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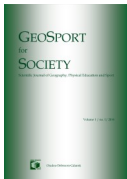


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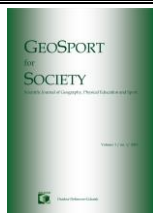
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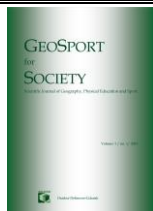
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Sport and adventure in the Pădurea Craiului Mountains

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Abstract: The term of tourist product, as it was understood in the first decade after December, has undergone an important change of meaning, in the age of today's tourist. The simple outings in nature are replaced by trekking and cycle tourism tours, the classical mountain climbing by sport climbing, via ferrata, rafting and canyoning, wandering through caves by speotourism and the list may continue. Finally, we realize that the era of speed and the Internet brings along a paradigm change in terms of the tourist offer: adaptation to the need for adrenaline is done through extreme sports and adventure tourism services. The present study aims to highlight some recreational and leisure, sportive and adventure activities: caving tourism, mountain climbing, sport climbing, via ferrate, mountain hiking, cycle tourism, zip line and rafting, all happening in Pădurea Craiului Mountains. If the above assertion seems generally valid, this area is perfectly in line with the trends, the tourism operators offer the most diverse activities, to meet the growing demand of new tourist products.

Keywords: biking, adventure, caving, climbing, trekking, rafting, via-ferrata

Introduction

The contemporary sports phenomenon achieves multidisciplinary valences from the social, economic, geographical and cultural point of view (Buhaş, 2015; Buhas et al., 2017; Kozma, 2014; Gaceu et al., 2015; Dragoş et al., 2017; Tătar et al.,

2018; Chirazi, 2019). The specialty studies have indicated a close link between sports- we include here tourism as a sport activity and their geographical distribution (Herman et al., 2016a, b). Moreover, for optimal information and representation, maps have been designed using the GIS tools cartographic method (Andronache et al., 2019; Baias et al., 2010; Herman, 2010; Ilies et al., 2011, 2016, 2017; Herman et al., 2016c; Herman and Grama, 2018; Romocea et al., 2018).

The quality and quantity of the sports offer evolve in parallel with the growth of the number of the participants, because, to practice sports has become for many people a way of personal highlighting and even a way of life as Binkowska-Bury, Penar-Zadarko say, 2009, quated by Lucaciu, 2012.

Tourism is one of the means of physical education, along with gymnastics, playing and dancing (Cîrstea, 1993; Dragnea & Bota, 1999). A definition among the many accepted, describes tourism as „a set of measures applied for organizing and carrying out some leisure trips or for other purposes, made either through organizations, societies or specialized agents, or on their own, for a limited time, as well as the industry that compete to fulfill the tourists' needs” (Minciu, 2002,14-15).

The form of tourism highlights the concrete way and the circumstances in which tourism is practiced. The type is connected to the essence of tourism, and the form to the nature of its manifestation. Summarizing the previous classifications I. Mac (quoted by Măhăra, 1995), distinguishes four types of tourist activities:

- A. Free time tourism:
 - a –recreational tourism (walking, hiking, trips, holidays);
 - b –recreational and health care tourism;
 - c –visiting tourism (cultural, social, family, religious);
 - d –short distance tourism;
- B. Transit tourism (volunteer and conditional);
- C. Cultural and sport tourism (folkloric manifestations, festivals, sport competitions etc.)
- D. Professional tourism (scientific, cultural, technical, business, diplomacy).

Another classification (Cocean, 1997) delineates the following types of tourism: recreational tourism; health care tourism; cultural tourism; complex tourism (recreational and business, recreational and information, etc).

Tourism is, by its impact and consequences, an industry becoming more and more important, a vital component of economic and social life for a growing number of countries, for some being the only real chance of economic success (Minciu, 2002; Fieroiu, 2008; Morar & Pop, 2016). Through its own and propagated characteristics also, tourism stands out in almost all countries as an activity with a high degree of economic efficiency in comparison with other sectors of the national economy (Bran et al., 2000). The ones

who want to practice tourism are not conditioned by certain qualities, skills or physical aptitudes, and boundaries of age does not exist (Lucaciu, 2013).

Mountain tourism is a phenomenon that implies many different aspects, involving a large number of activities -some of them seasonal -into and out of" fashion". After coastal areas and islands, mountains are the most important destination in the world tourism, accounting for about 15-20% of it (over 50 million people annually visit the mountains), which is an annual contribution of about 70-90 billion dollars to the world economy after 1990 with an annual growth rate of 4.7%; for the next two decades is expected a growth rate of 4.1%, being one of the most dynamic global industry (Lucaciu, 2013, 2015).

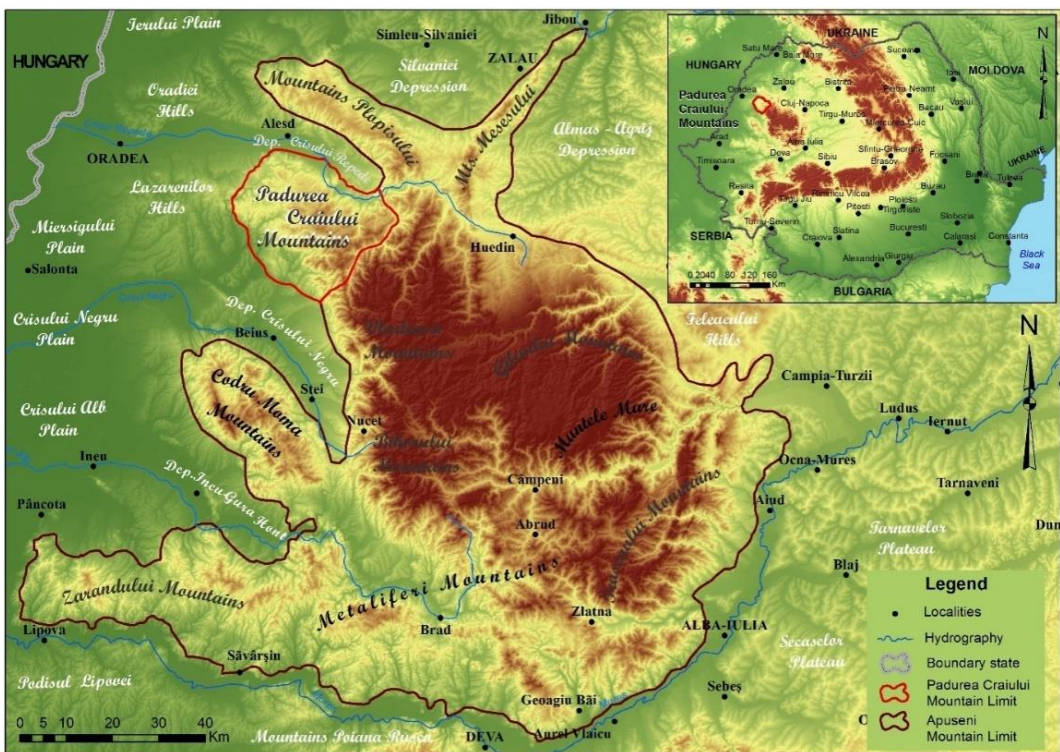


Figure 1. Geographic location of the Pădurea Craiului Mountains in the Apuseni Mountain and in Romania

The significant natural and anthropic tourism potential of the Pădurea Craiului Mountains (figure 1) puts this mountain group into the category of those favorable to the appearance and development of all types of tourism. Low altitudes, accessibility, the presence of Karst relief, the traditional village with all its elements create the conditions for recreational tourism, cultural, rural, ecotourism and also for the health care one, of course with differences regarding the number of the tourists

involved (Herman et al., 2019). Recreational and leisure tourism is detached by age and by the significant number of tourists, its forms such as mountain hiking, caving tourism and mountain climbing have an old and continuous tradition, with origins that date back to the nineteenth century.

The most representative physical activities that are practiced in the Pădurea Craiului Mountains are caving tourism, mountain and sport climbing, mountain hiking with old tradition or more recent forms, very well received among tourists such as rafting, via ferrata, cycle tourism, zip line, sport fishing, rafting and canoeing.

The popularity of the area for caving tourism is favored by the presence of an impressive number of caves and pit caves (vertical caves), 1308 according to Cocean (2000), from which 4 caves arranged for mass tourism. Mountain/sport climbing is currently practiced in six areas spread throughout the region.

Crisul Repede Gorges is a climbing area which is well known nationally. Hiking imposed by wide accessibility and freedom, both on long marked trails and also on shorter distances in the whole mountain group. The other forms of adventure tourism such as rafting, via ferrate or zip line have an increasing number of practitioners, enlarging the tourist offer in less attractive areas, revitalizing old routes or creating real adventure areas such as the area of Unguru Mare Cave.

Research Methodology

The methodology used in this material contributes to a better knowledge of Pădurea Craiului Mountains as tourist destination. The information and data analyzed in this study are from the domains of geography and sports. In what methodology is concerned, a series of classical research methods were used (observation and description), as well as a series of modern means. The relevant data were gathered from a variety of sources. The method of bibliographic documentation (Cocean, 2005) was followed by field investigations with the help of proper techniques. The bibliographic documentation included the consultation of specialty literature and documentary sources. The cartographic material was elaborated by using specialized software such as ArcGIS and Microsoft Excel. The method of synthesis led to conclusions referring to relations between nature and tourism, representing an objective and practical perspective of the key tendencies in tourism development.

Caving tourism

Mass caving tourism has very good development premises in the Pădurea Craiului Mountains, at the moment there are four caves exploited in this way Vadu Crișului Cave and Unguru Mare Cave in the north west of the mountain group and Meziad Cave and Farcu Mine in the south-west, their position in the mountains allows a balanced development of the tourism in that area. These four caves are well-known

tourist attractions at regional and national level, with great opportunities for opening up to international tourism, attracting a big number of visitors (figure 2).

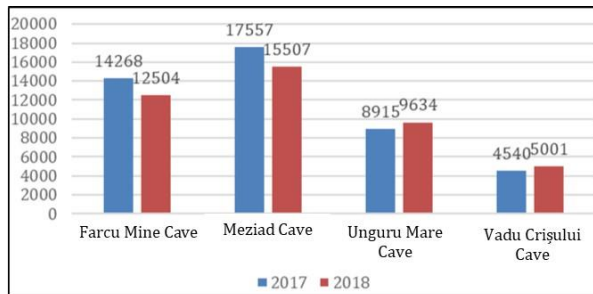


Figure 2. The number of visitors on each location in the years 2017-2018

(Source: CAPDD, Bihor, 2019)

According to some authors, (Cocean, 1995) many caves from the Pădurea Craiului Mountains spread in the whole region present a great variety in terms of attractive resources (magnitude and length of the cavern, variety of morphology, watercourses, the presence of underground lakes or waterfalls, richness and variety of speleothems, the underground climate, paleontological and archaeological vestiges), accessible position, or arrangement possibilities, attributes that position this mountain group on the map of national and European caving tourism.

Cocean (1995) identifies from the approximately 11.000 caves from Romania, 144 caves with tourist potential from which 19 are in the Pădurea Craiului Mountains, this mountain group being exceeded only by Bihorului Mountains.

Specialized caving tourism is practiced as a result of implementing the project „The first network of tourist caving from Romania” sustainable valorization of karstic patrimony of those from CAPDD Bihor in 2016. The project objective - protection, integrated and active conservation through tourist capitalization of 10 tourist caves from the Pădurea Craiului Mountains, is reached through clear regulations regarding the access but also through promoting actions that have put the Pădurea Craiului Mountains on the map of the national and international speleological tourism. These 10 caves are classified into three degrees of difficulty: Discover for beginners, Experience - medium difficulty and Explore- for advanced. ¹

Mountain and sport climbing

In the classic sense mountain climbing represents the ascent to the alpine peaks from the mountain area of high altitude, often covered with snow and ice. The aim of the ascent is to reach the summit with the help of the equipment provided-rope, ice

¹ <https://www.padureacraiului.ro/speoturism>

ax, crampons, pitons and safe descent at the base of mountain. Currently, climbing is done in two -man teams- lead climber and following climber. Climbing implies the ascent of the lead climber while the following (safety) climber assures him by regrouping (an easier section where anchors are mounted) allowing then the safety climber to start the climbing once the lead climber has mounted a new regrouping and ensures in turn the safety climber. Regrouping climbing repeats itself until the top of the mountain is reached; their number defines the length of the route expressed in „rope lengths”.

Mountain ascents follow either predetermined classic routes or new routes (FA-first ascents) and imply installing the anchors by the climbers. The anchors are fixed (pitons) or mobile (nuts and friend’s devices) and their aim is to fix the rope for assisting the lead climber.

Sport climbing, on the other hand, implies climbing on vertical rock walls with the help of your own forces, which means just by using hands and legs in the ascent, technical accessories are used only to belay the climber.

The aim of climbing vertical walls is rather a personal one; the competition is about winning the fight with gravity and your own physical and mental limits, by positioning the body in balance on the rock and by correct dosage of the effort to complete the route.

The equipment involves climbing rope, quick draws (couple of snap gate carabiners and a sling), the safety device (for blocking the rope in case of a fall), harness, climbing shoes and chalk bag. Anchors in sports climbing are fixed and permanent, mounted according to the expansion bolts technique and has a metallic hanger for fixing the rope by the mean of quick draws.

In sports climbing the routes have most often a single rope length (top rope), rarely two or three. Of course, this fact is mainly due to the low altitude of some climbing areas such as cliffs, stone quarries, gorges and passes from the Pădurea Craiului Mountains. Teams can either follow the classic pattern on the routes with more rope lengths, or gather more teammates, usually a monitor who belays the other climbers.

An alternative for climbing is bouldering which is a form of climbing that is performed on very short and difficult routes (2-3 meters) and which only requires a mattress at the base of the route as a safety technique. For mountaineering and climbing practitioners from nearby counties, Pădurea Craiului Mountains is a much-frequented destination. The large number of routes, accessible areas, different degrees of difficulty (Anghel, 2007) represents the strengths for these mountains to be chosen as a destination by the people who love this sport. In Pădurea Craiului Mountains there are currently six climbing areas: Vadu Crișului, Șuncuiș, Bulz, Remeți, Osoi and Lazuri, with a total of 442 routes. The oldest climbing area, thus with

the most routes is Vadu Crişului, with 20 sectors, a result of 281 routes with different rope lengths and different degrees of difficulty, from which two recent routes of via ferrata: The Fairy Wall (Peretele Zânelor) and Ogre's House (Casa Zmeului),² which makes use of two old mountaineering routes. From the analysis of the information provided by Bihor Mountain Rescue we may conclude the following: many of the old mountaineering routes have been re-equipped in the last years according to sports climbing (free climbing) standards, which shows a reorientation towards the old and picturesque climbing routes of the young climbers, exploiting thus the sectors left behind and integrating into the tourist circuit new climbing areas. Osoi area, on the wall that houses the eponymous cave, from Vârciorog with 30 routes, many of them of medium level, more accessible, including for kids, and Lazuri Gorges, in Lazuri, Roşia, 48 routes, also of medium level of difficulty, which shows openness to this sport from both ways, both from the hikers who promote it so that it does not remain a niche sport and from mountain lovers for which it becomes more accessible. Both areas have been recently inaugurated, Osoi in the autumn of 2017, Lazuri in the spring of 2018, during climbing festivals with hundreds of participants, both from the country and abroad.

Via ferrata

Via ferrata (iron trails) in Italian - translated as iron road - are routes equipped with iron steps, metal struts, fixed ladders, cables and bridges and becoming more and more popular in our country. These allow tourists who are less familiar with mountaineering/sports climbing to climb vertical trails of different lengths on rocky walls in safe conditions. The beginnings of via ferrata are linked to the World War I and the attempts of the soldiers from the Dolomites Alps to make their ascent easier.

The via ferrata routes are classified according to their level of difficulty from A (easy) to E (extremely difficult). The necessary equipment is climbing harness, via ferrata set (detachable set of ropes with carabiners which you will connect to the steel wire on the via ferrata trail), helmet and maybe gloves.

In Pădurea Craiului Mountains there are three via ferrata trails integrating from this point of view the mountain group in the top existing at national level: Mocăniţa (Steam Train)- 2015, difficulty B and Ogre's House-2017, difficulty C in Passes of Crisul Repede, near Vadu Crişului made by the County Mount Rescue Service; Salvaspeo Bihor and Cassio Montana Bihor Club. Both of them value old climbing trails of several rope lengths. The trail from the adventure park Montana Land, from Şuncuiuş made by the Cassio Montana Bihor Club in April 2018. The access in the route of B difficulty, with a length of 170 m has a tax unlike those from Vadu Crişului

² <http://alpinismbihor.ro>

where access is free.³ Also, in Șuncuiuș, Hodoaba Valley route situated on the wall of Unguru Mare Cave, degree of difficulty A, with a length of 42 m, equipped by County Mount Rescue Service- Salvaspeo Bihor.

Cycling tourism

Cycling routes uses the existing communication infrastructure, county roads, communal and forest roads or hiking trail sectors. CAPDD Bihor outlined and then marked routes within the projects carried out nine themed cycle tours, of different lengths and degree of difficulty towards different tourist attractions, traditional households, spectacular and picturesque landscapes from the Pădurea Craiului Mountains. Therefore, there are available for tourists 12 bicycles equipped for mountain bike and trails with maps or GPS at the renting centers Remetea that function within the campsite Turul and Roșia at the Nature 2000 Site Visiting Centre or may be transported at request anywhere within the area of the Pădurea Craiului Mountains. Most of the trails are difficult (six of the nine proposed), two of medium level and one trail is easy, which make them not so accessible to mass tourism though the Pădurea Craiului Mountains have a huge potential in this regard.

Zip line

Zip line, aerial crossing over a steep valley with the help of a fixed cable between two points and a pulley, can be tried in Roșia commune beneath the Mina Farcu cave, where it has a length of 300 m, being the second long one in the country, at Meziad cave with a length of 100 m.

Rafting

Practicing water sports on mountain rivers, such as rafting, is very popular in mountain areas. Bihor County was the first area to have promoted this kind of activity in Romania, through the potential assessment project, on mountain rivers from Romania, developed in 2004 by Bihor Association of Mountain Rescuers.⁴

Regarding the study area, rafting is getting more and more popular, is being practiced in the Crisul Repede Gorges, from Bratca up to Vadu Crișului. The part between Bălnaca and Șuncuiuș is very often used for rafting because during summer there is the possibility to rent boats at the entrance area on Mișidului Valley (Pop, 2014).

From the practiced physical activities, rafting has an ascending trend, being the most requested sport for operators in the area. In 2018 it had the percentage of 44,91% tourists from the total of those who requested activities offered by operators (figure 3).

³ <https://viaferrataramania.wordpress.com/>

⁴ <http://www.cjbihor.ro/pdf/Strategia%20pentru%20dezvoltarea%20durabila%20a%20judetului%20Bihor%202014-2020.pdf>

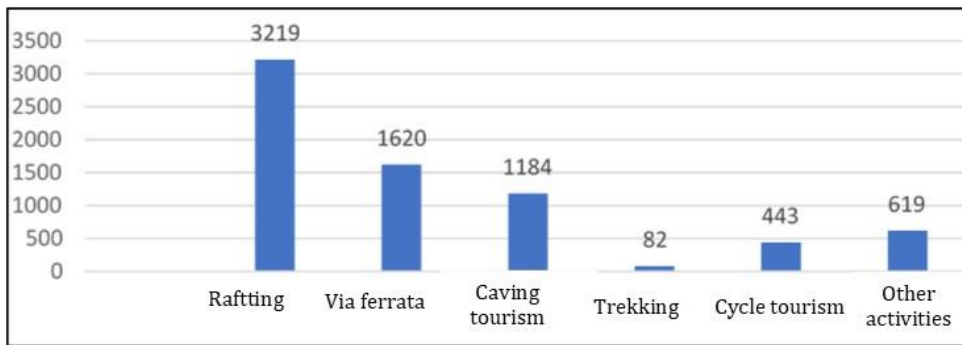


Figure 3. Number of tourists on activities in 2018
(source: CAPDD Bihor, 2019)

Mountain running

The rough terrain and altitudinal differences make the Pădurea Craiului Mountains a place for mountain running even if from the altitude point of view, they do not register for this form of sports tourism. As a result, in 2019 five running trails were marked in this area, three in Șuncuiuș area and two in Roșia area, from which two easy, two medium/difficult and one difficult ⁵

Starting with the year 2017, an important mountain running competition has been held in Șuncuiuș-Primavera Trail Race that gathers the fans of this sport which is practiced by more and more mountain lovers and which was the basis for the subsequent marking of the routes. The entire space of the Pădurea Craiului Mountains offers ideal places for carrying out such competitions/ regular meetings.

Conclusions and proposals

The studied area offers the possibility to practice many physical activities but we have to meet the expectations with certain facilities that regards the accommodation offer, food, transport, entertainment and not lastly easy access and arranged parking lots. The entertaining side and the opportunities to spend free time are poorly developed in this area. Still, one thing has to be mentioned, the proximity to big Romanian cities, such as: Oradea, Cluj Napoca, Arad, and the western border could attract a considerable number of foreign tourists, resolving this issue to a certain extent. By organizing competitions at national and international level, tourism could develop in this area, by involving various actors: competitors, organizers, spectators and supporters.

⁵ <https://padureacraiului.ro/alergare-montana/>

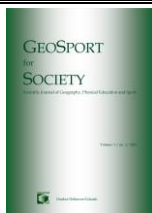
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Daily Physical Education and the Impact of a „Handball at School” Project

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Abstract: This study identified what effects project Handball at School had on target accuracy amongst primary aged school children (n=293) over a 6 month period, who undertook daily PE in school. They were grouped into 3 experimental schools in which intervention took place and 2 control schools. In order to examine target accuracy, technical form, and time in task, 2 tests were applied. The first test involved students in throwing sponge-handballs 5 times with no break at a target from a stationary straddle stand. The aim of the exercise was to hit a small box using an overarm throw. The other test involved running movement. Target accuracy and technical form improved in test 1 across all age groups. In the more dynamic activity with the preceding run technical form improved across all age groups and positive trends were identified in target accuracy, albeit that only one age group recorded significant improvements. The authors suggest that the results indicate the benefits of the Handball at School as a sport specific intervention programme. There is a cautionary note that adding further complexity or speed with children in these groups may contribute some confounding variables.

Keywords: handball, daily PE, target accuracy, primary school children

Introduction

In Hungary significant changes in physical education of the primary and secondary schools were implemented when daily physical education was introduced. The justification for the increase in the number of P.E lessons was the result of concerns about negative health tendencies in Hungary's young people. Recent years have seen a worrying rise of negative health conditions such as asthma, allergies, COPD, high blood pressure, diabetes and coronary diseases, with increases also being evidenced, among young people and children, of the number of physical disabilities such as scoliosis, kyphosis, lordosis, and spondylosis.

The idea of introducing daily physical education in Hungary had been promoted in the country's Sports Strategy (Sport XXI) following research evidence that was presented prior to policy preparation. This research revealed that 75% of Hungarian children only did regular exercises in physical education lessons, which did not (at that time) ensure the amount of activity necessary for the age group. It was also stated that only 19% of the students took part in the student Olympics competition system and only 90,000 under-18 sportspeople (6% of that population) held competition permits indicating participation in sports clubs as part of the federational sports system.

Further support for daily physical education was derived from a Hungarian study in which it was identified that amongst seven-year olds, every fourth girl (25%) and every fifth boy was classified as being overweight or obese in Hungary in 2010 (Martos et al., 2012). At present there are over twelve million overweight or obese children in the European Union with the number of overweight children growing by 400,000 per year and the number of obese children by 85,000. This early onset of obesity is a big problem because it is a major risk factor concerning adult- or later obesity (Cole, 2004; Börnhorst et al., 2016). It was anticipated that daily physical education would have an essential role in fighting obesity (Baidog and Herman, 2018; Papp et al., 2019; Tătar et al., 2018). Support for this view was garnered from EU recommendations (Guidelines of EU for Physical Activity, 2008) which stated that school-age children need 60 minutes of moderate intensity exercise per day. Referring to those issues, the Sports Strategy promoted the necessity of introducing daily physical education and noted it as a task to be implemented in the future.

Recently, there have been substantial alterations to curricular content and methods of delivery as a result of Hungarian policy changes outlined in a series of Basic National Curriculum (NAT) documents culminating in the latest edition NAT4 (2012). The latest NAT was approved by the Hungarian government in 2012, based on Government Order 110 (2012) covering objectives such as social-, mental- physical-

health education. The main goal of the project was to introduce 5 PE lessons per week, as to ensure the daily physical education for every student between the age of 6 and 18. Beginning in the 2012/2013 academic year, daily physical education became compulsory for three year groups (7, 11 and 15 plus years – classes 1, 5 and 9 respectively). It was then rolled out across the sector until daily physical education for all schoolchildren was fully enacted by the beginning of the 2015/2016 academic year. To meet the objectives and principles of the daily PE, skills must be obtained in both individual sports and team games and alongside knowledge of the history, traditions, and culture of sport and society. Additionally, daily PE is also recognized as a medium that has been used effectively to create pathways for healthy lifestyles and activities. Other purposes of daily physical education relate to the advancement of sports knowledge, developing, and enlarging different kind of movement skills, increasing involvement in leisure sports and creating values based on regular physical activity.

One major plank in supporting the introduction of daily physical education came from another Government initiative known as the TAO system in Hungary (for further information see Bács and Bácsné Bába, 2014). The TAO system was a subsidy system that was developed to support team sports that had both a strong participation outlet as well as a culture and capacity as key spectator (aka visual) sports. Funding was supplied via the Government’s Corporate Tax and Dividend Tax. The TAO sport support system for spectator team sports was introduced in our country in 2011 following the modification of Act LXXXI of 1996 on Corporate Tax and Dividend Tax to encompass legal regulation of a ‘sports-friendly’ tax (András, 2014). This system was supported the following spectator sports: football, basketball, handball, water polo and ice hockey (Bardóczy, 2014).

The resources coming from TAO can be spend by the beneficiaries on tangible investment such as sport infrastructural background, renovation of sport facilities, personal expenses and educational costs. In the 2011 tax year alone the sports purpose contribution of 2618 corporate tax payers were approximately 20.4 bn HUF in tax advantage. By end of year 2012, it had increased to 25 billion HUF (Bardóczy, 2014).

One undisputable merit of TAO is that it plays an exceptional role both in the development of grassroots provision as well as that of professionals’ training (Dajnoki et al., 2015). The importance of the ‘grassroots’ is crucial. The Hungarian data of 2006 cited in the National Sports Strategy (Sport XXI) indicated that there were 200,000 sports people holding competition permits in Hungary. Of this number, 138,000 people were from the 6 popular spectator team sports (handball, football, water polo, basketball, ice hockey and volleyball), albeit that volleyball was only added in 2017. As for handball, the TAO had a positive effect on the increases in participation with year on year growth being shown (2011 there were 24 000 persons, in 2012 - 25 000 persons, in 2013 - 29788 persons and in 2014- 31 227 registered sportsmen (Bardóczy, 2014; András 2014).

It is not TAO system alone that plays an essential developmental role in our country. A good example is the relatively novel Handball at School project operated by the Hungarian Handball Federation which also could increase the number of school aged children in sports clubs. This was supported by the TAO funds.

The Hungarian Handball Association took advantage of this favourable educational-political environment to get involved in daily PE to promote its sport through its Handball at School project. Its aim was to enrich the curriculum and develop ball skills with age-appropriate practices and material, promoted through the delivery of two handball lesson per week from the five physical education lessons.

Summary of the “Handball at School” Programme

The Handball at School programme of the Hungarian Handball Association was introduced and implemented in 2013 in 50 primary schools, with 54 participating physical education teachers and 1430 children. Following favourable responses from teachers and children alike, the programme was enlarged in 2014 to cover 91 schools, with 98 physical education teachers actively promoting it amongst 3400 participating children. As of today – as a result of further extension in 2015 – the project is being run in 117 schools by 127 physical education teachers with a concomitant increase in participation to almost 4565 students (7 – 14/15-year olds). One thousand four hundred and thirty-five participants were in junior school aged between 8 and 11 years and the programme and the schools taking part in the project have enlarged the base of youth handball participation. A concomitant affect is that the project has also become a dominant nursery for talent identification and development.

The participating children aged 8-11 (albeit this study only tested 8-10-year olds due to sampling issues) years learn basic handball rules and technical and tactical items of handball twice a week. They also undertake numerous kinds of ball-specific drills (to improve dexterity and skills) by using lighter handballs (sponge-handballs) and compete in mock or fun competitions during the lesson. PE teachers, required to take part in the project were trained by the Hungarian Handball Federation and the schools were given the needed handball equipment. The results of the programme are monitored through a mentor system as well as by reviewing lesson plans sent to the Association by the teachers. This makes it a novel programme in this country as it provides professional supervision, continuous training, and assessment. By comparison, a similar sport programme known as Kids Athletics, also had a support package and the retraining of professionals, but the feedback and continuous monitoring was not evident as thoroughly as in the school handball project, making Handball in Schools a unique product.

Description of “Handball at School” Project

The efficacy of handball sport education can be measured in many ways, mainly through testing the teacher’s activities as well as by the quality of motor skill production of the students (Nijhar et al., 2011; Button et al., 2003) When developing our research, we were focused on students’ performances besides their efficiency.

Motor skills have quantifiable measurements that can ascertain the demands and efficacy of performance. First, McMorris (2015) has suggested that skills are learned activities as opposed to being simple movements that just ‘happen’. He suggested also that skills are both goal-oriented and task specific. In other words, there needs to be a definite outcome and that the movement undertaken will be purposefully conducted to meet that outcome e.g. hit a target in handball. This seems to support Juhász et al., (1980) assertion around skill: “Working without mistake, reliably.” Finally, McMorris asserted that a movement requires consistency of approach, performance and conclusion to be considered skillful. Added to these variables, Schmidt & Lee (2013) promoted the concept of complexity as being a defining agent, with complexity being dependent upon task, environment or external factors in terms of auditory or visual cues, or speed of response and/or movement. Other terms have been employed in the past such as with Fetz (cit. Rigler, 1987) in his work wrote about target and scoring accuracy in a more generally way relating not only to ballgames. He often used the concepts of scoring accuracy and repetitive precision in his work also with scoring accuracy reflecting, which means hitting a target as the result of the planned movement. He viewed this as defying moment when assessing how good the performance was. The definition of repetitive precision means that although a target may be hit once by chance, without any practice, if one can reproduce it several times after having practiced it then shows repetitive precision. Moreover, precise implementation, movement precision, movement accuracy and result accuracy concepts were defined and determined based on what Meinl termed as target focus by (Rigler, 1987). His general description identified a concept that he termed movement accuracy which meant aiming to hit the target with sports specific movements that are determined by the target. He considered practice crucial, saying that the more one practices the more one can perform different technical movements more precisely.

This has also been termed as scoring- or target accuracy by Allaway (Rigler, 1987) which means that the aim is to improve the quality of ball-passing and dribbling the ball. The “target”, the surface of the target or the opponent’s basket is considered as the goal or the opponents’ basket, a part of their playing area, or even a team-mate who could be serve as a moving target surface when the ball is being passed to him/her.

Handball Specific Research

The literature regarding handball has always focused more on the characteristics of physical performance in the adult age group (Wagner et al., 2014; Massaça and Fragoso, 2011).

Relative and physical fitness, resistance training, and physiological aspects have been studied with regards to professional handball players and their specific performances (Granados et al., 2007; Ortega-Becerra et al., 2018; Sporiš et al., 2019; Marques and Gonzalez-Badillo, 2006; Muratović et al. 2015; Gürhan et al., 2016; Nikolaidis and Ingebrigtsen, 2013). Further studies focus on the sportsspecific tests regarding handball (Schwesig et al. 2016a; b). There are some research focusing on the importance of handball's tactical elements (Budi et al., 2019) and the analyzation of the games (Bilge, 2012). Meanwhile the target group in most of the researches are the elite handball players, studies focusing on school-aged children (Juhász et al., 2017) are lacking in number. In line with studies based on adult players, research with children has tend to relate to general motor skills e.g. Ingebrigsten & Jeffreys (2012); Ingebrigsten, Rodahl & Jeffreys, (2013); Zhunisbek et al., (2016); Broderick & Newell (1999); Karadenizli (2016); Kayapinar et al., (2015). Only a few studies have been conducted to consider effect of handball on improving motor skills in children, albeit tenuously, as it was mainly a physical characteristics study (Ion, 2015; Juhász et al., 2016; 2017). Nonetheless, the author stated that in a special game devised for the study, the research group improved compared with a control group.

Summary of Literature

The general and working definitions above align themselves well with our proposed project as handball performance can be determined by correct technical implementation with repetitive precision, faultless activity, and with time demands. It is to these factors that our project turns to help design and assess the skill levels of primary aged school children in a variety of situations. After studying the theoretical background of skill, motor control, motor learning, movement, precision and its measurement (Bakonyi, 1969; Rigler, 1987; Buckley & Cople, 2009; Nádori, 1989; Schmidt & Wrisberg, 2008; Rigler & Zsideg 1985; Müller et al., 1999; Schmidtbleicher et al., 1981; Müller, 2004; Nagy, 1978; Wulf et al., 2010; Müller, 2000) a key component of this study was to choose criteria by which skill could be evaluated. Thus, the study will assess three components of handball:

- accuracy of result - the "best" scores when aiming at a target (objective performance);
- technical form - precision of technical performance in terms of an ideal model (subjective performance);
- time on task – time taken to execute the 5 shots.

Aim of the study

The main goal of our research was to identify whether the Handball in Schools project led to improvements in skill development, target accuracy, and speed of performance amongst primary aged school children.

Research Question

The following research question was addressed:

Are there differences in handball performances across a six-month period in three specific areas (target accuracy, technical execution, time on task) between experimental and control groups of primary school aged children who undertake daily PE?

Participants

Our study was organised using five schools from different parts of the country of Hungary. Three schools were identified for intervention with two other schools being recruited as controls. The project took place in autumn and spring, 2015-2016. One school (City School) was from the capital city (Budapest) while the other two were from the west and east of the country (West School and East School respectively). They joined the daily PE programme in 2015 with qualified, professional PE teachers and staff who had great experience of teaching handball. The intervention involved primary school children between the age of 8 and 10 (n = 183) having 5 PE lessons in a week out of which 2 were held to acquire the basic knowledge and skills of handball. The control group (n=110) consisted of school children (8 to 10-year olds) who attended two schools in the north east of the country (Rural School and North East School respectively). The children normally took 5 PE lessons a week but without handball.

Table 1. Sample by location, type of school (intervention or control), sex, ages and previous sport experience of children

Group	Location	No of Part	Male	Female	Age 8	Age 9	Age 10
Intervention Group	West	63	33	30	19	20	22
	City	60	31	29	22	15	21
	East	60	30	30	22	22	16
Sub Total		183	94	89	63	57	63
Control	Rural	55	27	28	14	21	17
	NE	55	28	27	24	15	19
Sub Total		110	55	55	38	36	36

In terms of sampling, it was hoped to consider at least 10% of the total sample available. Out of 1430 pupils of the required ages in all five schools 293 took part in the project (20.5%) of which the intervention groups numbered 12.8%.

Ninety-four (51.4%) of the intervention children were boys, while 89 (48.6%) were girls and they were allocated to groups according to age - 8, 9, and 10 years of age. In the experimental group 63 children (34.4%) were 8 years of age, 57 children (31.1%) 9 years of age, 63 children (34.4%) 10 years old. The control group was composed of 38 children of 8 years of age and 36 children in each of the 9 years and 10 years of age groupings.

Protocols

In handball, movement accuracy is a very complex concept. Because of this reason, we tried to examine it via different factors so as to justify the selection of the tests undertaken. It has been conceptualized that there are three key parameters that are fundamental to handball running without the ball; motor skill performance (passing or shooting); and the ability to carry the ball (Figure 1). Factors that impact or influence those key areas and that can be measured are noted below (Factors 1-8). Due to the ages of the children and the absolute fundamental components of handball movement, it was decided to focus the study on Skill 2 - Measuring the motor skill performance – by undertaking two tests that were designed to cover three Elements (Elements 2-4).

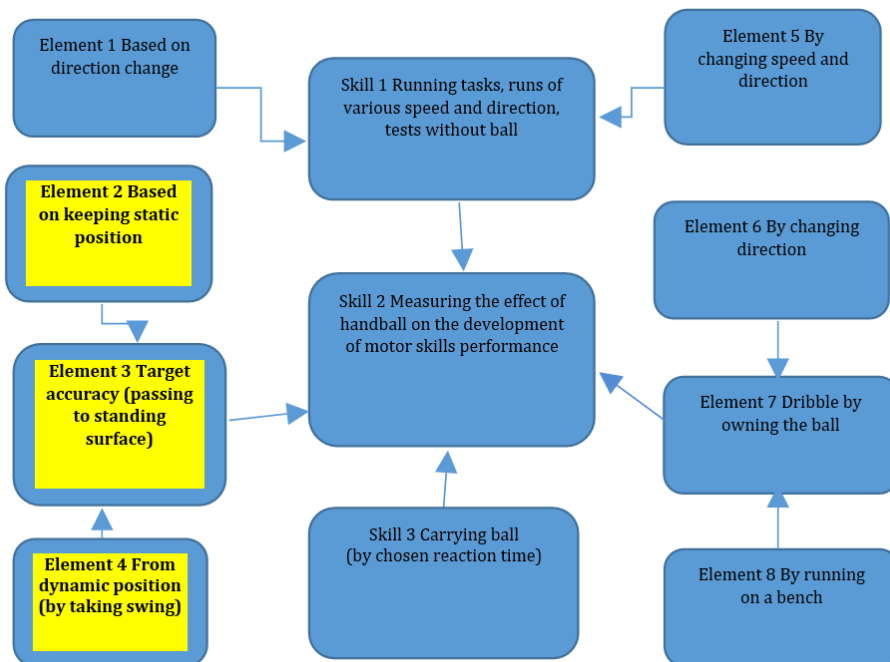


Figure 1. Structure of skills and underpinning elements in handball with measured elements of this study highlighted in bold

In this article the results of our two tests of accuracy are described. The titles and descriptions of these tests and the methods for their evaluation are also shown below.

Originally it was planned to include 6 and 7-year-old children but during the pilot research, it became evident that those age groups had to be withdrawn as a result of an inability to perform the protocols alongside a general lack of understanding of the task. This was perceived to be indicative of their relative levels of cognitive and physical immaturity and lack of movement literacy.

Test 1: Shooting in transverse straddle standing position with no run up (to test sport specific coordination skills) (Figure 1 - Skill 2, Elements 2 and 3).

Checking target accuracy with no run up, while modelling the handball action, is not truly sport-specific as handball takes place in a dynamic environment. That is, the player (and the target, if passing to another player) moves throughout the game. However, it is an important early stage or transitional skill and thus valued by those who teach or coach handball to children. Thus, it was included as part of the project.

The students stood behind a line on the floor. Five lightweight sponge handballs suitable for the pupils' ages were placed in a small turned-up box beside the pupils' throwing hand. The task was performed using an overarm throw. Another larger box, the target box (dimension: 62 cm long, 42 cm wide, 26 cm tall), was placed 5.5 meters away in the case of 8-9-year-old pupils, and 6 meters away in case of 10-year-old children. The leather covered surface of the box faced the pupil who was performing the shot. The pupil, on hearing a start whistle, had to quickly take a ball from the small box nearby and then aim at the leather covered surface of the box with the intention of hitting the leather surface with a direct hit with a ball. A direct hit was classed as accurate.

Participants were given 5 attempts to familiarize themselves with the test. Following a ten-minute rest period, each participant then undertook the trial with five attempts being recorded. Total time for the attempts was taken using a digital watch (times taken to 1/100th secs). The number of successful attempts was scored along with time taken as a measure of accuracy.

Test 2: Shooting in transverse straddle standing position with run up (to test sport specific dynamic coordination skills) (Figure 1 - Skill 2, Elements 3 and 4)

The students stood behind a line on the floor, with the distance from the line to the target surface being the same as in Test 1 (5.5-6m dependent upon age). Five sponge handballs adequate to the pupils' ages were placed behind the pupils in a small open box that was situated on the side of the pupils' throwing hand at a distance of 1.5-2m dependent upon age. The pupil, on hearing a start whistle, had to run up to the small box and, taking a ball from the box run to the line and similarly to task 1, aim at

the target box. The pupil had to repeat it until all 5 balls were used. The test was performed using an overarm throw.

Participants were given 5 attempts to familiarize themselves with the test. Following a ten-minute rest period, each participant then undertook the trial with five attempts being recorded. Total time for the attempts was taken using a digital watch (times taken to 1/100th secs). The number of successful attempts was scored along with time taken as a measure of accuracy.

Pilot Study

To test the materials and the protocols, a pilot study was undertaken in another Hungarian primary school. This also took place to ensure that the processes and equipment for the main study suited the age-related abilities of the participants. Specifically, the pilot study focused on the feasibility of the exercises to identify whether they were suitable for students of different ages and pre-training experience.

Results and Discussion

The data from the trials were collated and processed using SPSS.22.0 (IBM Corp, Ca, USA). The analysis grouped the population prior to calculating mean averages and standard deviations (SD). A paired-samples T-test was performed to identify differences between the two test dates (autumn and spring). Data from the control and intervention groups were compared using independent samples T-tests.

Results of TEST 1: Shooting in the transverse straddle standing position with no run up (table 2)

The experimental group was made up of those students who had 2 handball lessons out of the 5 compulsory PE lessons as part of the Handball at School programme. In terms of the first measure of accuracy that group improved compared with the control group in the six months between the autumn and spring across all three age-groups.

There were no significant changes in accuracy in the general PE control groups, albeit there was still some evidence of a trend towards better skill production. However, the experimental groups showed significant improvements in performance in each of the respective age groups (aged 8 – 13% improvement, $p=0.000$; aged 9 – 10%, $p=0.015$; aged 10 – 9%, $p=0.0011$).

The participants were also judged on technical form as well as time on task.

Technical execution was subjectively assessed by the researchers who were looking to identify visually and record if the thrower's elbows were lifted to shoulder height or above while throwing of the attempts. It can be stated that the accuracy

improved from autumn to spring, the elbow reaching the height of the shoulder is deemed to be a more advanced or precise ideal model of the handball shooting action. As with accuracy, the three age groups (8, 9 and 10 years) saw significant improvements from one season to the next (7% improvement, $p=0.03$; 13%, $p=0.001$; 10%, $p=0.000$ respectively). Similar to the results for accuracy, there were no significant changes in the technical performances of the control groups.

Time on task (the overall time that it took each participant to complete their 5 throws) was viewed as a valuable assessment of skill development as handball is a dynamic activity and two age groups showed significant improvements in this measurement from autumn to spring (9 years - 11% improvement, $p=0.01$; 10 years - 8%, $p=0.000$). Interestingly, all ages of the control groups also reported similar improvements in time taken (speed on task) which contrasts with that group's other results. This will be explored in the discussion section of the paper.

An 'eyeball' comparison of the two groups indicated that the experimental group executed the performances much faster than the control group.

Table 2. Results of Test 1 - Shooting in transverse straddle standing position with no run up (control and experimental groups)

	2 nd classes, 8 years n=63					3 rd classes, 9 years n=57					4 th classes, 10 years n=63				
	Autumn result		Spring result		p	Autumn result		Spring result		p	Autumn result		Spring result		p
	mean	SD	mean	SD		mean	SD	mean	SD		mean	SD	mean	SD	
Accuracy Scores Control Group	0.68 14%	0.70	0.53 11%	0.73	0.290	0.69 14%	0.75	0.56 11%	0.70	0.113	0.83	0.81 16%	0.42	0.69 14%	0.298
Accuracy Scores Experimental Group	1.46 29%	1.31	2.10 42%	1.49	0.000	1.42 28%	1.07	1.91 38%	1.24	0.015	1.41 28%	1.19	1.86 37%	1.01	0.011
Technical Form Control Group	0.71 14%	0.69	0.58 12%	0.64	0.184	0.53 11%	0.65	0.75 15%	0.69	0.647	0.53	0.70 14%	0.75	0.81 16%	0.506
Technical Form Experimental Group	3.08 62%	1.77	3.46 69%	1.66	0.003	3.39 68%	1.99	4.05 81%	1.38	0.001	3.52 70%	1.80	4.02 80%	1.52	0.000
Time on Task (sec) Control Group	16.25	1.59	15.63	1.58	0.000	16.02	1.76	15.53	1.55	0.000	14.7 3	1.94	14.18	2.04	0.000
Time on Task (sec) Experimental Group	11.74	2.06	11.21	1.80	0.147	11.49	2.28	10.23	2.11	0.001	10.1 9	1.82	9.41	1.71	0.000

Note: Accuracy scores indicate how often the target was hit; Technical form scores indicate how many times the elbow was raised above shoulder level (overarm technique used appropriately); Time on Task indicates how much time was taken for the five shots of each full trial.

(* significant $p<0.05$ ** very significant $p<0.01$, showing the change in performance in the studied group from autumn to spring)

Shooting with no run up, 2. class, 3.class, 4. class autumn and spring (score - lifted elbow - time)

Results of TEST 2: Shooting in the transverse straddle standing position with run up (Table 3)

This task is a more dynamic task than that of Test 1 and, as such, is clearly sport specific and characteristic of handball. While the previous exercise involved shooting from a standing position, this second task required for the shooting skill to be

executed from a run up. This run-up phase ensured that there is also a 'swinging' action which made the task more difficult. There were fewer positively weighted significant differences in performances in this more complex task.

In terms of accuracy, only the youngest age group evidenced significant changes between the seasons (8 years of age, 15% improvement, $p=0.000$). There were tendentious changes in the 9 and 10-year-old groups but they were non-significant (7% and 8% improvements respectively). In all cases, the accuracy scores were better in the experimental group than with the control group and the control groups made no advances in any of the ages.

Technical form did show significant improvements across all ages in the experimental group (8 years, 7% improvement, $p=0.006$; 9 years, 5%, $p=0.000$; 10 years, 17%, $p=0.000$). All were higher than the values noted against the control group which showed no significant improvements across the two seasons, and, indeed, noted falls in performance.

Time on task showed a significant drop in the younger age group (-4%, $p=0.005$) but sped up in the two older age groups, but with only the oldest age group (10 years) showing significant improvements (4%, $p=0.00$). Similar to the non-run-up test (Test 1), the control group improved in this component, whereas they stayed the same or in most cases worsened in accuracy and technical form scores.

Table 3. The results of Test 2 - Shooting in transverse straddle standing position with run up (control and experimental groups)

	2 nd classes, 8 years n=63					3 rd classes, 9 years n=57					4 th classes, 10 years n=63				
	Autumn result		Spring result		p	Autumn result		Spring result		p	Autumn result		Spring result		p
	mean	SD	mean	SD		mean	SD	mean	SD		mean	SD			
Accuracy Scores Control Group	0.58 12%	0.68	0.58 12%	0.64	0.164	0.42 8%	0.60	0.42 8%	0.69	0.018	0.50 10%	0.66	0.47 9%	0.74	0.606
Accuracy Scores Experimental Group	1.40 28%	1.29	2.14 43%	1.38	0.000	1.35 27%	1.04	1.74 35%	1.33	0.078	1.40 28%	1.01	1.79 36%	1.18	0.449
Technical Form Control Group	0.63 13%	0.59	0.59 12%	0.69	0.425	0.69 14%	0.75	0.64 13%	0.76	0.238	1.11 22%	0.89	0.69 14%	0.79	0.210
Technical Form Experimental Group	3.19 64%	1.86	3.56 71%	1.68	0.006	3.40 68%	1.96	3.65 73%	1.58	0.000	3.25 65%	1.97	4.10 82%	1.52	0.000
Time on Task (sec) Control Group	20.53	1.57	20.48	1.49	0.000	20.85	1.88	20.77	1.76	0.000	19.99	1.64	19.81	1.67	0.000
Time on Task (sec) Experimental Group	19.21	2.23	20.06	2.54	0.005	18.28	2.87	16.90	2.27	0.127	16.50	2.55	15.90	2.28	0.000

(* significant $p<0.05$ ** very significant $p<0.01$, showing the change in performance in the studied group from autumn to spring)

Shooting with run up, 2. class, 3.class, 4. class autumn and spring (score – lifted elbow – time)

From table 5 (* significant $p<0.05$ ** very significant $p<0.01$, showing the change in performance in the studied group from autumn to spring)

Summary

The research question asked whether there would be differences in handball performances across a six-month period in three specific areas (target accuracy, technical form, time on task) between experimental and control groups of primary school aged children who undertake daily PE?

In Test 1, the shooting with no run up assessment, the summation of the responses indicates that across the three components of skill that were tested, the three age groups in the experimental group significantly improved compared with control groups. The only measure in which there was no significant improvement was on time on task in the 8-year olds. The control groups showed no significant improvements or dropped performance in all accuracy and technical form tests across the three age groups. However, it has to be noted that those children in the control groups all increased the speed of executing their tasks with significant improvements in all age groups.

In Test 2 in which the children do a run up before shooting, the results were a bit mixed. There were significant improvements in the technical form scores across all age groups. However, in terms of accuracy and time on task scores, only the youngest children showed significant differences in both measures. The 10-year-old participants showed significant improvements on time on task. All other scores showed that the experimental group improved but not significantly.

Similar to Test 1, the control group showed significant improvements in time on task but either ‘stood still’ or performed less well in the accuracy or technical form values.

Conclusion

During this project primary school aged children were tested with handball-specific movements. At this age and stage of children’s development, the skills and movements being tested were complex and included relatively static tests as well as more complex holistic assessments of movement.

There were a number of key problems that can be identified from the results. First, the results showed that the Handball at School project, involving 2 sport-specific lessons in a week, helped to improve speed coordination abilities and shooting accuracy of all the children in the experimental group. In Test 1 in which the children did not run-up but executed the skills from a standing position, all three age groups in the experimental section showed significant improvements in both accuracy and in technical form exhibited. The older two age groups also showed significant differences in the speed at which they undertook the task. In Test 2 in which the run up was added prior to the execution of the skills, the results were slightly more varied. Technical form showed significant improvements across the age groups within the

experimental grouping, while the time on task data identified significant improvements in both the younger children and the 10-year olds.

However, in the control group, the time on task was the only variable tested that showed significant improvements across the three age groups. All other changes were mainly non-significant. Thus, there is no doubt that the intervention worked and handball specific input led to better performances.

That information is of use to this national sports federation as well as others who wish to develop their sports further: simple projects with adequate teacher training and supported by sufficient age-related resources leads to impactful change. The challenge for the future is to track this project as the children mature and identify if the early age results continue into adolescence and beyond.

In terms of the benefits of daily physical education per se, further work is required. This project was designed to consider Handball at School within the setting of daily physical education. The results very favourably noted that handball skills improved in most areas in the experimental group BUT it also identified performance decrements in many of the areas in the control group.

In Test 1 (with no run up), both accuracy and technical form dropped over the six months period, except in the older age group in which form improved. Only in the time on task did the control group improve significantly or show a trend towards improvement in Test 1. Likewise, in Test 2 (with a run up), there were no improvements at all and the trends indicated that at best the scores were the same but mostly worsened. The exception again was in the time on task in which all three age groups showed quicker responses.

While the result is perhaps surprising as this latter group still undertook daily physical education and it might have been assumed that skills would have improved, not from the sports specific training (that this group did not receive) but from general movement skills that the children should have gained, it is suggested that the increase in speed on time on task is a mitigating factor. It is well recognized that the more complex a task, then adding speed to it complicated it further. The authors feel that this might have impacted on the study as it was one of the key instructions: the children were being timed on the shooting tasks and new that they were being assessed not only on accuracy and technical form but on speed. If the children focus on the 'easiest' component of their skills repertoires at their ages, speed of action or doing things faster, this is likely to have caused an overload in the areas that are dealing with accuracy and execution with a focus being elsewhere. The only way to test this would be for the control group to now undertake the test without the speed component as well as with the speed component and look for any differences. A suitable hypothesis could be that daily physical education would positively assist young people to develop

handball skills despite not taking part in regular handball so long as they were allowed to develop at their own pace. The fact that the experimental group showed improvements in accuracy and technical form, even when speeding up tends to support the premise.

Aside from the above suggestion for additional work, future studies should include children who do not have the benefit of daily physical education to identify what differences there are between those who have that opportunity, and those who do not. Such an addition could help to cement the overall importance of daily physical education in the life of a child.

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Levels of Public and Higher Education in Health Promotion in the Light of Focus Group Studies

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Abstract: Health is considered an upgrade value by The WHO Ottawa Charter for Health Promotion (1986), so we study the institutional role of these “upgrade values” from different points of view like roles, interests and representatives. We make our research both in the public and higher education also in the national and international field. In our comparative study we analyse the processes of the higher education in the context of the participants and we outline the concepts of the students. We made two focus group interviews with those students who took part in daily physical education and in their first year in the University of Debrecen and the University of Nyíregyháza. Each focus group contained 15 students who represented their own institutions. They also had to compare their health behaviour and sports practice in secondary school and university. Our research questions focused on the will to do something for health awareness (Pikó, 2002). We were curious about how the forms of developed health behaviour change entering the higher education and what the main motivations of health development are. Our results show that the students of both universities highlighted the institutional infrastructure, the teacher’s attitude and most importantly the social effect of daily physical education.

Keywords: health improvement, public education, higher education, daily physical education

Introduction

Among the scenes of everyday life, educational institutions are places that have a long tradition of teaching a healthy lifestyle. Therefore, it is important that regular physical activity is treated by educational institutions as a value, to promote

the development of a positive attitude towards movement and a commitment to an active lifestyle (Csányi, 2010). In view of this, school can be considered as one of the most important areas of health promotion (Somhegyi, 2012). In public education, there is an opportunity to develop the personality of students, where health and leisure time are valuable (Révész and Csányi, 2015). This is also true of higher education, although its institutional and pedagogical background is less developed.

Literature review

In our study, we wish to highlight, through the WHO Global School Health Initiative, that the roles of public and higher education in health education are fundamentally different. The three levels (following St. Leger, 2001) are:

- transfer of certain knowledge (eg self-assessment, body image);
- developing specific competencies (eg learning about typical health problems);
- developing certain social skills (eg caring for one's own health).

Students need to take the first two levels of public education. These first two levels are different from the third level because the acquisition of the knowledge contained therein greatly influences the individual's quality of life and outlook on life. Mastering the third, more complex level may be a task for higher education (as well as for secondary schools), so it is worth concentrating resources on developing social skills when organizing university programs. The most important pedagogical conclusion to be drawn from university programs is that the personal role of instructors is just as important as educating students, as any individual skills development program is doomed to failure in the absence of a supportive institutional environment.

Although there are many similarities between schools and universities in health promotion, the two environments are fundamentally different. Among the most important differences are:

- from a legal point of view, in many cases schoolchildren are not yet of legal age, so in many cases smoking and alcohol consumption can be an offense, making it difficult to deal with the issues honestly;
- the role of the family in students is typically greater than in many cases away from home;
- sexual activity is - at best - completely different for the two groups, but these boundaries are increasingly blurred;
- the role of teachers and trainers in modeling varies significantly: while personal leadership and support are much more important in schools, the distance between the two groups is greater at universities, so basically other methods are needed.

Perhaps the main difference between the two scenes is that while at school the individual is at the center of health promotion, universities (which in principle

prepare students for socio-economic leadership roles) need to make everyone aware that the knowledge they have acquired it can influence not only individual quality of life but also the lives of a narrower and wider community (St. Leger, 2001).

All countries strive to ensure that healthy young people leaving higher education serve as a positive role model for other sections of society, and that higher education can provide an opportunity for higher education as a last resort. The university should be considered as a theater, because students live their everyday lives, study and work here (Barabás, 2013). Scene approaches date back many years. The Ottawa Charter (WHO, 1986) focuses on a health-promoting environment, and the Jakarta Declaration (WHO, 1997) emphasizes the value of the scene as health promotion strategies can only be realized under the right environmental conditions. The first and best known program based on color space, the so called. "Healthy cities" became a popular movement worldwide (Tsouros et al., 1998). Subsequently, the "health education schools" movement became known. The transfer of this idea to higher education in the UK is associated with Dooris et al., (Dooris, 2006).

Based on these documents, the University of Health Development is an institution that integrates health into its culture as an organizing value. The institution protects the health of educators and students, as well as the well-being of the wider community. Health is an important part of university plans and university policy. Such a university creates and maintains a healthy physical environment in which workplaces that promote health and have a positive impact on those who work there are created; at the same time, they promote students' healthy personal development and social relationships.

On the university scene, problematic issues are grouped around different topics:

- drug and alcohol consumption: Strict regulation and counseling for users is a priority;

- sexually Transmitted Diseases: As universities are predominantly young people who are getting out of close parental care for the first time in their lives, this area is inevitable;

- mental health and well-being: relatively little data and research is available on students. It is primarily due to the reduction of drop-out rates and the need for this area of intervention;

- exercise and healthy eating: An important part of education for a healthy lifestyle is the development of appropriate physical activity and physical education, and the promotion of healthy eating where universities can play an important role (Baidog and Herman, 2018; Dooris and Doherty, 2009; Papp et al., 2019; Tătar et al., 2018; Zadarko et al., 2011).

Material and methods

In our study, we attempt to conduct exploratory research using focus group interviews, thus interpreting the process of transition from public education to higher education in the context of stakeholders. We wanted to grasp the nodes along which the students interpret the influences they understand within the framework of health promotion within the subject of physical education (everyday physical education).

In the spring of 2017, we interviewed 7 students from the University of Nyíregyháza (hereinafter referred to as NY), then 8 students from the University of Debrecen (hereinafter DE), totaling 15 students. The focus groups consist of male and female students who entered tertiary education during their first year of high school and were involved in the health promotion program of daily physical education. The focus groups are distinguished by the student status of the two institutions and the degree programs they choose. During the interviews the atmosphere of the groups was relaxed. The students were happy to tell about their experiences. As the given study population and institution have not yet been examined from this point of view, no concrete hypotheses have been formulated, rather we have focused on research questions.

The main questions of our exploratory research for the already implemented health promotion program (daily physical education):

1. What is the (negative / positive) impact of day-to-day physical education among students in public education?
2. How do the forms of health behavior developed in public education change in the values of students entering higher education?
3. What are some of the main motivational factors that can be a supporting factor in health promotion?

Results

1. The impact of daily physical education

In order to improve the health of students and a healthy lifestyle, in line with the principles of comprehensive school health promotion in Hungary, CXC 2011 on national public education Act 5 provides for the daily, that is five weekly, physical education classes in all grades, the implementation of which began in September 2012. This created an opportunity for our institutions to make a significant contribution to the regular physical activity and physical activity of school-age children. In 2016, the first year of graduation in higher education came to attend this program during high school.

As a research question, what were the effects of day-to-day physical education on the students involved?

We are unable to provide a clear answer to the question we are asking, but we do try to outline decisive directions along some points based on students' opinions.

On the positive side, the serious community-building power of everyday physical education was highlighted. Community and team games were emphasized most:

"I loved the body so much; it was the last year that we were able to work as a team, whatever the sport." (DE boy)

The importance of contemporary communities has already been pointed out in the literature (Pusztai, 2011). Sport enables students to acquire the skills they need to become successful in their lives (such as social skills, collaboration, problem solving, openness to society, social roles, etc.), and positively influences academic achievement overall (Gordon and Caltabiano, 1996; Serbu, 1997; Kovács, 2015).

The same opinions were emphasized in both institutions as a negative effect.

"In the last two years before graduation, there was a lot of pressure on learning and it was not what we wanted we go to volleyball, but we had to run 8 laps. I would change it to do the kids what they want." (DE girl)

They fundamentally agree with the principle of day-to-day physical education, but see it as problematic due to lack of room and overcrowding.

"Because it was every day, many classes had a class at the same time, so there were 3-4 classes in the same room at the same time, so we could play 5 minutes of the 45 minute class." (NYE boy)

"Many times, in the hallway or in smaller halls, the clock was as healthy as it would have been." (DE boy)

To the question of whether compulsory physical education should be introduced in universities, similar to everyday physical education? Various answers were provided by DE and NYE students.

"I would support the introduction because if, for example, we are based on a medical university where I have a lot of acquaintances, I see them ready; they have no time for anything. If sports were compulsory at least 1-2 times a week, they would have the opportunity to do something other than studying." (DE boy)

"No, because there are a lot of students who learn a lot and maybe need sports, but they are not required. Rather, it should be motivation, interest, attention, new opportunities." (NYE boy)

At the university, the proportion of regular sports is drastically decreasing, which is often attributed to the lack of time and the high demands and inflexibility of the university education system. This phenomenon is also difficult to investigate because shifts in students' knowledge, competences, and personality occur during the youth phase (Zinnecker, 1993), when personality traits, worldviews, and thinking

exhibit plasticity. Thus, the process is also related to changes in age. Inglehart's (2008) research, for example, illustrates the effect of age on value preferences.

2. Changes in health behaviors in higher education

Elements of a healthy lifestyle and forms of health behavior are influenced by many factors. Such a factor is age: movement is still an integral part of a child's life (Keresztes et al., 2003), but over time it shows a decreasing tendency (Sallis, 1993). The activity decreases significantly even in young adulthood, because during this phase of life significant changes and life events occur (beginning of independent life) (Goldscheider et al., 1993). Our next research question focuses on this stage of life.

How do the health behaviors of public education change in the values of students entering higher education?

Students are not health conscious. They mainly refer to the lack of time, the university lifestyle:

"I have no time to exercise, no healthy eating, no regular meals, sometimes I forget to eat, so I eat late. Today, for example, I'll be in college from 8am to 8pm." (DE girl)

DE and NYE students have all met some of the noxious passions in high school. It changes which one: which is the least with drugs, most with cigarettes and alcohol. They remove the subject: the "others" did it. The importance of teacher patterns is also articulated.

"We had smoking and alcohol, but after 9th grade. It was not a good example that we saw the same thing from the educators. We were disturbed when they came to the class that we could smell the cigarette." (DE girl)

Students see sport as a general value, but they do not always have the time. DE students, due to lack of time due to university education, do not exercise:

"If I had time, I'd sacrifice anything." (DE boy)

"Today's education system does not allow time for sport" (DE girl)

NYE students have a very positive attitude, they spend more money and time, they are the more athletic focus group.

"Sport is very valuable to me, and I like to spend time doing it, and if it comes to making money, even joining an association, it will require some money. If you want to gain muscle mass, or any improvement, you need to change your life, your diet, or your diet, and that has some financial implications. I appreciate it and if I can, I will sacrifice it." (NYE boy)

Our interviews also confirmed the findings of previous research that: Sport is an active form of health behavior that requires conscious energy investment and conscious control (Pikó and Keresztes, 2007; Dragos et al., 2017). In this case, I would highlight awareness as an important factor.

In terms of health behavior, the mindset of the Conscious Thinking Group (NYE) and its positive lifestyle and nutritional habits were distinguished from those of high school. Thus, the extent to which the individual and the system itself are able to evolve at several levels in an increasingly conscious direction may be the key to success (Orosz and Jónás, 2017).

There are many factors that influence risk-taking behavior. With a positive commitment to sport, it may be easier to withstand the negative, "party" peer pressure almost expected on campus. Here, too, awareness, the specific purpose of life, plays a role. "I'm in the Airplane Program, both for parental support and for my childhood dream." (NYE boy)

3. The main motivational factors of health promotion

As a final issue of our qualitative research, we looked for the main motivational factors that may be a supporting factor in health promotion.

Students attributed a high priority to institutional sports infrastructure and focused on experience-based sport. (Volleyball, aerobics, TRX, kettleball, yoga, meditation, various dances are the favorite sports for students).

Similarly, to public education, the role of physical education plays a key role in higher education. Although personalized relationships between educators and students are increasingly disappearing in a massively expanding higher education system, especially in thousands of students, we can see that a student-friendly, empathetic, curious physical education teacher can exert an enormous impact on students' health and within the context of regular sport education (Kovács and Moravec, 2019).

"The two teachers I contact today still came in and said they were doing their heart and soul, they loved what they were doing, not giving them this lesson and something, they have to do it, but they don't feel like it, they have more things to do." (NYE boy)

Nagy et al., (2017) formulated the following tasks for higher education:

"The generation of day-to-day physical education offers new opportunities for university physical education and sports." The authors say a service-oriented, modern inclusive education has evolved, where the role of the teacher is valued and coaching has become a tool for efficiency. The task of the Physical Education Departments has been to introduce a student-friendly pedagogy that is consistent with student activation and successful education.

The most important supporting factor is the community, where students can gain benefits in several areas during their higher education years.

"I really liked high school gym classes. It was five times a week, we played volleyball, we played basketball, and it really took off in the last few years, the mood was really good, everyone loved it, the whole class." (DE girl)

As a member of a sports community, participating in sporting activities brings many benefits to the individual, as it contributes to social and emotional development, as well as improving the individual dimension of student well-being and psychological well-being. It improves external appearance, social skills, position of control (ie the person's reference point), academic performance, and leads to sports success and helps to accept the structure of positions in the team (Taliaferro et al., 2010; Kovács, 2014).

Findings

In our study, we sought to identify the key drivers that can influence students entering public education from higher education to lead healthier lives. Our qualitative study sought to outline the effects of day-to-day physical education on them.

Based on our results we can say that from the point of view of high school and higher education health behavior students of both universities emphasized the institutional sports infrastructure, the teacher attitude and the most important value of high school every day physical education (Kovacs and Moravec, 2017).

Everyday physical education plays a fundamental role in the development of lifelong exercise-rich lifestyles. During the school years, the emphasis is placed on the acquisition of competences that can be incorporated into the individual's daily life after leaving public education. The long-term value of the program can be realized if there are supply options available at different stages of the exodus from the sport, such as leaving the education system or entering the workplace, life stage, resuming a mobile lifestyle or re-joining (Perényi and Bodnár, 2015). It became necessary to get a clearer understanding of the values of the stakeholders and the learners; which factors could play the most important role in their decisions and in the management of their actions. However, this system of values is constantly changing and is affected by several factors. The most important of these is age - contemporaries, gender, type of sport. The values of the youth populations are clearly shifting the experience towards central, postmodern values, which tendencies are confirmed not only by domestic but also international large-scale value studies (Inglehart and Baker, 2000; Schwartz et al., 2000). Schulze (2000) talks about an experience society, which emphasizes autonomy, freedom of choice, and the search for experience and diversity.

Further research is needed on the fact that by 2024 higher education will reach the age group who will be 12 years old (the whole public education process) behind their daily physical education. From an early age, you may be involved in frequent physical activity. How will the development of health education in higher education change by 2024 to meet the experience-oriented demands of the age?

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Cartographic representation of a sports (football) competition – UEFA Youth League (2013-2019)

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Abstract: The sports phenomenon, football in this case, is analyzed through the angle of the inter-clubs' European competition UEFA Youth League, for teams with players aged under 19. By means of the used cartographic methods, our purpose was to build a useful tool in elaborating territorial planning and development strategies, applicable on local, regional and even continental level. The spatial representation, through adjusted methods, of certain quantitative elements (reflected through number) combined with the qualitative ones (performance) in graphic and cartographic synthetic materials, set in chronological order, finalizes our endeavor with the elaboration of synthetic products of great practical utility. There are analyzed the affiliated federations, participating teams, represented localities etc., the relations between them, their temporal activity sequence and their performances. The resulting maps are thus representations of territorial realities and they faithfully portray the condition of the sports phenomenon through temporal sequences and through its spatial distribution, as a reflection of the support human society.

Keywords: sport team, competition, football, UEFA Youth League, under 19

Introduction

The increase of states number on European level after 1990 led to the increase of national teams' number, sports federations and, implicitly, sports clubs involved in European competitions affiliated to UEFA. In order to give an affirmation

opportunity to as many young people (Atan et al., 2014) as possible the European football forum, besides the traditional senior competitions, founded in 1993 the UEFA Youth League for teams with players Under 19. By means of this study and the used cartographic representation methods (Griffin et al., 2017; Murphy, 2019), our purpose was to accomplish a spatial-temporal analysis tool for a sports competition (Bale, 2000; Herman et al., 2018). Its efficiency is provided by the combination of quantitative elements (number) with the qualitative ones (performances), with the possibility of chronological setting, into original, expressive (Raisch, 2018) and representative synthetic products (Ilieş et al., 2014; Cartwright & Ruas, 2015), especially in outlining the relationship between settlements and sport (Bale, 2002; Reilly and Gilbourne, 2003; Bale & Vertinsky, 2004; Conner, 2014; Kozma et al., 2015). There are analyzed in space and time structural elements of a competition such as: seasonality, affiliated federations, registered clubs, representative localities, etc., all filtered through the quantitative-qualitative spatial-temporal analysis.

Methodology

The methodological component includes gathering real, verified and organized statistical information so it could be processed through GIS. Creating the data base (Robinson et al., 2017) using the information from website¹ facilitates later on, according to the elements taken into consideration, the mapping of the European football space generated by complex geographical and statistical elements of qualitative and quantitative importance (Reilly & Gilbourne, 2003; Ilieş et al., 2014; Kozma et al., 2015; Herman et al., 2016a; Ilieş et al., 2016a; 2016b; 2016c) Thus, original maps are provided which, due to the methods and principles used in elaborating them (Ilieş et al., 2015; O'Brien & Cheshire, 2016; Gartner & Huang, 2016; Herman et al., 2016b; Roth et al., 2017; Raisch, 2018), are very useful in outlining in time and space of a certain phenomenon, event or sports competition (Bairner, 2011; Buhaş et al., 2017; Ilieş et al., 2015; Ilieş, et al., 2016a; Gaffney, 2016). Through the cartographic method and representation ways (dots, circles, cartograms, symbols, etc.), supported by GIS, there are shown quantitative and qualitative spatial-temporal aspects of elements forming the sports phenomenon (Henry, 2005; Shobe, 2008; Sam & Hughson, 2010; Goldblatt, 2011; Ilies et al, 2016a; 2016b; 2016c; James & Day, 2015; Wendt & Scutti, 2016; Buhaş et al., 2018).

Analitical component

The spatial dimension of the international impact of youth football game (players under 19) on inter-clubs European competition level started to be outlined

¹ *ro.soccerway.com*

ever since the organization of the first edition of the UEFA Youth League competition. Practically, the affiliation of national federations and their representation through clubs formed of juniors under 19 represents a way of emphasizing the interest on club level for raising and promoting the young players. In almost every European country affiliated to UEFA (figure 1), irrespective of its dimensions and number of inhabitants, there is at least one national competition for clubs with youth teams.

Chronology and spatiality

Chronologically, 7 editions were analyzed (figure 1; table 1), out of which 6 were complete, while the last one (2019/2020) is still in progress. According with table 1 and figure 2 in all 7 editions participated 44 national football federations from 130 localities with 158 football clubs (table 1).

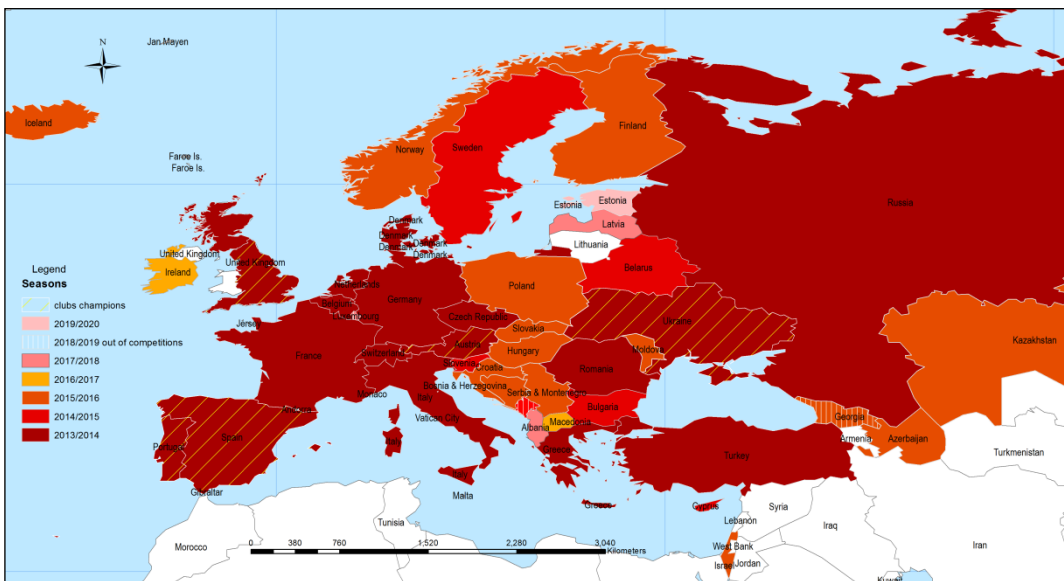


Figure 1. UEFA map. The national federation according with year (seson) of first participation in UEFA Youth League and teams champion ¹

The first UEFA Youth League competition season (2013/2014) gathered no less than 32 teams (table 1), representing 18 national football federations and 29 localities. Madrid, Manchester and London had two teams each. The best represented federation was England, Germany, Italy and Spain with 4 teams each, followed by France, Portugal and Russia with 2 club teams. The competition format included preliminary elimination tournaments. As expected, 4 clubs with tradition from countries with advanced football reached the semifinals: FC Barcelona (first champion), Benfica Lisabona, Schalke 04 Gelsenkirchen, Real Madrid (figure 8; table 2).

Table 1. The national football federation, localities and number of clubs with participation in UEFA Youth League between 2013-2019 ¹

no	National Football Federation	Season 2013/2014	Season 2014/2015	Season 2015/2016	Season 2016/2017	Season 2017/2018	Season 2018/2019	Season 2019/2020	Total									
		Number of																
		Settlements 1	Teams 2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	
1	Albania									1	1	1	1	1	1	1	1	
2	Austria	1	1			1	1	1	1	1	1	1	1	1	1	1	2	3
3	Azerbaijan					1	1	1	1	1	1	1	1	1	1	1	2	3
4	Belarus			1	1	2	2	1	1	1	1	1	1	1	1	3	4	
5	Belgium	1	1	1	1	2	2	2	2	1	1	2	2	2	2	3	3	
6	Bosnia and Herzegovina					1	1	1	1	1	1			1	1	2	2	
7	Bulgaria			1	1	1	1	2	2	1	1	1	1	1	1	3	4	
8	Cyprus			1	1	1	1	1	1	1	1	1	1	1	1	2	2	
9	Croatia					1	1	1	1	1	1	1	1	1	1	1	2	
10	Czech Rep.	1	1			1	1	1	1	1	1	2	2	1	1	4	5	
11	Denmark	1	1			2	2	1	1	1	1	1	1	1	1	3	3	
12	England	2	4	3	5	3	5	3	4	3	4	3	5	4	5	6	9	
13	Estonia													1	1	1	1	
14	Finland					1	1	1	1	1	1	1	1	1	1	2	3	
15	France	2	2	2	2	3	3	3	3	3	3	4	4	4	4	9	9	
16	Georgia					1	1	1	1	1	1					1	2	
17	Germany	4	4	4	4	5	5	4	4	3	3	5	5	4	4	9	9	
18	Greece	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	3	
19	Hungary					1	1	1	1	1	1	1	1	1	1	2	4	
20	Iceland					1	1	1	1	1	1	1	1	1	1	2	4	
21	Ireland							1	1	1	1	1	1	1	1	2	3	
22	Israel					1	1	1	1	1	1	1	1	1	1	3	3	
23	Italy	4	4	2	2	2	3	3	3	4	4	4	4	4	4	5	7	
24	Kazakhstan					2	2	1	1	1	1	1	1	1	1	3	3	
25	Latvia									1	1			1	1	1	1	
26	Luxembourg									1	1					1	1	
27	Northern Macedonia							1	1	1	1			1	1	2	2	
28	Moldova					1	1	1	1	1	1	1	1	1	1	2	2	
29	Montenegro							1	1	1	1					2	2	
30	Netherlands	1	1	1	1	2	2	2	2	2	2	2	2	1	1	3	3	
31	Norway					1	1	1	1	1	1	1	1	1	1	4	4	
32	Poland					1	1	1	1	1	1	1	1	1	1	3	3	
33	Portugal	2	2	2	3	2	2	1	2	2	3	2	2	2	2	2	3	
34	Romania	1	1			1	1	1	1	1	1	1	1	1	1	2	3	
35	Russia	2	2	2	2	2	3	2	3	2	3	2	3	2	2	4	7	
36	Scotland	1	1			1	1	1	1	1	1	1	1	1	1	2	3	
37	Serbia					1	1	1	1	1	1	1	1	1	1	3	4	
38	Slovakia					1	1	1	1	1	1	1	1	1	1	4	4	
39	Slovenia			1	1	1	1	1	1	1	1	1	1	1	1	2	2	
40	Spain	3	4	3	4	5	6	4	5	3	4	3	4	4	5	9	10	
41	Sweden			1	1	2	2	1	1	1	1	1	1	1	1	3	4	
42	Switzerland	1	1	1	1	1	1	2	2	1	1	2	2	1	1	4	4	
43	Turkey	1	1	1	1	1	2	2	2	2	2	2	2	1	1	3	4	
44	Ukraine	1	1	1	1	2	2	1	1	2	2	2	2	2	2	2	2	
	TOTAL	29	32	28	32	57	63	57	61	57	61	58	62	59	61	130	158	

The second edition (2014/2015) had the same format (32 teams), but with a higher number of represented federations (18) with 28 localities. Thus, club teams from Belarus, Bulgaria, Cyprus, Slovenia and Sweden entered the

competition, but countries like Austria, Czech Republic, Denmark, Romania and Scotland were not represented (table 1).

The third edition (2015/2016) “conquered” and extended the football playing Europe through significant increase of the number of represented countries (to 37), as well as of clubs to 63 and 57 localities (figure 1; table 1). The 13 new states were the following: Azerbaijan, Bosnia-Hercegovina, Croatia, Georgia, Hungary, Iceland, Israel, Kazakhstan, Moldova, Norway, Poland, Serbia and Slovakia.

A significant number of federations entered more than two teams into the competition. The format was different as well (figure 3). 32 teams participated in three preliminary tournaments, while other 32 teams from countries with high coefficients on senior level participated in parallel to a competition under the form of 8 teams.

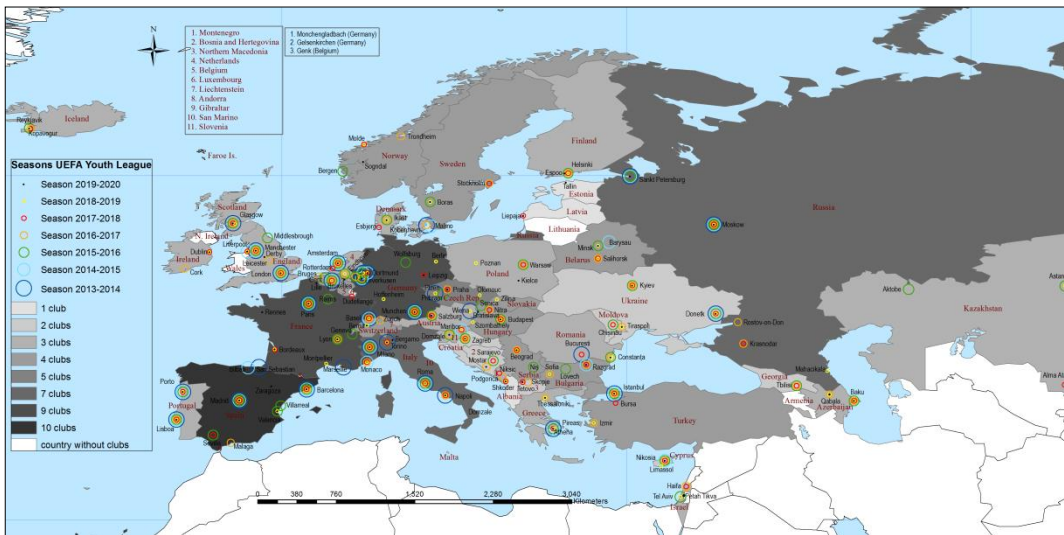


Figure 2. UEFA map. The national football federation, number of football clubs and settlements with teams participation in UEFA Youth League between 2013-2019 ¹

The winners of the 8 groups were qualified in the quarterfinals. The teams ranked on the second places in groups entered the playoffs with the teams qualified after the second preliminary tournament. The quarterfinals, semifinals and the final followed. For the third edition, the final four was made up of Chelsea (champion), Paris Saint Germain (PSG), Anderlecht Bruxelles and Real Madrid (figure 8; table 2).

In the fourth edition (2016/2017) had 61 federation with 61 clubs from 57 localities. The first tournament included 32 teams and two new states: Northern Macedonia and Montenegro. After the first tournament, 16 teams remained. After the second tournament, 8 teams entered the playoffs and other 8 teams joined

them, those ranked on the second places in groups. In the fourth edition, 3 clubs with tradition “relapsed”: Benfica, CF Barcelona and Real Madrid, however, the champion was a surprise team from Austria: FC Salzburg, winner in the final against Lisbon (table 2).

New federations entered the 2017/2018 edition (5): Albania, Latvia and Luxemburg and, implicitly, the number of localities (57) and of representative teams (61) increased (figures 1 and 3). On this edition participated maximum number of federation, 43 (table 1).

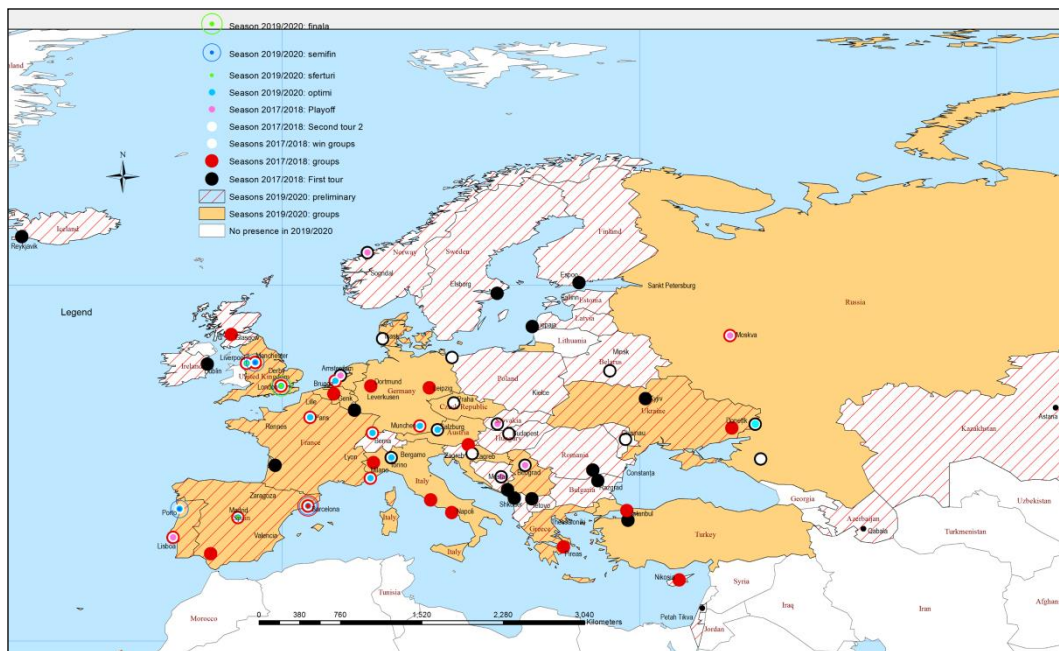


Figure 3. UEFA map. Spatial distribution of the preliminary and groups phase of the 2017/2018 in UEFA Youth League ¹

The sixth edition (2018/2019), in the same format, ended in the summer of 2019 and brought under the lights the team FC Porto, followed by Chelsea, FC Barcelona and Hoffenheim. In the quarterfinals, the following teams were ranked on the places from 5 to 8: Dynamo Zagreb, Olympique Lyon, Real Madrid and Midtjylland Inkast. Number of federation decrease to 37 with 62 clubs from 58 localities.

The last edition, 2019/2020, represented by 41 national federations being in progress, includes 61 teams from 59 localities distributed in the preliminary phase in 8 groups and, in parallel, in two eliminatory tournaments. In the figure 3, it is cartographically represented the spatial distribution of the preliminary phase of the 2019/2020 competition.

Spatiality and the quantitative component

Ever since the 2013/2014 edition, a number of 32 teams, representing 18 European states (table 1) (re)configured the European space (figures 1 and 4) having as criterion the participation of affiliated clubs to the first edition of UEFA YL. At the initiative of inter-clubs European football important forces, the best represented national federations were: England, Germany, Spain and Italy with 4 teams each, Portugal, Russia and France with 2 teams each and Ukraine, Turkey, Switzerland, Scotland, Romania, Holland, Greece, Denmark, Czech Republic, Belgium and Austria with one team each (figure 4). Gradually, the number of participating federations increased to 44 in the 2018/2019 edition, out of the 55 teams entered in UEFA (figures 2, 4; table 1).

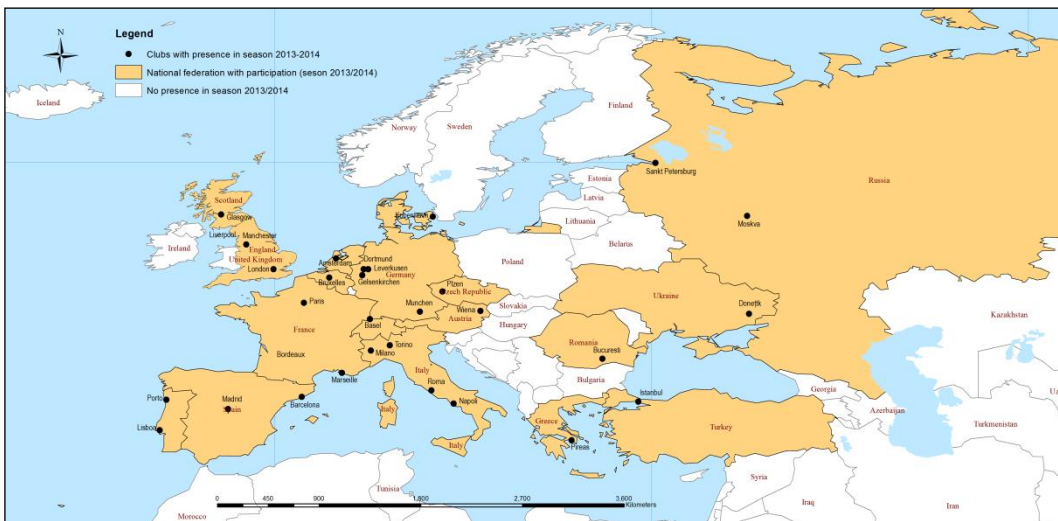


Figure 4. UEFA map. Spatial distribution of national federations and localities with participation in first sezon (2013/2014) in UEFA Youth League ¹

In figure 1, the European football fethederations were represented in chronological order after the year of the first participation in this competition. Up to present, 11 national federations participating to the inter-clubs senior European competitions have not entered any club teams into this competition: Andorra, Armenia, Faeroe Gibraltar, Islands, Kosovo, Liechtenstein, Lithuania, Malta, Northern Ireland, San Marino and Wales. It should also be mentioned that, out of political or economic reasons, UEFA entered in its own competitions extra-European federations such as Armenia, Azerbaijan, Georgia, Israel and Kazakhstan (figure 1).



Figure 5. UEFA map. Spatial distribution of the preliminary phase of the 2019/2020 in UEFA Youth League ¹

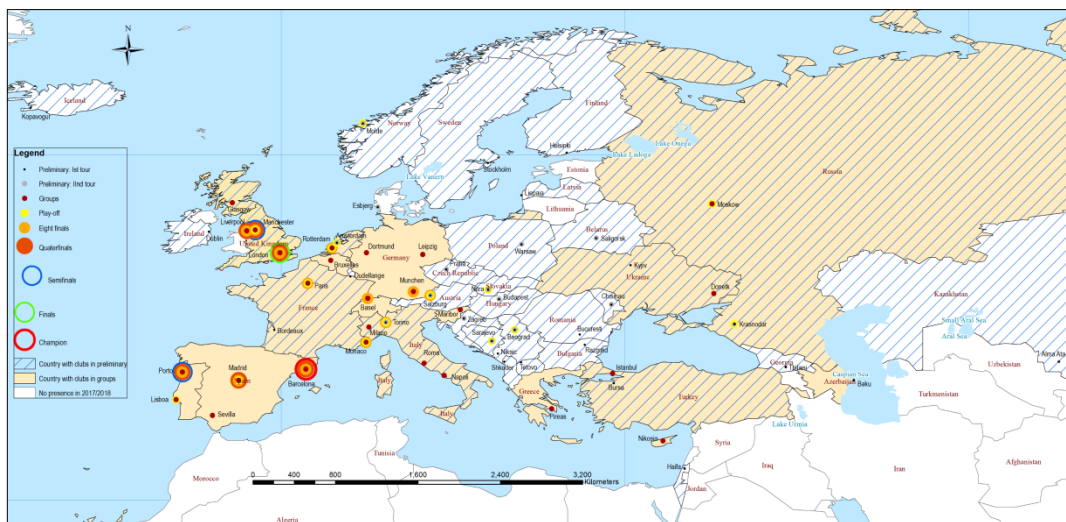


Figure 6. UEFA map. Spatial distribution of the preliminary phase of the 2017/2018 in UEFA Youth League ¹

Out of the 7 editions, the most complete one was the 2017/2018 edition with the participation of 43 national federations. Compared to the previous editions, the federations from Luxemburg, Georgia and Montenegro did not enter any club teams into the 2019/2020 edition. Thus, on the 2019 map (figure 6), 41 national federations are represented.

An interesting aspect to be cartographically represented is the competition management manner through its organization form. For example, in editions

2017/2018 (figure 3) and 2019/2020 (figure 5), thus, two categories of countries, teams and represented localities are identified:

- teams participating in preliminary elimination tournaments (32 teams in two tournaments);

- teams participating in competition groups (32 groups divided in 8 groups x 4 teams each);

The superior phases include (figure 6):

- 16 teams in the quarterfinals (eliminary): the 8 winning teams of the second preliminary tournament were matched with 8 teams from the second places in the groups. After this tournament, 8 teams remain;

- 16 teams in the eighths of finals: the winners of the 8 groups and the 8 teams qualified from playoff;

The end of the competition includes quarterfinals, semifinals and big final.

Quality and spatiality

Spatial distribution of the sports phenomenon

a) The method of cartograms and the color spectrum used in the cartographic construction from figure 7 show the spatial distribution of a series of data over 7 years with competition specific elements on country level such as: football federations participating through clubs entered into competitions; the year they entered the competition; the year (years) when they did not participate to the competition; the number of participations since the competition for under 19 club teams was founded. At the same time, the map mirrors faithfully the youth football representativeness on European states level. For example, regarding the oldness in competition, there are two areas outlined on the map (figures 1, 2 and 7): a western one, made up of countries representative for European football (12 federations) and an eastern one encompassing countries from the former socialist block: Russia, Ukraine and Romania, to which Turkey and Greece are added in the south-east. Amongst these, a Central European group occurs, from the Mediterranean to the Baltic Sea, connected with the Scandinavian area. Kazakhstan and the Caucasian countries close up the European football space in the south-east. In conclusion, figures 1, 2 and 7 shows quite faithfully the spatial distribution of "European football forces", pointing out that they can also be found dominantly in inter-club youth (under 19) football competitions.

b) Through the method of points and circles to scale, there can be represented the quantitative dimension of the sports phenomenon (teams, localities, etc.) and the qualitative one (performance, oldness, etc). Figures 1, 2 and 7 shows spatially all centers on level of locality and sports federation which participated with club teams to all the 7 editions of UEFA Youth League. Thus, the

position of the point or of the circle shows the represented locality and the dimension of the point or of the circle shows the number of teams in the respective locality. Other elements, represented through different colors, can be added, such as: the edition or the number of editions (figure 2). A brief analysis of the 7 editions emphasizes a series of aspects such as (figure 2):

- 44 national federations were represented; the number of participating teams was 158; the number of represented localities was 130;

- the following localities had the highest number of teams: London (3), Budapest (3), Moscow (4), Belgrade (3), while Wienn, Minsk, Sofia, Bucharest, Prague, Manchester, Helsinki, Tbilisi, Reykjavik, Dublin, Torino, Milano, Lisbon, Madrid, Glasgow, Stockholm and Istanbul had 2 teams each. To these, other 120 localities are added with one team each.

- the highest number of localities were in the following countries: France (9), Germany (9), Spain (9), England (6), Italy (5) etc.

- the highest number of teams had federations from: Spain (10), and 9 football clubs England, France and Germany.

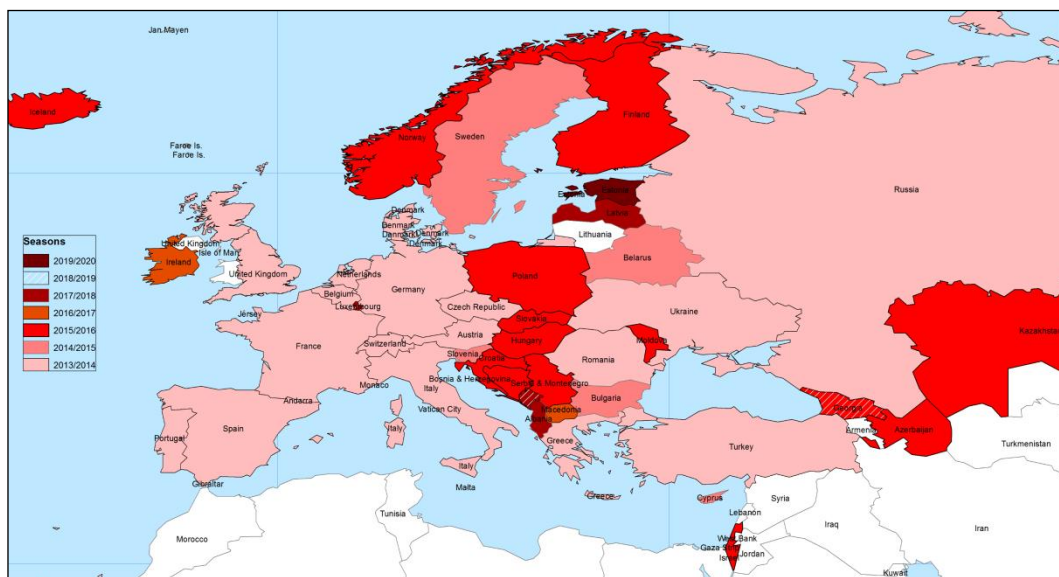


Figure 7. UEFA map. The national federation according with year (seson) of first participation in UEFA Youth League and teams champion ¹

To these, there can be added a series of other pieces of information generated by the combination of quantitative (number) type of elements with the qualitative ones (performances) and their spatial distribution.

Another interesting aspect is provided by the spatial concentration map of the youth sports phenomenon determined by two directions:

- polycentric development (several clubs from the same locality: Madrid, London, Moscow etc.), typically for England, Spain, Russia etc
- or the spatial one (one club and one represented locality), typically for Germany, Italy etc.

Quality through representation in the superior competition phases

Combining the cartograms method with the points method in figure 2-9, the cartographic representation shows, on the spatial distribution background, the performing federations and the positioning on the places 1-8 in the 7 competition seasons of the participating club teams. On the level of the 7 editions, a qualitative aspect results from the cartographic representation of the first 8 qualified teams (quarterfinals). Through the representation method, the country, the number of participations, the place taken, etc, are all outlined by overlapping a series of 7 maps (for each edition) in the synthesis map of representation in the superior competition phases (table 2; figures 2 and 8). According to the detail degree, this representation manner can be with one element (the champion) or n elements (level of competition: semifinals, quarterfinals, eighths of finals, etc).

Table 2. The first 8 qualified teams (quarterfinals) in UEFA Youth League ¹

Place	Season 2013/2014	Season 2014/2015	Season 2015/2016	Season 2016/2017	Season 2017/2018	Season 2018/2019
1	CF Barcelona	Chelsea London	Chelsea London	FC Salzburg	CF Barcelona	FC Porto
2	<i>Benfica Lisabona</i>	<i>Sahtior Donetk</i>	<i>Paris SG</i>	<i>Benfica Lisabon</i>	<i>Chelsea London</i>	<i>Chelsea London</i>
3-4	Schalke 04 Gelsenkirchen	Anderlecht Bruxelles	Real Madrid	CF Barcelona	FC Porto	CF Barcelona
3-4	Real Madrid	AS Roma	Anderlecht Bruxelles	Real Madrid	Manchester City	Hoffenheim
5-8	Manchester City	Benfica Lisboa	Ajax Amsterdam	Ajax Amsterdam	Athletico Madrid	Dinamo Zagreb
6	Paris SG	Manchester City	Benfica Lisabona	Athletico Madrid	FC Liverpool	Olympique Lyon
7	Arsenal London	Atheltico Madrid	CF Barcelona	CSKA Moscova	Real Madrid	Real Madrid
8	Chelsea London	FC Porto	AS Roma	FC Porto	Tottenham Hotspur	Midtjylland Ikast

On the level of final teams (table 1, figure 8), 7 federations were represented in the semifinals: Spain, Portugal, England, Austria, Germany, Belgium and Ukraine, and the winners were: England (2), Spain (2), Austria (1) and Portugal (1). Through the method of points, there are represented the localities with teams

which obtained a ranking in the first 8 teams in the 7 competition seasons. Analytically, the following data stand out:

- 4 teams (CF Barcelona 2, Chelsea London 1, FC Salzburg 1 and FC Porto 1) from 4 localities (Barcelona, London, Salzburg and Porto), belonging to 4 distinct federations (England, Austria, Portugal and Spain) dominated the competition by winning the 6 champion titles of UEFA Youth League.

- except the Londoners from Chelsea (3 editions), other 3 teams (Sahtior, Paris SG and Benfica) from 3 localities (Donetsk, Paris and Lisbon) raised the number to 5 federations (the winners together with France and Ukraine) which played the 6 finals.

- out of the 5 finalist federations, only Portugal participated with 2 teams (FC Porto and Benfica) from 2 different localities (Lisbon and Porto), only FC Porto being a winner.

- regarding the semifinals and the occupants of places 3-4, next to the already “traditional” teams mentioned in the finals, the participating federations map is extended and includes 3 new states (Belgium, Germany and Italy), together with traditional ones: England, Spain, and Portugal, 6 new teams (Schalke 04, Real Madrid, Anderlecht, AS Roma, Manchester City and Hoffenheim) and 6 different localities (Gelsenkirchen, Madrid, Bruxelles, Roma, Manchester and Hoffenheim).

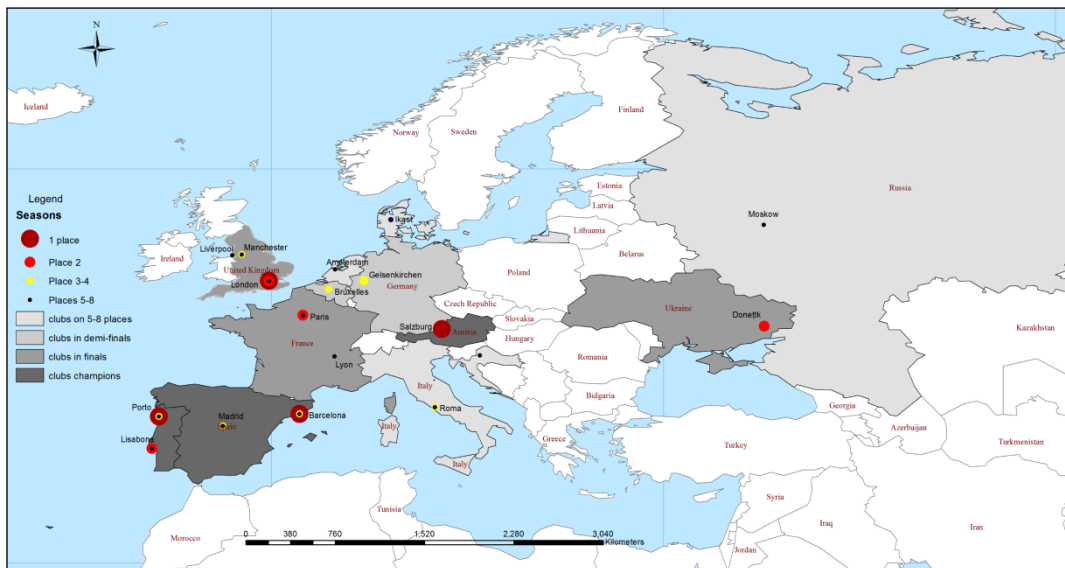


Figure 8. UEFA map. Performance, measured through the qualification among the first 8 teams in all seasons of UEFA Youth League (2013-2019) ¹

- amongst the aces of the 6 finalized editions, we found 13 teams (table 2) on the 24 theoretically available places, most of them being with the teams CF Barcelona (4), Chelsea (4), Real Madrid (3), Anderlecht and Porto with 2 each. Regarding the cities,

the followings stand out as polarizing centers: Barcelona (4), London (4) and federation wise, only 8 of the European ones occur: Spain (7), England (4) and Portugal (4), Germany (2), Austria, Belgium, Italy and Ukraine with one each.

- the places 5-8 extend the participation map with 4 more federations (Denmark, Russia, Netherlands and Croatia), with 8 new teams (Arsenal London, Atletico Madrid, Midlytdian Ikast, Dinamo Zagreb, CSKA Moscow, FC Liverpool, Ajax Amsterdam, Tottenham London), next to the 8 traditional ones, and 6 new localities (Amsterdam, Moscow, Lyon, Zagreb, Ikast and Liverpool).

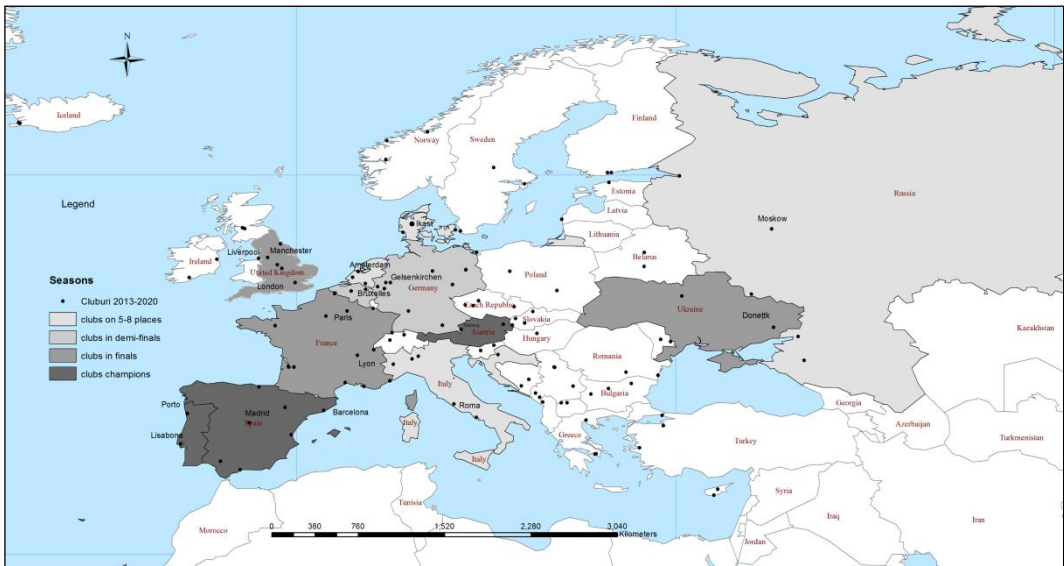


Figure 9. UEFA map. Performance of national federations, measured through the qualification among the first 8 teams in all seasons of UEFA Youth League (2013-2019) ¹

Performance, measured through the qualification among the first 8 teams (out of 64 participants per edition), stands out on the level of 12 federations with 20 teams, representing 13 localities.

All these qualitative-quantitative elements are faithfully represented on map 1 which can be a good analysis tool in elaborating space development strategies of a sports phenomenon.

Conclusions

Spatial-temporal patterning through cartographic representation of a sports competition can significantly contribute as support to its development strategies elaboration. Through the properly chosen cartographic and graphic methods, a large number of elements can be shown, individually or synthetically, through the

outcomes resulted from their combination. Thus, there can be shown many quantitative elements whose spatial distribution reflects the amplitude of the phenomenon in a given area. The complexity of the spatial analysis can increase by combining qualitative aspects (performances) with the quantitative ones (number), to which the temporal component is added. The case study focused on UEFA Youth League competition reflects, through the cartographically represented materials, the polarization centers of the phenomenon on country, club and locality levels. On the level of the 7 editions of analyzed competitions, 44 represented federations entered no less than 158 club teams, representing 130 European localities. Performance wise, referring to the ranking on the first 8 places during each edition, only 12 federations out of 44 were represented, while the number of localities was 12 out of 130. Through the data base elaborated with the representation methods chosen as appropriate for our endeavor, the resulting product, the map, represents a very useful tool due to the fact that it provides the possibility of a real spatial analysis, quantitative-qualitative comparisons, emphasizing certain elements from simple to complex and, especially, the ability to synthesize and spatially show elements and processes useful in elaborating territorial planning strategies from local to general level (European in the present case).

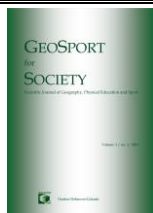
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Polish Football Teams in the Champions League - Does the Budget Decide Everything?

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Abstract: The research on the participation of Polish football teams in the Champions League presented a retrospective view of the competition in one of the most important and prestigious football tournaments in Europe and the world. The article attempts to answer the question about assessing the budget size of individual football federations for the level of national leagues. The quality of national competitions largely determines the chances of a high place in the UEFA cup and additionally translates into the number of teams that take part in the competition. Taking the above into account, it can be assumed that the budget size of the national leagues football teams is positively correlated with their high achievements in UEFA competitions. Unfortunately, the Polish football league, compared to other European leagues, has relatively modest financial resources, which, according to the authors, is reflected in both the number of Polish teams participating in the group stage and their results.

Keywords: football, UEFA, Champions League, budget, national league

Introduction

Football games have always enjoyed great interest not only from fans but also from a wide audience (Jarvie, 2006; Ilieş et al, 2014; Merkel, 2012; Dehoorne et al., 2019; Smith and Stewart, 2007). In a sense, football matches are a substitute for old knights' tournaments or even more modern wars - for national teams. Football plays as well important role in economy (Buhaş et al., 2017; Breitbarth and Harris, 2008; García-Sánchez, 2007; Herman et al., 2016). Which confirms both the scale of preparation and the amount of financial resources allocated for transfers of players

whose earnings in many clubs reach a cosmic level. An additional aspect of winning at a football stadium, in the case of national teams, is playing national anthems and the presence of national flags, not so much prepared by the organizers as visible in the stands (Ilieş et al., 2016; Chirazi, 2019). The most prestigious competitions of European teams - UEFA Cup - can count on the same scale of interest. In this case, instead of national emotions, we are dealing with equally great in psychological terms emotions associated with the known and described combination - our versus strangers (Scutti and Wendt, 2016). The local impact of football clubs has long ago turned into cross-border worship for the best football teams (James and Day, 2015), and supporter clubs for teams such as FC Barcelona and Real Madrid are found in many European countries and beyond (Shobe, 2008).

Methodology

To show the overall picture of the matches of Polish football club teams in the Champions League, a retrospective view of the games was used, in which Polish teams managed to be promoted only three times. On the one hand, this may indicate the weakness of Polish football, or on the other hand, the relatively small financial resources at the disposal of football clubs. In the era of player transfers (Mikołajczyk, 2011), the correct thesis about the decisive impact of finances on the purchase of players seems to be, which in most of the analyzed cases directly translates into success in UEFA competition. Taking the above assumption into account, the article attempts to answer the question about the assessment of the budget size of individual football federations at the level of national leagues.

The quality of national competitions largely determines the chances of a high place in the UEFA cup and additionally translates into the number of teams that take part in the competition. Taking the above into account, it can be assumed that the budget size of the national leagues football teams is positively correlated with their high achievements in UEFA competitions. Unfortunately, the Polish football league, compared to other European leagues, has relatively modest financial resources, which, according to the authors, is reflected in both the number of Polish teams participating in the group stage and their results. The analysis used a simple analysis of the facts and a comparison of the budgets of national football leagues.

Participation of Polish football teams in the UEFA Cup

In 1955, the Champions Cup began, which changed its name to the Champions League in 1992. The Polish team for 27 seasons of this elite league managed to advance to group competitions only three times. There are four qualifying rounds in the current system. The Polish Champion must start from the first elimination phase. Four strongest leagues, i.e. English, Spanish, German and Italian, have 4 places in groups. In the

1992/1993 season the games began in a changed form. Poland is represented by Lech Poznań, who won the championship and was the first representative from our country. The first round manages to beat Skonto Riga. In a two-leg game, it was enough to win in the capital of Greater Poland 2: 0 and draw in the capital of Latvia to advance. In the next stage, it turns out to be too strong Swedish champion from Goteborg, to whom the Poznan club succumbs after two matches, up to 0: 4.

In the next season, Poznan's representative is Poland again. In the first stage this time he goes to the team from Israel. He wins at home 3: 0 and away 4: 2. In the next stage there is a much more demanding opponent, which is Spartak Moscow, who defeats our Champion in the 7: 2 aggregate and again the eliminations end for the Polish team in the second stage. This time in the season 1994/95 our country is represented by a new Champion, and thus Legia Warsaw. The preliminary round for the team from Warsaw is the first and the last, succumbing to the team from Croatia, Hajduk Split in the aggregate as much as 5: 0.¹

In the 1995/1996 season, 4 years after the creation of the Champions League, the Polish team, namely Legia Warsaw, was promoted to group competitions in the defeat by beating Goteborg 3: 1, in Warsaw 1: 0 and away 2: 1. It can be said that Legia avenged Lech, who succumbed to Swedes 3 years ago. It didn't end in promotion, as always. The Polish champion managed to place behind Spartak Moscow behind him and thus advanced to the best eight of these elite games. In the first match, the Polish Champion defeated Rosenborg Trondheim, two weeks later he succumbed to Spartak in Moscow 2: 1. In October, he plays a match against the English club Blackburn Rovers, with which he wins 1: 0 in Warsaw, in a rematch November 1 there is a goalless draw. The seven points Legia wins will prove sufficient to reach the quarter-finals. The last two matches are the defeats of the club from the capital of Mazovia, the first on November 22 in Trondheim lost 4: 0. The next two weeks later in Warsaw, lost to Spartak 1: 0. After leaving the group, Panathinaikos Athens was waiting for the Warsaw club. A goalless tie is scored in Warsaw on June 6, but in Athens Legia is losing 3: 0. Nobody suspects that this is the last such a great success of the Polish club in the games of this rank.

In the next season, 1996/97, the Champion changes again in Poland. This time it's Widzew Łódź, which on August 7 wins the away match against Danish team Brøndby 2: 1. After an amazing end to the match, Widzew scores a goal at 3: 2, which gives him promotion. There is a 4: 4 draw in the tie, but more goals scored away gives promotion to the group games to the club from the capital of the Lodz region. The first match for Widzew takes place in Dortmund, Borussia, who wins 2: 1, turns out to be better. Atletico Madrid came to Łódź on 25 September, defeating the Polish

¹ www.livescore.in; 2019

Champion 4: 1. Widzew went to Bucharest on October 16, where he lost to the local Steaua 0: 1. Romanian champion comes to Poland after 14 days, but Widzewa team wins 2: 0. The last 20 November in Lodz hosts a team from Germany, which exports one point after a draw with the Polish club 2: 2. At the end of the group games on December 4, Łódź Widzew went to the capital of Spain, where he lost to the local Atletico 0: 1. After six matches, the Polish champion had 4 points. They only managed to take third place thanks to the goal balance and had to say goodbye to the Champions League cup round. I guess no one thought at the time that we would have to wait 20 years for the Polish team in the group stage of the UEFA Champions League.

In the 1997/98 season, Łódź Widzew becomes the Polish champion again. In the first round, he goes to Azerbaijani Neftchi Baku, with whom he wins 10: 0, which gives him hope to repeat the feat from the previous season and advance to the group stage. The second round brings the Polish champion to earth, who goes to the Italian Parma and loses 7: 1 on a two-legged basis. In the next season the team from Lodz becomes the champion again, but this time it is ŁKS, who in the first preliminary round goes to Azerbaijani Kapaz Ganja, with whom he wins 7: 2. The next step is to beat Manchester United English. At the stadium of red devils ŁKS is 2-0, only draws at home and are eliminated from the games. In the 1998/99 season Widzew returns to the chair of the leader, starting the game from the second round, in which he will face the Bulgarian club Liteks Łowecz with whom he drew in a 5: 5 aggregate. Bulgarians won at home 4: 1, the same amount Widzew won in Poland. They needed punishments, which ended with the victory of the Łódź team 3: 2. In the third round, the Polish Champion goes to Italian Fiorentina, with whom he loses 5: 1 after two matches.

At the beginning of the new century, Polonia Warsaw becomes the new champion of the country from the Vistula River, starts the game from the II preliminary ore and plays with Dinamo Bucharest. Away, the Polish team wins 4: 3, and 3: 1 at home, which gives them 7: 4 and promotion to the next round. In the third preliminary round, Polonia goes to the Greek champion Panathinaikos Athens, well known to Polish teams. In Płock, where our champion played his matches, on August 9, 2000 there is a 2: 2 draw, unfortunately fourteen days later at the stadium in Athens, Polonia successes 1: 2 in Warsaw and has to say goodbye to the group stage.

After another season, Wisla Krakow becomes the Polish champion, in the second qualifying round he has to face the Latvian champion, the first match takes place on July 25, 2001 in Liepaja, where Skonto Riga plays its matches and ends with the victory of the Polish team 2: 1. After a week, during a rematch in the capital of Lesser Poland, Wisla wins 1: 0, which gives two matches 3: 1 and promotion to the next stage of the competition. In the third preliminary round, the Polish champion has a very difficult task because he will play against FC Barcelona, with whom he will lose at home on August 8, 2001 3: 4 and away thirteen days later 0: 1.

After seven years break, Legia Warsaw returns to the seat of the leader, who goes to face the Macedonian champion FK Vardar Skopje in the capital of Macedonia on July 31, 2002 in the second preliminary round. The Polish champion wins 3: 1, and eight days later the team from the capital of the Mazowieckie voivodship draws 1: 1 at home and after two matches it is 4: 2, so the Polish team will advance to the next stage of the competition. In the next stage Legi comes to face the Spanish club FC Barcelona. The first match is played in the capital of Catalonia on August 14, 2002, where the hosts win 3: 0, after two weeks the match takes place in Warsaw, the guest wins again 1: 0. After two matches it is 4: 0 for the team from the Iberian Peninsula, and the Polish team is once again eliminated after the third preliminary round.

After a two-year break, Wisła Kraków is again a Polish champion. In the second round, he goes to the Cypriot team Omonia Nicosia. The first match takes place in Krakow on July 30, 2003 and Wisla 5: 2 wins. A week later, Nicosia on the island of the Mediterranean draws 2: 2, the team from the capital of the Lesser Poland voivodship wins 7: 4 after two matches, which means a promotion to the next stage for the Polish team. In the third round, the Polish champion has a very difficult task to defeat the Belgian league winner, Anderlecht Brussels. The first meeting takes place in the Belgian capital on August 13, 2003, where the hosts win 3: 1. Another clash takes place in Krakow on August 26, 2003. The guests win for the second time this time 1: 0 which results in a 4: 1 aggregate and the team from Brussels will advance to the next stage. In the 2003/04 season, she wins the Polish league for the second time in a row Krakowska Wisła and she will represent Poland in the qualifying rounds, and maybe later in the champions league itself.

In the 2004/05 season, for the preliminary phase, the champion from the capital of Lesser Poland is going to Georgia on July 27, 2004 for a match with Georgia Georgia Tbilisi, whom she defeated 8: 2, and after eight days in Krakow she won another victory this time 3: 0. After two matches it was 11: 2 and the Polish team's promotion to the third stage. In this round, the Spanish team of Real Madrid was waiting for Wisla, with which they lost twice at home on August 11, 2004 0: 2, then 1: 3 and had to say goodbye to the Champions League by losing after two matches 1: 5. The third season in a row wins the Polish league Wisla Krakow, the Polish team for the first time begins the struggle from the third qualifying round. He meets a team that Polish teams know better and better, namely the Greek Panathinaikos Athens. The first match takes place in Krakow on August 25, 2005, where the locals win 3: 1. Was it optimism? However, the final test must be taken away. In the Greek capital after regular time the game has the same result as in the capital of Lesser Poland, so the promotion will be decided by extra time, in which Panathinaikos scores a goal 4: 1 and is happy with the promotion by winning the

two goals in a single goal, i.e. 5: 4. Polish team again does not get into the group in the champions league.

In the 2006/07 Champions League, our country will be represented by a new champion, Warsaw Legia. In the second round he has to face the Icelandic national champion FK Hafnarfjoerdur, the first match takes place on July 26, 2006 on this volcanic island in the city of Hafnarfjoerdur, where the Polish team wins 1: 0 against the capital. A week later in Warsaw Legia wins 2: 0 and after two matches wins 3: 0, thus advancing to the next stage. In the third phase, the Ukrainian champion is waiting for the Polish team, and it is Shakhtar Donetsk. The first start takes place on August 9, 2006 in Donetsk, a club from a country lying on the Vistula loses 1: 0, two weeks later the Warsaw team is losing 2: 3 to their team from Ukraine and Shakhtar will continue to play by winning Legia after two 4: 2 matches. The conclusion is that Polish fans have to wait another year for the team in this elite group.

For the first time in history, Zagłębie Lubin becomes the Polish champion and it will represent Poland in the League of the best teams in Europe in the 2007/08 season. The winner of the Polish league goes in the second round to Romanian champion Steau Bucharest. The first meeting takes place in Lubin on July 31, 2007, the team from Bucharest wins 1: 0, nine days later there is a rematch in which the team from Romania wins again 2: 1 this time. After two matches it is 3: 1 and the Polish club is once again losing in the qualifying rounds. After a period of three years, Wisła Krakow wins the Polish league, and their rival in the 2nd stage will be a team from distant Israel. The first match will be played on July 30, 2008 in Jerusalem. The Beitar 2: 1 team won. After a week, the next meeting takes place in Krakow, where Wisła turns out to be better, winning 5: 0, which gives the Polish team 6: 2 on a two-fold basis and promotion to phase III. In this round a much more difficult task awaits the team from the capital of Lesser Poland. He has to face FC Barcelona. First, the match will take place on August 13, 2008 in the capital of Catalonia, where the team from Spain wins with Wisła 4: 0. August 26 at the white star stadium there is a rematch, which unexpectedly the team from Krakow wins 1: 0, but this is not enough for promotion to the group. After two matches it is 4: 1 for Barcelona. ²

The team from Krakow defends the title and will represent Poland in the elite European competitions in the 2009/10 season. In the second round Wisła will play on the field with the Estonian club Levadia Talinn. Due to the renovation of the stadium in Krakow, the winner of the Polish league must play their match in Sosnowiec on July 15, 2009, in which there is a 1: 1 draw. A week later the duel takes place in the capital of Estonia, which Wisła loses 0: 1, after two matches it is 2: 1 for Levadia, so after the second phase the Polish team breaks with the eliminations.

² www.hppn.pl; 2019

After a seventeen-year break, Poznań Lech returns to the first place in the league, who will appear in the Champions League qualifying in the 2010/11 season. In the second stage he will face the Azerbaijani team Inter Baku. The first meeting takes place at the Azeris on July 13, 2010, the team from the capital of Wielkopolska wins 1: 0. Then on July 21, 2010 the rematch takes place in Poznan, Inter wins 1: 0 and in the match is 1: 1, so extra time is needed to decide, after which the same result is still maintained. To determine the winner you will need a penalty, in which Lech turns out to be better by winning them 9: 8 and securing a game in the third round. In it he will meet the Czech Sparta Prague. The first match will be played in Prague on July 27, 2010. Here the Czech team wins 1: 0. After a week another start is in Poznań, in which Sparta 1: 0 also wins. After two matches it is 2: 0 for our neighbors team and the Polish team will not once again play in groups with the best teams in Europe.

After a year of break, Wisła from Krakow returns to the chair of the leader. In the preliminary stage II it must measure Skonto Riga. In the first skirmish on July 13, 2011 in the capital of Latvia, the Polish team wins 1: 0, and on July 19 at the Krakow stadium two goals are scored for Wisła, after two matches it is 3: 0 and the team from the capital of Małopolska reports in the third stage of elimination hitting the Bulgarian Liteks Łowecz team, with whom they win twice. First, 2: 1 in Lovech, then 3: 1 at Reymonta Street, the double-ended match results 5: 1 for the Polish champion. For the first time the Polish team reaches the fourth qualifying round after the so-called Platini Reform from the 2009/2010 season. At this stage, the Wisła will take on the Cypriot APOEL master Nicosia. On August 17, 2011, they take home this island club by winning 1: 0, a rematch six days later takes place in Nicosia, APOEL wins 3: 1, so only one goal was missing from the White Star for the desired promotion to the Champions League group competition. After two matches it is 3: 2 and the Cypriot team will play with the best teams in Europe.³

In the 2012/13 season Poland will be represented in Silesia by Wroclaw Silesia, who will face the Montenegrin champion Buducnost Podgorica in the second qualifying round. The first match takes place in the capital of the country from the Balkans July 18, 2012, the team from the capital of the Dolnośląskie voivodship wins 2: 0, the revenge takes place a week later, in this match Montenegrins are better and they win 1: 0. After two matches there is 2: 1 for Silesia, which gets a pass to the next round. In the third preliminary phase, the Polish champion will take the Swedish team Helsingborgs IF, this time the two match will start in Wroclaw on August 1, 2012, in which the Lower Silesian team will lose 0: 3, and in the away match seven

³ www.transfermarkt.pl; 2019

days later 1: 3. He is worse by five goals in a two-leg breakdown and loses 1: 6. Polish team the next season must wait for promotion to the best league in the world.

Legia Warsaw becomes the Polish champion after the 2012/13 season and she will represent the country lying on the Vistula in the competition of the best teams of Europe in the 2013/14 season. In the second stage, the team from the capital of the Mazowieckie Voivodeship will face the Welsh team The New Saints FC, the team from Poland will play first away on July 17, 2013 in Wrexham, for which they will win 3: 1, a week later in Warsaw is 1: 0 for the capital, the result after two matches is 4: 1 for Legia and makes them in the third phase. At this level of competition, the Polish champion is given the chance to face the Norwegian team Molde FK, in the Norwegian town on July 31, 2013 there is a 1: 1 draw, and eight days later in Warsaw the teams are again draw, this time 0: 0, the goal scored on leaving gives promotion to the Polish team. Victory in the next phase gives rise to group competitions, for the second time we manage to get this level of elimination for the Polish team. The team from the Polish capital in the fourth round will face the Romanian Steaua Bucharest, on August 21, 2013 in the capital of the country lying on the Black Sea the match ends in a 1: 1 draw, in Warsaw there is also a 2: 2 draw this time. Despite a 3: 3 draw after two matches, Steaua will get a pass to the group matches because he scored more away goals. Polish supporters could have thought that so little was missing, and on the other hand the same thing again, i.e. no play in the Champions League. For the second time in a row, the Polish champion is the team from the capital of the country lying on the Baltic Sea, in the second round Legia will be taken by the Irish team of St. Patrick's Athletic F.C., the first match on July 16, 2014 takes place in Warsaw, the winner of the Polish league draws 1: 1 against the Irish team, in a match after seven days in Dublin the Warsaw club wins by winning 5: 0 and thus advancing to the next stage. In the third phase of Warsaw Legia, a meeting was held with Scottish Celtic Glasgow. On July 30, 2014, Łazienkowska scores a 4: 1 result, a week later despite the victory of the Polish team, Celtic got a bye, so he won 3: 0, in the aggregate it was 4: 4. The away goal gave the Scottish team a promotion to the fourth round. Due to the mistake of the Legi staff and the introduction of a player at the end of the match who was not reported for this competition, the Polish team will not have a chance to fight for elite competition.⁴

In the 2015/16 season, Poland will be represented in the qualifying rounds by Poznań Lech, who will face in the second preliminary round the champion of Bosnia and Herzegovina, i.e. K Sarajevo. First, the meeting was played in Sarajevo on July 14, 2015, the Polish champion won 2: 0, after eight days in the capital of Greater Poland, Lech won 1: 0, after playing matches it was 3: 0 for the Polish champion who in this way went on to the next round. The third elimination phase is a confrontation with

⁴ www.hppn.pl; 2019

the Swiss FC Basel and a very difficult task for the Polish team, first the match took place at Bułgarska Street. On July 29, 2015, the Poznań team lost at home 1: 3, a week later in Basel, the team from the capital of the Wielkopolska Province failed, this time 0: 1. After the match in Poznań and Switzerland, it was 4: 1 for FC Basel, who was given a pass to the next round. The Polish champion has once again lost in the qualifying rounds; the saying "maybe next year" has already been adopted in the country from the Vistula.

Budgets of selected European football leagues in the 2019/2020 season

Legia Warsaw is coming back to the first place in the league, it will represent Poland in the 2016/17 qualifying rounds, yet nobody knows that fans will remember this season for a long time. In the second round, the Polish champion gets on the best team from Bosnia and Herzegovina, namely HSK Zrinjski Mostar. The first meeting takes place on July 12, 2016 in Mostar, the teams draw 1: 1 with each other, in the rematch match on July 19, 2016 at the stadium at Łazienkowska Street, the locals win 2: 0, they are 3: 1 on the promotion and the Polish team is promoted. The third phase is a duel with the Slovak AS Trencin, in the town of Zilina at the southern neighbors of Poland, the team from the capital of the Mazowieckie voivodship wins 1: 0. A week later in Warsaw the result is 0: 0, thanks to the goal in Slovakia, Legia gets the next fourth stage of the elimination, here he goes to the Irish Dundalk FC. On August 17, 2016 in Dublin, the Polish champion wins 2: 0, after six days in the Polish capital, the teams draw 1: 1 with each other, and this means 3: 1 after two matches for the Polish champion and the third promotion of the Polish team in the history of the Champions League. In the group stage, in Group F Legia will face Borussia Dortmund, Real Madrid and Sporting Lisbon. The opening for the Polish team takes place in Warsaw on September 14, 2016 with the German club Borussia Dortmund, with which they lose 0: 6. Thirteen days later, i.e. on September 27, 2016, the Warsaw club goes to Lisbon and loses 0: 2 to the locals there. The next clash takes place on October 18, 2016 in Madrid, where Legia loses 0: 5 to the capital. The revenge takes place after two weeks and to the surprise of the Warsaw team they manage to draw 3: 3 with the mighty Real. When we look at the players and the budget of these two teams, this result is a big surprise (table 1).

The next confrontation of the Polish team takes place on November 22, 2016 in Dortmund, in this match there were as many as 12 goals, but the Polish champion lost 4: 8. At the end of group competitions, the last match will be played on December 7, 2016 at Łazienkowska Street, to take third place, which guarantees the game in the 1/16 league of Europe, Legia must win. She managed to do this by beating 1: 0 team from the capital of Portugal. The Polish team took the third place behind the back of German Borussia and Spanish Real, and ahead of Portuguese

Sporting, who accumulated three points with four points and goal statistics 9:24 will play in the knockout zone of lower competitions.⁵

Table 1. Budgets and balance of expenses and revenues in the 2019/20 leagues which have occurred at least once in the Champions League (in euros)

Source: own elaboration based on www.transfermarkt.pl (access: 12.10.2019).

League	Country of origin	Total market value (mln)	Average value Market (thous.)	Transfer charges	Revenue from transfer fees	Total balance
Premier League	England	9330,0	18430	1.551.465.000	826.570.000	-724.895.000
Serie A	Italy	5310,0	9690	1.172.976.000	856.760.000	-316.216.000
LALIGA	Spain	6180,0	12590	1.322.320.000	1.027.720.000	-294.600.000
1.Bundesliga	Germany	4710,0	8860	738.600.000	564.545.000	-174.055.000
Premier Liga	Russia	1100,0	2670	236.806.000	83.565.000	-153.241.000
Ligue 1	France	3590,0	6590	697.150.000	846.055.000	148.905.000
Super Lig	Turkey	665,3	1280	67.429.500	82.805.000	15.375.500
Premier Liga	Ukraine	326,1	100	9.900.000	3.450.000	-6.450.000
SuperLiga	Portugal	1130,0	2370	137.400.000	382.125.000	244.725.000
Eredivisie	Holland	1010,0	2090	115.900.000	36.030.000	249.130.000
Jupiler Pro League	Belgium	848,8	1750	145.540.000	225.680.000	80.140.000
Liga 1	Romania	211,6	489	6.785.000	13.475.000	6.690.000
Super League 1	Greece	314,7	735	25.720.000	16.700.000	-9.020.000
Premier League	Scotland	232,0	753	25.447.585	27.278.000	1.830.415
Ekstraklasa	Poland	195,0	400	7.124.500	18.623.500	11.499.000
Bundesliga	Austria	261,5	800	26.750.000	94.543.585	67.793.585
Superligaen	Denmark	204,2	579	27.279.666	55.302.666	28.023.000
Super League	Swiss	284,4	1030	12.836.000	42.200.000	29.364.000
Fortuna Liga	Czech	224,8	530	12.535.000	37.200.000	24.665.000
T-Com 1. HNL	Croatia	231,8	797	9.900.000	24.900.000	15.000.000
Nemzeti Bajnoksag	Hungary	105,4	330	4.825.000	4.550.000	-275.000
EFBET LIGA	Bulgaria	150,6	438	4.410.000	1.560.000	-2.850.000
Allsvenskan	Sweden	158,8	392	4.000.000	34.265.000	30.265.000
Division A	Cyprus	115,0	356	659.000	1.459.000	800.000
Tippeligaen	Norway	132,4	332	6.995.000	16.185.000	9.190.000
Corgon liga	Slovakia	62,7	191	1.150.000	2.350.000	1.200.000
SuperLiga SRBIJE	Serbia	231,6	541	8.040.000	21.800.000	13.760.000
Prva Liga	Slovenia	59,3	222	600.000	5.000.000	4.400.000
Ligat ha'Al	Israel	127,8	355	9.737.000	16.572.000	6.835.000
Premyer Liqasi	Azerbaijan	72,9	386	490.000	327.000	-163.000
Premier Liga	Kazakhstan	137,1	463	4.670.000	4.325.000	-435.000
Wyszejszaja	Belarus	90,8	255	725.500	1.484.300	758.800

⁵ www.transfermarkt.pl; 2019

In the 2017/18 season, the team from the capital will continue to represent Poland in the qualifying rounds of the best teams in Europe, because they defended the title. In the second round of the match Legia will play with the Finnish IFK Mariehamn on July 12, 2017. The first match takes place in the Finnish town of Mariehamn, where the Warsaw team wins 3: 0, a week later in the capital of the Mazowieckie Voivodeship, the locals win 6: 0, after two matches it is 9: 0 and the Polish champion advances to the third stage of elimination, in which with the Kazakh team FC Astana on July 26, 2017 on their field, the capital players win 3: 1. After seven days, a rematch match takes place, in which Legia wins 1: 0, but unfortunately after matches played in the capital of Kazakhstan and Poland, they lose 3: 2 and this results in the promotion of the opposing team to the next phase. The Warsaw club becomes the national champion for the third time, the Polish team after changing the places allocated to a given country (wikipedia.org) must start the eliminations from the first round. The first match is played against the Irish Cork City FC on July 10, 2018. Legia wins 1: 0 away, and a week later 3: 0 at home, after two matches for the Polish team is 4: 0, which causes the game to continue in the competition. In the second stage, the champion from the Polish capital will play with the Slovak team Spartak Trnava, on July 24, 2018 at Łazienkowska St. the visiting team wins 2: 0, away the team from the Mazowieckie voivodship wins 1: 0, but it is not enough because they lost 1 after two matches : 2 and will not advance to the next round. Unexpectedly, Piast Gliwice becomes the Polish Champion, who in the 2019/20 season will represent Poland in elite competitions. In the first round at the Belarussian BATE Borisov, with which they draw 1: 1 away and lose 1: 2 at home, after two matches there is a 3: 2 result for the team from Belarus and the Polish team is eliminated as soon as possible. The question is how long will the crisis of Polish teams last.

Conclusions

Countries with a high budget also have a group stage. The total market value of the English Premier League, which ranks first in this matter, is over EUR 9 billion, and the Polish Ekstraklasa is far behind this country with a value of EUR 194 million. 26 places are allocated in advance in the group stage: four for England, Spain, Italy and Germany, three for France, two for Russia, one for Portugal, Ukraine, Belgium, Turkey and the Czech Republic. There are 6 places left for the remaining teams who have to go through a very difficult four-step elimination path (wikipedia.org). Countries that are guaranteed to play in the Champions League have a huge budget, while the other teams that are not immediately qualified cannot boast such money. Entering the competition is extremely difficult in this case for these teams. The Polish team has advanced to the group stage of the Champions League only three times - in the 1994/95, 1995/96 season and after a long break in 2016/17.

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