# PHYSICAL CULTURE OF STUDENTS IN TIMES OF SYSTEM TRANSFORMATION AFTER 1989 IN MEDICAL COLLEGES AND UNIVERSITIES IN POLAND

Wojciech J. **CYNARSKI**<sup>A,D,E,F</sup>, Marcin **OBODYŃSKI**<sup>B,F,G</sup>, Zbigniew **BARABASZ**<sup>B,D,E,F</sup>, Emilian **ZADARKO**<sup>C,D,E</sup>

Faculty of Physical Education, University of Rzeszow, Rzeszow, Poland

Key words:	Abstract:
<ul> <li>student,</li> <li>Physical Education and Sport studies,</li> <li>Physical Education,</li> <li>Academic Sports Association</li> </ul>	<ul> <li>BACKGROUND: Social and political transformations that took place in Poland after 1989 also induced changes in higher education system along with academic physical culture. As a result, several law acts were introduced (the first of them in 1990, the most recent in 2011) which indicate constant pluralization in this area of social life.</li> <li>OBJECTIVE: The objective of this paper is to demonstrate changes that have taken place in students' physical culture in Polish colleges and universities after 1989, during system transformation, and the assessment of adaptive changes.</li> <li>METHODS: The area of research is based on Polish universities and public medical college, which educate ca. 30% of the overall number of students. The research was conducted between 2005 and 2007 using a survey interview. A comparative method was used to compare the results and create an outline of actions taken by the institutions dealing with physical culture in particular types of universities.</li> <li>RESULTS: As a result of the research it was determined that the authorities responsible for physical culture in universities are Senate, Rector/Chancellor and Vice-Rector/Vice-Chancellor. In a lot of schools, definitely more often in medical colleges rather than universities, attempts have been made to modify curricula of PE classes. Employment structure, next to condition of infrastructure, points at staff aging as a major barrier for physical culture transformation. The offer is addressed mainly to day students and the curriculum is covered within 60 hours over the entire course of study. The main entities dealing with physical culture are Studies of Physical culture transformation and curriculum modification processes have not been completed yet. There is a need of modifying PE goals, adjusting them to students' needs, individualization of classes and means of choosing them. Classes should inspire personality development, improvement of physical condition and should create pro-health attitude in life.</li> </ul>

### **INTRODUCTION**

Changes connected with the transformation in 1989 led to the increased autonomy of universities and colleges. Based on the Round Table regulations, a novelization of the Higher Education Act of 4 May, 1982, with the amendments of 25 July, 1985, was introduced. It changed the authorities dealing with PE in higher education from the central body to collegiate authorities of particular universities.

Another Higher Education Act of 12 September, 1990, confirmed the amendment (Dziubiński, 2000). However, a vague article 3, act 2, section 2 concerning 'taking care of

students' health and physical development' was actually irrelevant to students' physical culture. Nonetheless, it must be said that this article defined compulsory PE classes in universities regardless of their type and form of ownership. To any other student organization dealing with physical culture the article 148 referred: 'students have the right to associate in student organizations based on rules defined in the Act'. Those rules were detailed in the article 159, which stated that those organizations are to register and the registering authority is Rector.

Works on the Physical Culture Act were successfully completed in 18 January 1996. This Act, based on pluralism in physical culture area, puts responsibility of management on the local authorities, defining only those regulations that concern the respect for the law and ensure the safety requirements in this area (Nowakowski, 1996). A complementary Act of 22 August 1997 concerns mass events security.

The following Act of 18 January 1996 indirectly confirms the 1990 Act. Article 19, act 1 states that universities giving daytime courses are obliged to include PE classes. So that it seems that authorities' statutory obligation is to ensure PE classes take place. The Act however does not mention whether it is obligatory for students to attend those classes, leaving the issue to particular universities, based on 1990 Higher Education Act (Nowakowski 1996). Defining the minimum number of hours of PE classes depending on the course, however, is to be made by the main authority of academic council, the Council for Higher Education, by issuing appropriate resolutions in the Official Journal of Ministry of National Education and Sport (in the part concerning higher education). Since then, the new PE programs were creat-ed and approved at the university level (Nowakowski 2004).

By the end of the nineties, minimum regulations of the Council of Higher Education perceived PE as a subject of secondary importance, defining its basic number of hours as 60-90 throughout the entire course of study, usually five years.

The new Act of 27 July 2005 was introduced as the Higher Education Act (Journal of Laws of 2005 No 164, Position 1365 with later amendments). It promotes the adaptation of our educational system to the world, and particularly European, standards, it also begins to streamline higher education in Poland through a combination of decisions described in the Act of 12 September 1990 on higher education. Some of those regulations refer to the sphere of physical education in universities. Article 13.1, paragraph 7, states that the core responsibility of universities is to 'create conditions for the students' physical culture' and article 106 states that 'conducting teaching, scientific, experimental, artistic, sporting, rehabilitation or treatment activities by universities is not a business activity.' The academic circles believe it is not enough.

The existing legislation is the Act of March 18, 2011, amending the Law on Higher Education, the Acts on Academic Degrees and Titles and the Academic Titles and Degrees in the field of art as well as some other Acts (*Journal of Laws* No 84, position 455), in force since October 1, 2011.

It does not provide, however, references related to physical culture in universities, but is limited to the rules of granting scholarships for academic, artistic and sports achievements. There is no mention of those references in the recently introduced Act of 25 June 2010 on Sport.

Thus the only legislation related to students' physical education are core curricula published on 19 February 2007 with the Standards of Teaching for Faculties stating that 'curricula should provide PE classes in the number of 60 hours for which up to 2 ECTS points can be granted...' It relates only to undergraduate studies.

The legal basis for students' physical culture in the period of system transformation after 1989 apply not only to PE classes included in the course but also academic sports movement including the oldest organizational entity – the Academic Sports Association. It became an association registered in court when Poland enacted the first democratic post-war Act on As-

sociations in 1989. On the basis of the Act on Physical Culture which extended the court mode of associations registration – anticipating the Constitution of 1997 – no one disputes the legal status of this association as an academic association of a general nature in accordance with the principle of continuity of acquired rights, respected in a law-abiding country.

Despite the dominant role of Academic Sports Association in the academic environment, there is no reason for which any other association should not work in the area related to physical culture. This is guaranteed by the Acts of 1989 on Associations, of 1990 on Education and 1996 on Physical Culture.

The upcoming years will be connected with the pluralization of physical culture in terms of organization, programs, movement forms and funding sources. There may be schools without organizational forms of physical culture, but there will be also schools which provide conditions for dynamic development.

### **METHODS**

The aim of this study was to show the changes referring to the students' physical culture after 1989 – in the period of system transformation in Polish higher education on the example of public universities and public medical colleges – and to determine whether changes adapting physical culture to new realities have been applied.

The study was conducted in the academic years 2005/2006 and 2006/2007 using a questionnaire survey in Polish universities and medical colleges. Questions were both open and closed. Replies were received from all the places surveyed, ie. 18 universities and 12 medical colleges. At that time ca. 619 000 people studied there, which makes ca. 30% of all students in Poland. The important part of the research is to determine the structure of authorities responsible for the condition of physical culture in higher education. The responses presented status and actions of those authorities.

A comparative method was used to analyze the results and create a picture of the institutions dealing with physical culture in particular types of universities.

## RESULTS

The research shows that due to legislative changes and autonomy in the management of universities some pluralization was introduced in the organization of structures responsible for the condition of physical culture in Polish higher education. An example of this fact is placing them in university's structure, as presented below (table 1).

Approving authority	Number	Number
	medical colleges	universities (n=18)
	(n=12, 3-no data)	
Senate	0	7
Rector/ Chancellor	4	8
Vice-Rector/ Vice-Chancellor	4	1
Person in charge of Studies of	1	0
Physical Education and Sport		
Lack of regulations	0	2

 Table 1. Institutional body approving studies of physical education and sport regulations

Source: own research 2006, 2010.

There are attempts to adapt PE classes into the field of course of studies. It is characteristic for medical colleges, as research conducted in universities does not indicate such trials made to significant extent (Fig.1)

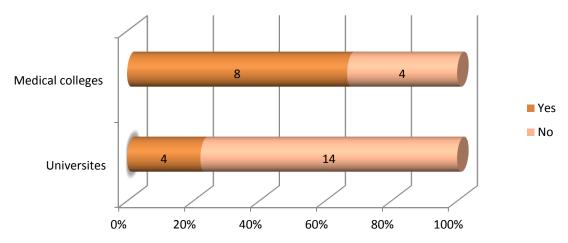


Fig. 1.Adapting PE curriculum to the field of study in universities and medical colleges *Source:* own research, 2006, 2010.

The correlation between the specific type of work of future medical graduates and prohealth influence of classes has a positive impact on students' attitude towards PE in medical colleges.

The main factor determining correct development of physical culture in higher education is the appropriate PE teaching staff, as it is the major subject in the structure of evolution of form and educational quality. Over the last 20 years, physical culture has had to adjust to many changes in PE area. There is a demand for specialists in new and previously unknown sports and recreational activities, e.g. martial arts and aerobics.

Yet the PE teaching staff is constantly aging. Although the long-standing practice and resulting experience are the main factors determining professional career in higher education, promotions from instructor to lecturer and senior lecturer are bound to increase financial burdens of Studies of Physical Education and Sport. The results of studies represented below show that over 60% of people working in Studies of Physical Education and Sport are employed in positions of senior lecturers (Fig. 2).

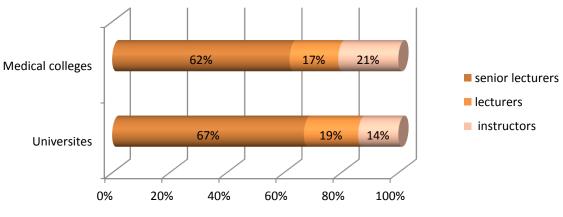


Fig. 2. Employment structures of PE teachers

The continuous aging of PE teaching staff has been observed. In the eighties 60% of PE teachers were under 45, now it's only 40%. It looks worse for the older teachers – there were 17% of 55+ teachers in 1983, now it is up to 34% people working in Studies of Physical Education and Sport (table 2).

This is caused by universities' policy to employ teachers who have the relevant experience and some additional qualifications (e.g. instructor or coach) expected when working with the students; however problems with teaching staff rotation causes dangerous stagnation which may lead to problems with development of emerging disciplines, especially recreational activities.

 Table 2. Age of studies of physical education and sport teachers working at universities, n=17 (jagiellonian university – no data)

Age of teachers	do 31	31–37	38–45	46–54	> 55
Number of teachers	32	48	66	124	142
% of all employees	8%	12%	16%	30	34%

Source: own research, 2006, 2010.

Condition of sports infrastructure is also very important. Nearly 50% of universities do not have a large sports hall, some of them do not have either football field or swimming pool. Some universities use only small rooms, gyms and table tennis rooms.

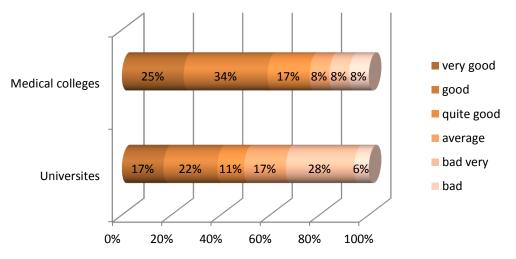


Fig. 3. Sports infrastructure assessment by Studies management

The condition of sport infrastructure in universities and medical colleges looks right only in case of small and easy to upgrade facilities (mainly gyms). There are not enough aerobics halls (30% of universities do not have one), table tennis rooms, tennis courts and small playing fields. Some universities found a solution to this problem and want to build new facilities, mostly as academic sports centers including sports halls, swimming pools etc. Such plans have been developed by Rzeszow University and Cardinal Stefan Wyszynski University in Warsaw. The implementation of those investments has already begun in Warsaw University and in University of Warmia and Mazury as well as – to a lesser extent – the construction of sports halls in Poznan and Bialystok.

Universities try to rent facilities they do not have, allocating a sum of 50 000  $\in$  per year. As a result, representatives of most studies assess conditions of available sports infrastructure positively (Fig.3).

Those activities are focused mainly on daytime students and on organization of optional courses for students of senior years (Fig.4). Classes for students of extramural studies are offered at only one university and five medical colleges. Form and number of hours depend on the course of study and are made by particular faculty councils.

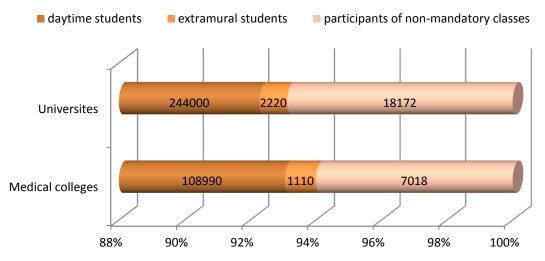


Fig. 4. Number of students attending mandatory and optional PE classes

Dominant form of teaching PE in Poland is imposed by scheduling council. Most classes take place on the first year of study, although in some cases they were rescheduled to further years of study. The number of hour varies, yet most university authorities declared that in the future they adjust to the standards of teaching (i.e. 60 hours).

During the survey, most units declared implementation of PE classes in 60-90 hours (table 3). It is worth noticing that in 1983, PE was carried out in 130 hours in three years of study and in some universities PE had 300 hours over five years of study.

	Number of		
Number of implemented PE hours	Universities n =18	Medical colleges n=12	
60	8	8	
60–90	6	2	
90–120	2	2	
60–180	1	0	
120	1	0	

Table 3. Number of	obligatory	pe classes	during	course of study
--------------------	------------	------------	--------	-----------------

Source: own materials, 2006, 2010.

Changing interests of students are visible in their choice of forms of recreational PE classes. Based on the data presented in table 4, the most popular activities are aerobics and bodybuilding. There are two trends in this case – women attend aerobics classes, men prefer bodybuilding. Both groups want to improve or maintain physical performance as it gives them satisfaction of good health and body efficiency. Another popular disciplines are capoeira, climbing, table tennis and ever-popular team games. Popularity of capoeira is quite unusual as it is a young discipline in Poland, however, being a combination of martial arts with dance, it is quite spectacular. Many other recreational disciplines are outdoors – horse riding, cross-country skiing, hiking and water sports.

	Numbers of groups in		
Recreational classes	Medical colleges	universities	
aerobics	6	15	
bodybuilding	4	8	
capoeira and dancing	2	3	
table tennis	2	2	
climbing	2	2	

1'	1	1
aqua aerobics	1	1
badminton	1	0
team games	1	7
horse riding	1	0
karate and martial arts	2	6
cross-country skiing	1	1
futsal	1	2
swimming	1	3
volleyball	2	1
chess	1	0
tourism	1	1
sailing and windsurfing	1	1

Unfortunately, 30% of medical colleges and universities do not offer courses focused on students with movement dysfunction and posture (rehabilitative or corrective gymnastics) and only 3 of 12 medical colleges and 4 of 18 universities offer both forms of activities.

Studies of Physical Education and Sport have always been in good relations with other organizations in universities, mostly trade unions, social and labor departments. They have been ofter organizing recreation events for university staff and their families. Therefore universities' authorities are aware of the importance of cooperation, especially with student organizations.

**Table 5.** Cooperation of studies of physical education and sport with different organizations

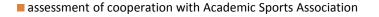
sities

Source: own research, 2006, 2010.

In case of Polish universities, basic partners of Studies of Physical Education and Sport are student organizations, e.g. student government and parliament, university clubs and city sport clubs (table 5).

University Academic Sports Associations usually cooperate with Studies of Physical Education and Sports. People often work in both organizations and in some cases both organizations have the same secretariats and rentals, they also co-organize camps and other forms of training.

Cooperation with university senates, faculty councils and deans is declared rarely, even though these authorities have a great impact on students' physical culture as well as deciding the number of hours and forms organization of PE classes.



assessment of Academic Sports Association's activities

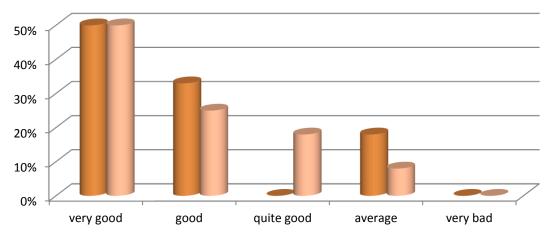


Fig. 5. Assessment of relations between Studies of Physical Education and Sport and Academic Sports Association in medical colleges Source: own research, 2010.

The main partner of Physical Studies Departments in their everyday activities has always been Academic Sports Association. The vast majority of Studies management appreciate the role of Academic Sports Association's university clubs (Fig.5).

In recent years great changes have been observed in higher education. It may be said that system transformation has not finished yet and this applies also to students' physical culture. Almost every year new directions and objectives of teaching are set. A survey question 'Name dominant forms of activities by Studies of Physical Education and Sport according to your own hierarchy,' is strictly connected with the issue. Table 6 indicates tendencies to emphasize sports and recreation forms at the expense of PE classes.

Table 6. Dominant forms of studies of physical education and sports with	regards to universities and
medical colleges	

	Number of		
Form	Medical colleges	universities	
Sport	5	10	
Recreation	5	4	
PE classes	2	4	
1 000 6 00	10		

Source: own research 2006, 2010.

Among the threats to the functioning students' physical culture, almost all Studies of Physical Education and Sports mention limiting or total withdrawal of PE classes off the curriculum. Due to the introduction of the Act of 1 October 2011 – and in the near future qualification frames – those fears may be justified. To some extent arbitrary choosing the subjects in the course of study may lead to a weakening of the role of PE classes and replacing it with 'more important' subjects – in the view of university's authorities.

### DISCUSSION

The deep transformation of socio-cultural area at the turn of the eighties and nineties made the animators of students' physical culture to implement processes adjusting this area to the new reality, however despite the efforts those actions were not innovative enough to stop the decline of physical culture in higher education (cf. Mirkiewicz, 1998; Lukiewicz, 2013).

Its direct consequences included reducing the number of students participating in sports and recreational activities, stagnation in sports infrastructure development and decline in the number of Academic Sports Association members compared to the total number of students (Obodyński, 2009; cf. Cynarski, 2001).

Introduction of Higher Education Act of 12 September 1990 and 27 July 2005 provided universities' authorities with previously unknown means for autonomous management of schools. Schools determine the curricula of the respective fields of study. The existing core curricula require only 60 hours of mandatory PE classes in any year of study.

Students' physical culture is constantly changing. New acts are introduced to determine basis on which it can function. In some cases it comes to challenging Studies of Physical Education and Sport's monopoly of conducting PE classes (Cynarski, 2000; Barabasz, 2007). Difficult financial situation of universities and resulting savings often are visible in the studies' performance. It is worsened by the high operating costs of study, sports infrastructure's rental and modernization, the position of senior lecturers and the dominant form of employment which is a permanent employment.

Cooperation with student governments and university clubs looks positively, as those are often the most active organizations working in this environment. Unfortunately, cooperation with other organizations is not as good. Animators of physical culture underestimate cooperation both with Society for the Promotion of Physical Culture and Polish Tourist and Sightseeing Society as well as other clubs, e.g. diving, equestrian and cycling.

It is a Rector and Senate that decide of the Studies of Physical Education and Sport's condition. Despite the attempts, the adequate conditions for the development of academic physical culture, especially in medical colleges and medical faculties, have not yet been created.

It is necessary to consolidate the efforts of all Studies of Physical Education and Sport in order to create a system of cooperation, views exchange and seeking solutions that can enhance the classes and encourage academic environment (including employees and their families) to the sporting lifestyle, whereas the reasons of low physical activity are laziness and financial barriers (Palica, 2010).

Generally, Studies of Physical Education and Sport cooperate with the universities' authorities, but they do not make the effort to raise funds outside the universities. This is due to their inability to cooperate with the budgetary and extra-budgetary institutions which, compared to the situation in the 'old' EU, shows a huge difference in this sphere of activity. First, sport system there is based on choosing an option from the offer presented by the university almost voluntarily by the students. Good infrastructure, comparable to Polish, is just a part of the system (Korpak, 2005). Universities' sports centers use positive arguments addressed to students and conduct constant monitoring of needs and expectations of not only students but also employees of the universities. Highly developed marketing activity is focused not only on academic society, but also on local community. Teachers are sports animators competing for students with other attractive subjects on the principles of market economy. PE classes are therefore a professional service with teachers / instructors competing for customers and adapting to their expectations (Harms, 2005).

Current guidelines specify only the minimum number of hours of PE classes which must be implemented during the course of study. They also specify the number of credit points (up to 2 ECTS points). Only few schools exceed these minimums. In Council of Higher Education's resolutions PE is the only mandatory subject settled on these principles.

Both teachers and Academic Sports Association's activists are critical in case of students' interests of the form of PE classes. Often this may result from students' need of undertaking additional work (already in the course of studies), lack of pro-health habits, unavailability of facilities as the right time and place – but also from the inaccurate offer addressed to them and lack of promotional campaign concerning pro-health attitude. Students do not perceive the advantages of physical activity and do not have habits of a healthy lifestyle (Rydzik, 2005; cf. Litwiniuk, Huk-Wieliczuk, & Cynarski, 2004).

The development of most universities was not parallel with the development of sports infrastructure – sports facilities were taken into account at the very end because of financial policy. Most managers believe that those deficiencies are the basic factors preventing physical culture from developing. Half of the respondents described the current state of things as insufficient, for universities lack especially large objects that are usually rented – e.g. sports halls, swimming pools, tennis courts and playing fields.

Financial problems of higher education and lack of governments' awareness lead to the decline of physical culture's prestige. The respondents often blame teachers for this state of things because of their improper approach to the students and lack of enthusiasm (Bielecki, 2003). It seems then, that in order to improve this situation, the teachers must change their way of thinking and acting, as the classes, even such as corrective or rehabilitation ones, cannot be an unpleasant experience for the students. PE classes should be promoted, especially in relation to Western Europe principles (Drabik, 1996). Studies of Physical Education and Sport cannot be based only on the Standards of Teaching, they must animate recreational activities in academic environment, create positive atmosphere around sport. Fitness and health cannot be permanently improved during 60 hours of obligatory classes, therefore the objectives of PE classes must be modified to include habits of pro-health attitude and healthy lifestyle (Kiełbasiewicz-Drozdowska, 2005).

Very important factors of physical culture are the teachers (Bielecki, 2003). Dominant form of their employment is a permanent contract for an indefinite period. It is beneficial to teachers, but does not exist in non-public universities or in other countries (Barabasz, 2007; Korpak, 2005). It effects in greater experience of teachers, but it may also cause stagnation and overlooking new trends in sport and recreation expected by students. Maybe that is why most universities offer traditional disciplines such as team games or swimming implying a small variety of classes, as students are rarely offered dancing classes or martial arts.

A main authority dealing with students' physical culture is Academic Sports Association, however, decline in the number of its members is visible. In addition to activities focused on professional sports, coordination of academic sports centers and universities' representations, it deals with mass sports. It organizes system of competition giving the opportunity to a large number of students of participating in 'small' sports (Wryk, 2009; www. azs.pl).

### CONCLUSIONS

The trends in students' physical education correlate with the negative report given with a research conducted in 2010 by the Supreme Chamber of Control in Polish schools under the Ministry of National Education. A negative opinion concerned attractiveness of classes, lack of variety, overly used team games instead of modern forms of activities. Zbigniew Cetnarowski reports that PE classes at schools do not correspond to the fundamental challenges of modern civilization, which is preparing students to a lifelong concern about physical fitness and health. This state of things depends on the activity and quality of PE teachers and also applies to higher education.

Is it possible to change this negative image and adapt the system to modern realities and requirements of the EU member? The authors believe so, but to make it permanent, the following conditions must be fulfilled:

- 1. Creating a friendly atmosphere for academic sports and students' physical culture among universities' authorities.
- 2. Implementing changes in infrastructure, accessibility and equipment despite difficult financial situation of universities.

- 3. Motivating students to attend PE classes by giving more ECTS point for PE classes.
- 4. Changing consciousness of teachers and animators (by changing structures of employment, if necessary).
- 5. Leaving the dominant class-lesson system for non-mandatory classes and changing the method of evaluation to students' achievements increasing efficiency, strength, improvement of mood, weight loss etc.
- 6. Raising students' awareness and giving them tools and means to control their own capacity, efficiency and health.
- 7. Changing students' physical culture and subordinating it to the main objective physical health and habits to lead a healthy lifestyle; PE classes are to be only means to achieve this objective.

Transformation of academic physical culture has been in progress for twenty years, and social changes have adapted it to new reality, but still in an insufficient degree. Changes require new forms of authorities' activities. They still have a way to go.

## REFERENCES

- 1. Barabasz, Z., Drozd, S.& Korpak, B. (2007). Kultura fizyczna w polskiej szkole wyższej. Stan obecny a przyszłość. In: M. Duricek, H. Hanusz (eds.), *Trendy pohybowej rekreacie a sucasny zivotny styl* (pp.79-86). Kosice: Univerzita Pavla Jozefa Safarika.
- 2. Bielecki, T. (2003). *Model akademickiego wychowania fizycznego w percepcji studentów studentów szkół uczelni Lublina*. Lublin: Praca doktorska.
- 3. Cynarski, W.J. (2000). *Debaty nad studencką kulturą fizyczną. Refleksje po dwóch konferencjach naukowych*. Rocznik Naukowy "Ido Ruch dla Kultury / Movement for Culture", vol. 1, pp. 249-254.
- 4. Cynarski, W.J. (2001). *Kultura fizyczna studentów w KATHO-RENO Torhout (Belgia)*. "Przegląd Naukowy Instytutu Wychowania Fizycznego i Zdrowotnbego Uniwersytetu Rzeszowskiego", vol. 5, no. 4, pp. 489-491.
- 5. Drabik, Z. (1996). *Aktywność fizyczna w edukacji zdrowotnej społeczeństwa*. *Część II*. Gdańsk: AWF.
- 6. Dziubiński, Z. (2000). Tendencje zmian uczelnianej kultury fizycznej w 10 lat po przełomie. *Przegląd Naukowy Instytutu Wychowania Fizycznego i Zdowotnego WSP w Rzeszowie, 1-2,* 63-64.
- Harms, E. (2005). Sport i wychowanie fizyczne na uniwersytecie w Hanowerze. In: H. Hanusz, B. Korpak (eds.), Wychowanie fizyczne studentów. Przeżytek czy konieczność (pp.159-164).Warszawa: ZG AZS.
- 8. Kiełbasiewicz-Drozdowska, I., Pluta, B. & Wiza, A. (2005). Prozdrowotny styl życia studentów w samoocenie studentów. *Annales Lublin-Polonia*, 60 (16), 200, 389-393.
- 9. Korpak, B. (2005). Wychowanie fizyczne studentów na uczelniach eurpoejskich. In: H.Hanusz, B.Korpak (eds.), *Wychowanie fizyczne studentów. Przeżytek czy koniecz-ność* (pp. 153-158).Warszawa: ZG AZS.
- Litwiniuk, A., Huk-Wieliczuk, E., & Cynarski, W.J. (2004). Aktywność fizyczna studentów AWF na tle innych zachowań zdrowotnych. "Annales Universitatis Mariae Curie-Skłodowska Lublin – Polonia", vol. LIX, suppl. XIV, no. 267, pp. 414-417.
- 11.Lukiewicz, W. (2013). The role of the university sport clubs in the students life in Belarus (years 1985-1997). In: W.J. Cynarski, A. Nowakowski, S. Zaborniak (eds.), Szkice z teorii i historii wychowania fizycznego, sportu i turystyki (pp. 97-102), Rzeszów: Wydawnictwo Uniwersytetu Rzeszowskiego / Rzeszow University Press.
- 12. Mirkiewicz, M., & Obodyński, K. (2006). Absolwenci szkół wyższych promotorami sportu w miejscu zamieszkania. In: Z. Krawczyk, J. Kosiewicz, K. Piłat (eds.), *Sport w*

procesie integracji europejskiej (pp. 231-234). Międzynarodowe Sympozjum. Warszawa: AWF.

- 13. Nowakowski, A. (1999). Wychowanie fizyczne uczniów i studentów w świetle nowej ustawy o kulturze fizycznej. *Wychowanie Fizyczne i Sport*, 3, 98.
- 14. Nowakowski, A. (1997). Zadania samorządu terytorialnego w dziedzinie kultury fizycznej w świetle ustawy z 1996 roku. *Samorząd Terytorialny*, 7 (4), 69–73.
- 15. Nowakowski, A. (2004). Drogi i bezdroża studenckiego wychowania fizycznego w Polsce w okresie transformacji systemowej. In: A. Nowakowski, S. Zaborniak (eds.) *Akademicka kultura fizyczna wczoraj i dziś*. Rzeszów, Uniwersytet Rzeszowski, 7.
- Obodyński, K. (2009). Rola AZS w kształtowaniu się struktur akademickiej kultury fizycznej. In: K. Obodyński, Z. Barabasz (eds.), Akademicka kultura fizyczna na przelomie stuleci. Stan i perspektywa zmian (pp.7-18). Warszawa: ZG AZS.
- Palica, D., Karkoszka, G. & Wołkowycka, B. (2010). Motywy podejmowania przez studentów aktywności ruchowej. In: Z. Barabasz, E. Zadarko (eds.), *Aktywność przez* całe życie. Zdrowie i sprawność studentów pod kontrolą (pp. 199-210). Krosno: PWSZ.
- Rydzik, J. (2005). Istota i funkcje wychowania fizycznego w szkole wyższej. In: A. Matuszewski, R. Muszkieta (eds.), *Współczesna kultura fizyczna studentów w teorii i praktyce*. Poznań: Wydawnictwo Wyższej Szkoły Bankowej.
- 19. Wryk, R. (2009). Sport akademicki w relacjach i wspomnieniach. Poznań: Wydawnictwo Poznańskie.
- 20. http://www.azs.pl; 15.07.2011.