0 (26', 92'). The teams from Ukraine and Russia were promoted to play for the 1–4 places. The teams of Sweden and Greece, taking places 3 and 4 in group A, won the right to play for places 5–8.

Group B (Table 2)

The best group B team was Turkey. Turkey won against the Czech team 8 : 0 (4', 14', 19', 23', 28', 34', 70', 88'), with the team from Belgium 3 : 1 (5', 53', 66' : 56'), and with the Polish team 6 : 1 (3', 5', 19', 40', 87', 90' : 59'). The Belgian team won the 2nd place in the group, winning high with the Czechs 10 : 1 (12', 18', 22', 28', 45', 52', 66', 71', 84', 90' : 94') and drawing with Poland 2 : 2 (9', 23' : 48', 60'). Poland won with the Czech Republic 5 : 1 (45', 55', 56', 75', 84' : 8'). Teams from Turkey and Belgium were promoted to play for places 1–4. Teams of Poland and the Czech Republic, taking places 3 and 4 in group B, won the right to play for places 5–8.

Matches for 5–8 places (Table 3)

The Polish national team won with the Greek team 3 : 1 (45', 61', 96' : 57'), and the Swedish team won against the Czech team 4 : 1 (31', 45', 63', 87' : 84') . The winning team secured the right to play for 5/6 places and the lost teams for 7/8 places.

In the match for 7/8 place (Table 3), the Greek team won with the Czech Republic 1 : 0 (78'), and in the match for place 5/6 (Table 3), the Polish team won with Sweden 3 : 0 (22', 60', 76').

Semi-final matches (Table 4)

The Turkey team was advanced to the final and won with Russia 4 : 0 (42', 45', 52', 81') and Ukraine, who after extra time won 4 : 2 with the Belgian team (20', 48', 98', 106' : 52', 58').

Table 3. Analysis of matches for 5–8 places

Team	SOT	SM	SC	UC	C	O	GS1	GS2	GSRT	PW
Poland	13	6	5	15	7	2	1	2	3	5/6
Sweden	14	6	9	21	10	5	2	2	4	5/6
Greece	2	5	1	15	2	7	0	1	1	7/8
The Czech Republic	7	4	7	15	6	2	0	1	1	7/8
The Czech Republic	5	14	4	20	5	4	0	0	0	8*
Greece	5	6	3	14	5	1	0	1	1	7*
Sweden	5	9	5	20	5	4	0	0	0	6*
Poland	5	10	4	16	1	2	1	2	3	5*

SOT – shots on target, SM – shots missed, SC – successful crosses, UC – unsuccessful crosses, C – corners, O – off-sides, GS1 – goals scored in the 1st half, GS2 – goals scored in the 2nd half, GSRT – goals scored in regular time, PW – place won by the team
* place finally won in the Championship

Table 4. Analysis of semi-finals and final

Team	SOT	SM	SC	UC	C	O	GS1	GS2	GSRT	PW
Turkey	14	9	9	35	15	0	2	2	4	1/2
Ukraine	13	5	10	24	10	7	1	1	2 (2*)	1/2
Russia	7	1	5	13	10	0	0	0	0	3/4
Belgium	11	7	6	16	9	0	0	2	2 (0*)	3/4
Belgium	4	6	3	9	3	2	0	2	2	4**
Russia	11	9	5	17	5	8	2	3	5	3**
Ukraine	2	4	5	18	6	1	0	0	0	2**
Turkey	8	6	7	21	3	0	3	1	4	1**

SOT – shots on target, SM – shots missed, SC – successful crosses, UC – unsuccessful crosses, C – corners, O – off-sides, GS1 – goals scored in the 1st half, GS2 – goals scored in the 2nd half, GSRT – goals scored in regular time, PW – place won by the team
* goals scored in extra time, ** place finally won in the Championship

Match for the 3rd place (Table 4)

In the 3rd place match, Russia's team defeated Belgium 5 : 2 (35', 38', 66', 71', 78' : 73', 89').

Final (Table 4)

The winner of the U21 tournament in Sweden was the team from Turkey, who won with Ukraine 4 : 0 (5', 13', 34', 61'). During the finals, the Turkish team received 2 yellow cards, and the Ukrainian team received 4 yellow and 3 red cards.

Overall, 92 goals were scored during the 2nd U21 Championship in Sweden; 47 (51.1%) goals were obtained in the 2nd half and 2 goals in extra time. The analysis of shots on target, shots missed, successful crosses, fouls, corners, and shooting efficiency included 19 from the 20 matches (without the one between Russia and Ukraine). The mean number of goals per all matches was 2.25 ± 2.27 (1.17 ± 1.3 in 2nd half). The number of shots on target and shot missed during the Championship was 306 (8.1 ± 5.7/team/match) and 237 (6.2 ± 3.9/team/match), respectively. The shooting efficiency during the analysed matches equalled 14.1% ± 10.5/team/match. Figure 1 represents the topography of the places from which shots ended in goals.

Seventy-one goals were scored during the 1st EDSO U21 (1.81 ± 1.53/match), 37 goals (2.47 ± 1.32/match) were scored during UEFA U21 in the Czech Republic [17], and 65 (3.10 ± 2.12/match) were scored during UEFA U21 in Poland [18]. The number of shots on target and shots missed was 246 (6.9 ± 4.9/team/match) and 194 (5.4 ± 3.7/team/match) during the 1st EDSO U21, 126 (4.2 ± 2.3/team/match) and 273 (9.10 ± 7.24/team/match) during UEFA U21 in the Czech Republic, and 199 (4.74 ± 3.25/team/match) and 417 (9.93 ± 8.58/team/match) during UEFA U21 in Poland, respectively. The shooting efficiency during the analysed matches equalled 4.96% ± 4.06/team/match and 5.95% ± 3.24/team/match, respectively.

In general, in 2nd EDSO U21 in Sweden (in comparison with 1st EDSO U21), 17.8% (15.25%) of goals were scored after shooting from outside of the penalty area, 62.2% (55.17%) of goals were scored from outside of the goal area but from the penalty area, whereas 20% (29.58%) were scored from the goal area. 24 goals, 53 goals, and 10 goals were scored with the left leg, right leg, and head, respectively. In the regular time, there was 1 penalty throw in 1st EDSO U21 and 5 penalty throws during 2nd EDSO U21. The number of goals scored during 2nd EDSO U21 [in comparison with 1st EDSO U21] in the 1st and 2nd quarter of an hour of all the matches was 13 (14.1%) [11 (15.7%), 7 (10.0%)], whereas the number for the 3rd quarter of the 1st half was 16 (17.4%) [13 (18.6%)]. In the 2nd half, these values were: 15 (16.3%) [14 (20.0%)], 12 (13%) [9 (12.9%)], and 18 (19.6%) [14 (20%)] goals, respectively. Three goals were scored in the additional time of 2nd half. In 2nd EDSO U21, 1 goal was scored during the 1st extra time (1.1%) and 1 goal was scored in the 2nd extra time.

The mean shooting efficiency (maximum efficiency) of the best 5 teams in the whole tournament was as follows: 23.8% ± 10.9% (40%) for Turkey, 7.8% ± 9.7% (20%) for Ukraine, 14.3% ± 11.3% (25%) for Russia, 21.2% ± 10.3% (38%) for Belgium, and 15.2% ± 3.8% (20%) for Poland. Among the 4 best teams of UEFA U21 in the Czech Republic and Poland, the mean shooting efficiency of Germany, Italy, Portugal, and Spain amounted to 7.78%, 10.21%, 10.41%, and 8.33%, respectively. Among the 5 finalists of 2nd EDSO U21, the mean highest efficiency of crosses (maximum efficiency of crosses) equalled: 9.4% ± 6.2% (20%) for

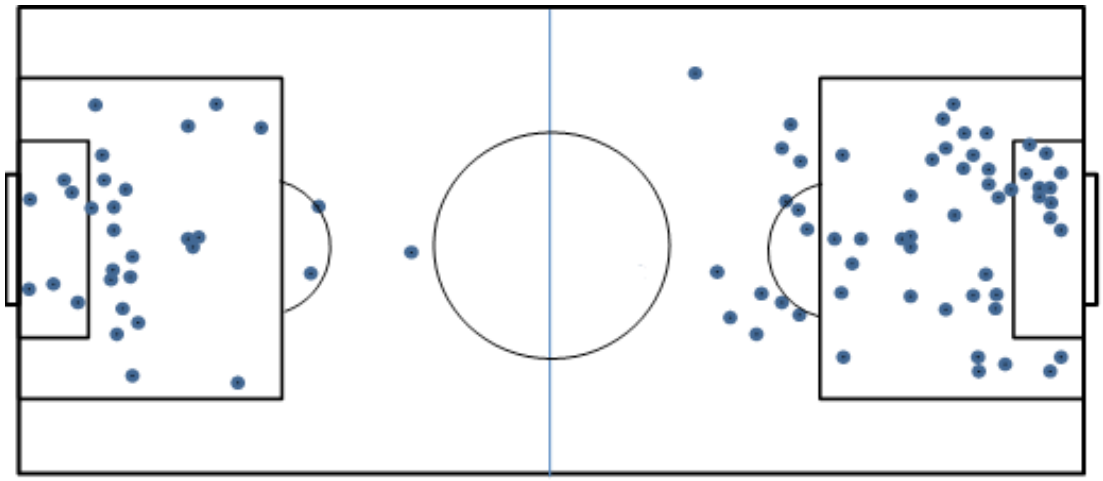

Figure 1. Goal scoring zone during the 2nd U21 European Deaf Football Championship, Stockholm, Sweden 2018

Table 5. Ranking of offensive plays of teams participating in 1st and 2nd EDSO U21

Team	WIN (1st)	GSM (1st)	SOT (1st)	C (1st)	SE 2nd (1st) (%)
Turkey (*n* = 10/10)	8 (3)	40 (15)	126 (56)	83 (40)	23.82 (21.74)
Poland (*n* = 10/10)	6 (3)	27 (13)	98 (48)	50 (23)	15.21 (15.91)
Russia (*n* = 9/10)	5 (2)	22 (11)	79 (37)	72 (39)	14.28 (22.22)
Ukraine (*n* = 7/9)	5 (2)	18 (10)	75 (36)	60 (26)	7.77 (4.41)
Sweden (*n* = 10/10)	4 (2)	16 (6)	55 (22)	38 (13)	15.78 (13.64)
Belgium (*n* = 5/5)	1 (–)	17 (–)	44 (–)	28 (–)	21.24 (–)
England (*n* = 3/4)	1 (1)	7 (7)	29 (29)	22 (22)	– (13.64)
Germany (*n* = 3/4)	1 (1)	6 (6)	13 (13)	24 (24)	– (17.39)
Greece (*n* = 5/5)	1 (–)	2 (–)	9 (–)	12 (–)	23.30 (–)
The Czech Republic (*n* = 8/9)	0 (0)	5 (2)	24 (5)	26 (4)	9.04 (10.0)

1st – 1st EDSO U21, 2nd – 2nd EDSO U21, *n* – number of video-recorded matches / number of plays, WIN – number of won matches, GSM – number of goals scored in match (without penalty goals), SOT – number of shots on target, C – number of corners, SE – shooting efficiency

Turkey, 6.7% ± 2.4% (10%) for Ukraine, 6.3% ± 3.9% (12%) for Russia, 5.0% ± 4.8% (13%) for Belgium, and 3.8% ± 0.8% (5%) for Poland.

The first goal impact on the game outcome for the scoring team was as follows: 1 draw (5%), 1 loss (5%), and 16 wins (85%) (one of the matches ended with 0:0). The 2nd EDSO U21 Championship showed that the 1st scored goal was very important for the final result of the match.

The players performed 224 corners in 19 matches (5.9 ± 3.7/team/match) in 2nd EDSO U21, 191 corners (6.4/team/match) in 1st EDSO U21, 147 corners (4.90 ± 2.86/team/match) in UEFA U21 in the Czech Republic, and 217 corners (5.15 ± 4.16/team/match) in UEFA U21 in Poland. Most of the corners [maximum of corners/match] in 2nd EDSO U21 were performed by the teams from Turkey (8.6 ± 5.9/match [15.0]), followed by Ukraine (8.5 ± 2.4/match [11.0]), Belgium (5.6 ± 2.4/match [9.0]), and Poland (5.4 ± 4.4/match [12.0]).

During the 2nd EDSO U21 tournament, the greatest number of interventions was made by goalkeepers from the Czech Republic, Greece, and Belgium: 104/tournament, 96/tournament, and 85/tournament, respectively. The Polish goalkeeper performed 62 interventions/tournament. The number of off-sides was 3.0 ± 2.8/team/match (2.17 ± 1.88/team/match in 1st EDSO U21, 3.93 ± 2.66/team/match in UEFA U21 in the Czech Republic, and 3.24 ± 2.46/team/match in UEFA U21 in Poland). Furthermore, the number of fouls committed equalled 426 in 19 matches (450 in 1st EDSO U21, 406 in UEFA U21 in the Czech Republic, and 602 in UEFA U21 in Poland). The deaf athletes were given 87 yellow cards (31 in 1st EDSO U21, 49 in UEFA U21 in the Czech Republic, and 99 in UEFA U21 in Poland) and 9 red cards (4 in 1st EDSO U21, 5 in UEFA U21 in the Czech Republic, 5 in UEFA U21 in Poland).

The ranking of teams participating in 1st and 2nd EDSO U21 tournaments was based on the sorting of results of the offensive plays: the number of won games, the number of goals scored, the number of shots on target, the number of corners, and the shooting efficiency ratio. The results are presented in Table 5.

The majority of the goals were scored by: Senne Dierck (BEL) (14 goals), Ahmet Ergin (TUR) (9 goals), and Damian Bieniak (POL) and Elias Tebibel (SWE) (5 goals each). The best goalkeeper in the tournament was Tomasz Morawski (POL), the most valuable player – Emre Can Dönmez (TUR).

Discussion and conclusions

The article introduces the reader to issues related to football competitions played by deaf footballers at the U21 age level. There exist a considerable number of studies on match analysis in hearing adult male football but there no analyses of football of deaf and hearing matches at the U21 age level. U21 matches are an introduction to senior football. They attract the attention of many coaches and fans.

With the help of advanced statistical procedures, we can have attempted to find some associations between cause and effect in different interactional contexts. In this study, match-analysis was performed only with the use of simple description and associations between variables, thus investigating this phenomenon without considering the dynamic, interactive, and complex systems aspects that can better characterise match performance in football. However, such

studies on possible interactions between the analysed variables will be possible when organizers of events for the deaf improve the video recording of sports competitions. The low level of video transmissions cause difficulties in making statistical analyses. The preparation of high-quality video transmission and applying wide-angle cameras will provide material allowing to obtain precise information about ball possession time, number of passes, shot type, distance covered by players/team, number of successful 1 vs. 1 dribbling actions, etc. In the future, the use of GPS systems along with the measurement of heart rate would permit the measurement of kinematic data: distance, speed, acceleration, and the accompanying intensity of effort at various stages of the match [19]. The paper presents detailed data about several actions which were accomplished for scoring goals. These data can be used by coaches in order to improve training. For example, if players were too often on the offside position, a coach should pay more attention to this aspect of the game during the training.

It can be noticed that because of the lack of qualifying matches in the EDSO U21 category, the teams in the final tournaments play the 5/6 and 7/8 matches, which is not practiced in UEFA U21.

An unequal number of matches were played by particular EDSO U21 teams (8 teams, 18 matches in 2016; 8 teams, 20 matches in 2018) and UEFA U21 teams (8 teams, 15 matches in 2015; 12 teams, 21 matches in 2017). Some video transmissions from EDSO U21 tournaments are missing (lacking 2 video transmissions during 1st EDSO U21 and 1 video transmission during 2nd EDSO U21).

It should be noted that the average age of participants was 18.7 years in 2nd EDSO U21, 21.5 years in UEFA U21 in the Czech Republic (nearly 73 players were born in 1992, 61 players in 1993), and about 21.4 years in UEFA U21 in Poland (nearly 107 players born in 1994, 78 players in 1995) [17, 18].

During the finals of the EDSO U21, more goals were scored than during the UEFA U21 finals. There were more shots on target and fewer shots missed. The analysis of the number of goals scored in each quarter of the game during 2nd EDSO U21 shows that goal scoring was at a similar level of 15–16%, only the last quarter of the match (fatigue, lack of concentration) increased the number of scored goals to almost 20%. During 1st EDSO U21, the highest number of scored goals could be observed in the 1st and 3rd quarters of the 2nd half (20%). Teams participating in 2nd EDSO U21 had a similar number of offside games as those in UEFA U21. The presented results of match statistics indicate a higher level of offensive game during 2nd EDSO U21 than during 1st EDSO U21. The team of Turkey presented the highest offensive level in 2nd EDSO U21. Teams of Ukraine, Russia, Belgium, and Poland exhibited a similar offensive level.

One of the criteria illustrating the commitment to sports success and the possible financial problems of the sports federations in the countries taking part in 2nd EDSO U21 is the number of people in the coaching staff: 10 in Sweden, 9 in Belgium, 8 in Turkey, 5 in the Czech Republic and Poland, 4 in Russia and Greece, 3 in Ukraine.

The current challenge involves organizing tournaments for deaf footballers with suitable video sequences that can clearly identify and categorize individuals and behaviours over time, regular playing patterns, and physiological aspects of the game. To this end, we recommend the adoption of methodologies that are used in tournaments for hearing athletes [3, 19, 20, 21].

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Disclosure statement

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Conflict of interest

The author states no conflict of interest.

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