

# KINESIOLOGY IN THE NAMES OF HIGHER EDUCATION INSTITUTIONS IN EUROPE AND THE UNITED STATES OF AMERICA

Zrinko Čustonja, Dragan Milanović and Goran Sporiš

University of Zagreb, Faculty of Kinesiology, Zagreb, Croatia

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## Abstract:

The purpose of this research was to analyse the differences between and within the European and the USA departments, faculties or universities (N=980) which offer a degree in human movement science studies, according to their names. Eight hundred and fifty-eight (n=858) different university departments in the field of human movement study programmes from the United States of America and one hundred and twenty-two (n=122) departments from Europe were included. Using the Chi-square test, the following statistically significant differences between and within America and Europe were found. The terms used most frequently for human movement study programmes in the USA were *health* (n=261), *physical education* (n=172) and *kinesiology* (n=145). In Europe the most frequently used terms in the names of departments and faculties were *sport* (n=54) and *physical education* (n=29). The differences between the USA and Europe regarding the number and names of human movement study programmes are based on social, economic and historical differences between North America and Europe. The term *kinesiology* is rare in Europe but it is often in use in the USA. The authors consider the term *kinesiology* to be the most adequate name to identify the broad area of the human movement studies in the academic and scientific community.

**Key words:** *terminology, physical education, sport, sport sciences, health, human movement study, exercise science, physical culture, human performance, recreation, leisure studies*

## Introduction

In the academic year 2008/2009 kinesiology has been recognized by the Ministry of Science, Education and Sport of the Republic of Croatia as an independent scientific field in the area of social sciences. It is now listed in the official nomenclature of scientific disciplines in Croatia along with other well established disciplines like psychology, biology, medicine, sociology, history, etc.

Since the first official use of the term *kinesiology* in Europe in Croatia in 1967, when the Institute for Kinesiology was established, this recent recognition of kinesiology as a scientific discipline marks the end of a long era of searching for an appropriate term for human movement studies in the Croatian academic community.

At present, Croatia seems to be the leading European nation in the promotion of the term *kinesiology* in the scientific and academic community.

The term *kinesiology* was created by the Swedish gymnasiarch Carl August Georgii. It appeared for the first time in 1854 in his biography of Per Henrik Ling, the founder of Swedish gymnastic system (Renson, 2006). The Frenchman Nicolas

Dally defined the term *kinesiology* in 1857 to denote *the science of movement in its relationship to education, hygiene and therapy* (Dally, 1857; Prot, 1997; Renson, 2000). The word *kinesiology* originates from two Greek words: *kinesis* meaning *movement* and *logos* meaning *science*. When translated literally into English, it means *the study of movement*.

Nowadays, the term *kinesiology* is used as an umbrella concept for the whole academic and scientific area of the study of human movement. In Croatia, kinesiology is understood as the empirical, experiment-based science that studies laws, principles, and patterns of controlled and targeted processes of physical exercise/activity and their influence on the human organism (Mraković, 1992). Kinesiology as a fundamental scientific field is applied in different areas such as sports, physical education, health, physical recreation, sport management and kinesitherapy and it is superordinated to them. It encompasses the principles which are fundamental to all applied fields of kinesiology.

Kinesiology, however, is not the only term currently in use for this academic field in Europe or

North America. Over a few last decades, many names and their combinations of names have emerged for identifying the academic discipline, university departments and faculties, professional organizations and societies or scientific journals in the field of human movement studies. A global worldwide academic agreement on this matter does not exist.

*Sport, sport science, exercise science, human performance, movement science, human kinetics, kinesiology, kinanthropology, athropomotorics, anthropokinetics, anthropokinesiology, health, physical education, physical culture, recreation, leisure studies, coaching, athletic training, adapted physical education, sport management* and other terms or their combinations are currently in use. A scientific field, of course, exists even if it has more than one name. But this diversity in terminology can sometimes cause confusion and lack of understanding in the academic community. Furthermore, Wade and Baker (cited in Mills, 1992) have warned that the absence of a clearly articulated and acceptable definition of the field will have serious consequences on the structure of the programmes in higher education.

Although the word *kinesiology* was created in Europe in the midst of the 19<sup>th</sup> century, its first official use in Europe occurred rather late. With the establishment of the Institute for Kinesiology, the Faculty of Physical Culture (since 2001, Faculty of Kinesiology), University of Zagreb, in Croatia, in 1967, the term *kinesiology* was for the first time officially used in the higher education system or academic community in Europe. Currently, there is only one faculty in Belgium (the Catholic University of Leuven, Faculty for Kinesiology and Rehabilitation Sciences) and two faculties in Croatia (the University of Zagreb, Faculty of Kinesiology and the University of Split, Faculty of Kinesiology), which have fully accepted the term *kinesiology* in their official titles.

In the United States of America the term *kinesiology* appeared in 1886 and became known when Baron Nils Posse published *The Special Kinesiology of Education Gymnastics* in Boston in 1894 (Renson, 2002). The modern era of kinesiology as an academic discipline began in North America about 50 years ago when the first university departments began to use the word *kinesiology* in their names. The American Academy of Physical Education changed its name to the American Academy of Kinesiology and Physical Education (AAKPE) in 1993 acknowledging the importance and fundamental values of kinesiology as a multi-disciplinary and crossdisciplinary science of human movement. Previously, the term *kinesiology* was often combined or even used interchangeably with the term biomechanics. During the 1990s, North America witnessed the bifurcation in the kine-

siology paradigm (Renson, 2002). The American Kinesiology Association was established in 2007 to promote and enhance kinesiology as a unified field of study within the higher education system of the United States and advance its many applications.

The debate about the proper name for this science has a relatively long history. Several papers addressing this subject appeared at the end of the 1980s and at the beginning of the 1990s (Ojeme, 1984; Bird, 1988; Caldwell, 1988; Piper, 1988; Vincent, Winningham, & Caldwell, 1988; Corbin & Eckert, 1989; Ojeme, 1989; Kretchmar, 1989; Newell, 1989; Vincent, 1991; Wade & Baker, 1992; Mills, 1992; Baker, Hardman, & Pan, 1996a; Baker, Hardman, & Pan, 1996). However, this discussion has not been concluded and the diversity of the terms for identifying this science has remained. The study is a contribution to the terminological discussions in this academic field. An analysis is made of the differences in usage frequencies of different terms in the names of higher education institutions, which offer degree programmes in the field of human movement studies, in Europe and the United States of America. Special emphasis will be laid on the term *kinesiology* because the authors want to promote it as the most adequate denotation of the discipline in question.

## Methods

### Subjects

The study encompassed names of eight hundred and fifty-eight (n=858) higher education study programmes in the broad field of human movement studies from the United States of America and one hundred and twenty-two (n=122) higher education study programmes from Europe. All were found browsing the Internet as the main source of information. The list of departments in the United States was taken from the web page of the American Kinesiology Association (American Kinesiology Association, 2008). The higher education study curricula were grouped according to the terms used in their names. If there was more than one term in the study programmes' name, the first term was chosen as a dominant one and the department was allocated accordingly.

### Statistical analysis

The non-parametric Chi-square test was used to analyse the differences within and between the North American and European higher education study programmes. The differences were determined by the number and the most frequently used term in the names of higher education curricula of North America and Europe. The statistical power and effect size were calculated using the GPOWER software (Faul & Erdfelder, 2004). The significance was set at  $p \leq .05$ .

## Results

The statistical power for all the statistical tests was .95. The effect size for the Chi-square test (.50) was large. The study encompassed eight hundred and fifty-eight (n=858) different higher education study programmes in the broad field of human movement studies from the United States of America (Table 1). The higher education study programmes were grouped according to the terms used in their names. If there was more than one term in the higher education curricula name,

the first term was chosen as the dominant one and the department was allocated accordingly. Seven different groups of higher education study programmes - *sport, physical education, movement science(s), kinesiology, health, exercise* and *other* - were formed according to their names.

The most frequently used terms in the names of university departments in North America were *health* (n=261), *physical education* (n=172) and *kinesiology* (n=145) (refer to Table 1). About 67% of all study programmes in North America encom-

Table 1. Higher education study programmes in the field of human movement studies in the United States of America grouped by the most frequently used terms in the official name

Term	Department name groups	No.	%
<b>Sport</b>	Sport Science	6	<b>46</b> 5.4%
	Sport and Exercise Sciences	5	
	Sport Studies	5	
	Sport, Wellness, Fitness, Recreation Management	30	
<b>Physical education</b>	Physical Education	100	<b>172</b> 20.1%
	Physical Education and Exercise Science	18	
	Physical Education and Health	18	
	Physical Education and Recreation, Wellness	11	
	Physical Education and Sport Studies	6	
	Physical Education and Human Performance	6	
	Physical Education and Sport Management	3	
	Physical Education, Athletic Training, Coaching, Health and Recreation	4	
	Physical Education and Health Education, Management, Promotion	4	
	Physical Education and Kinesiology	1	
	Physical Education and Sport	1	
<b>Movement science(s)</b>	Movement Science(s)	2	<b>8</b> 1%
	Movement Arts, Health Promotion and Leisure Studies	2	
	Movement Science and Education/Kinesiology	1	
	Movement Science and Sport	3	
<b>Kinesiology</b>	Kinesiology	108	<b>145</b> 17%
	Kinesiology and Health, Health Education, Health Promotion...	18	
	Kinesiology and Physical Education	8	
	Kinesiology and Recreation, Leisure	6	
	Kinesiology and Exercise Science/Studies	4	
	Kinesiology and Nutritional Science	1	
<b>Health</b>	Health and Physical Education, Kinesiology, Recreation, Management, Sport Science, Human Performance	89	<b>261</b> 30.1%
	Health and Physical Education	48	
	Health and Human Performance, Science, Kinetics	40	
	Health Sciences/Studies	28	
	Health and Exercise/Sport Science	27	
	Health and Kinesiology	12	
	Health and Human Services, Development	7	
	Health and Wellness/Fitness, Management	7	
	Health, Nutrition and Exercise Sciences	2	
	Health and Applied Human Science	1	

<b>Exercise</b>	Exercise and Sport Science	39	<b>112</b>	<b>13.1%</b>
	Exercise Science	36		
	Exercise, Sport, Leisure, Health, Recreation, Movement Science	12		
	Exercise Science and Physical Education	8		
	Exercise Science and Sport Studies	7		
	Exercise Science and Health	3		
	Exercise and Nutritional Sciences	2		
	Exercise Science and Sports Medicine	2		
	Exercise Physiology/Biology	3		
<b>Other</b>	Human Performance and Sport/Exercise Science, Sport, Leisure, Dance, Athletic Training	18	<b>114</b>	<b>13.3%</b>
	Physical Therapy	17		
	Athletic Training and Management, Exercise Science, Sports Medicine	11		
	Sports Medicine and Nutrition	5		
	Wellness and Sport/Exercise Sciences, Recreation	5		
	Sports Administration	2		
	Human Studies	1		
	Other	55		
<b>Summary</b>		<b>858</b>	<b>858</b>	<b>100%</b>

passed by this study use one of those terms in their official names as the first or dominant term.

After the terms *health*, *physical education* and *kinesiology*, fourth and fifth most frequently used terms were *exercise* and *sport*. We found only 8 study programmes that use the term *movement science* and 114 study programmes that we could not allocate in the already mentioned term groups (department names like: Human Performance and ..., Physical Therapy, Athletic Training and..., etc.), so we put them in the group named *Other*.

We found one hundred and twenty-two (n=122) different higher education study programmes in the broad field of human movement studies from Europe. They were also grouped according to the terms used in their names. If there was more than one term in the higher education study programmes' name, the first term was chosen as the dominant one and the department was allocated accordingly. Six different groups were formed - *sport*, *physical education*, *movement science(s)*, *kinesiology*, *exercise* and *other*. The term *health* was used only once as the first word in the name of a higher education curricula in Europe, therefore we allocated that department in the term category *Other*.

The most frequently used terms in the names of the university departments or faculties in Europe are *sport* (n=54) and *physical education* (n=29) (Table 2). About 68% of all the human movement study programmes in Europe, encompassed by our investigation, use one of those terms in their official names as the first or dominant term. A further 8% (n=10) use in their names the terms *exercise* and *sport science(s)*.

We found only 5 study programmes that use the term *movement science* and 21 study programmes that we could not allocate in the previously mentioned term groups (department names like: Science and Techniques of Physical and Sporting Activities, Sport Biomedicine or Coaches Faculty), so we placed them in the group named *Other*.

By using the Chi-square test the following statistically significant differences were determined (Table 3) between the USA and Europe in the number of departments whose names contained the terms *physical education*, *kinesiology* and *exercise*. Since the term *health* was used only once as the first word in the higher education human movement curricula name in Europe, we allocated that department in the group *Other*, and thus *health* was excluded from the statistical analysis.

The results of the Chi-square test shown in Table 4 clearly indicate that the term *health* is currently the most frequently used term in the official names of the higher education study programmes in the field of human movement studies in the USA. There are statistically significant differences between the usage frequencies of the term *health* compared with all the other terms.

There were no statistically significant differences in the usage frequency between the terms *physical education* and *kinesiology*. Also, no statistically significant differences in the usage frequency between the terms *kinesiology* and *exercise* were found, while the differences in the usage frequency between the terms *physical education* and *exercise* was only statistically significant at the higher p-level.

Table 2. Higher education study programmes in the field of human movement studies in Europe grouped by the most frequently used terms in the official name

Term	Department name groups	No	%
<b>Sport</b>	Sport Science(s)	31	44.2%
	Sport Studies	5	
	Sport, Exercise, Health, Leisure (science)	5	
	Sport	5	
	Sport Pedagogic/Sport Education	2	
	Sport, Humanities, Society, Social Science, Performing Arts	6	
<b>Physical education</b>	Physical Education and Sport	12	23.8%
	Physical Education and Sport Science(s)	10	
	Physical Education	5	
	Physical Education and Leisure Studies	1	
	Physical Education and Physiotherapy	1	
<b>Movement science(s)</b>	Movement Science(s)	4	4.1%
	Movement Science and Sport	1	
<b>Kinesiology</b>	Kinesiology	2	2.5%
	Kinesiology and Rehabilitation Sciences	1	
<b>Exercise</b>	Exercise and Sport Science(s)	10	8.2%
<b>Other</b>	Science and Techniques of Physical and Sporting Activities	10	17.2%
	Human Kinetics	1	
	Physical Recreation and Sport	1	
	Coaches Faculty	1	
	Recreation and Sport Management	1	
	Sport Biomedicine	1	
	Physical Culture	1	
	Human Performance	1	
	Sport Medicine and Exercise Science	1	
	Kinesitherapy Faculty	1	
	Health and Education	1	
	Teachers Faculty	1	
<b>Summary</b>		122	100%

Table 3. Differences between the United States and Europe in the frequency of the terms used in the official names of the higher education study programmes in the field of human movement studies

Name groups defined by frequently used terms in their name	USA	Europe	$\chi^2$	p-level
Sport	46	54	2.62	.15
Physical education	172	29	100.32	.0001
Movement science(s)	8	5	0.33	.58
Kinesiology	145	3	134.44	.0001
Exercise	112	10	55.89	.0001
Other	114	21	90.23	.0001
Summary	597	122	184.48	.0001

The terms *sport* and *movement science* are the least frequently used terms in the official names of the higher education study programmes in the field

of human movement studies in the USA and statistically significant differences in the usage frequency between them and all the other terms were found.

Table 4. Differences within the United States in the frequency of the terms used in the official names of the higher education study programmes in the field of human movement studies

	Sport	Movement Science	Physical Education	Kinesiology	Health	Exercise	Other
Sport							
Movement Science	Chi=25.13 (p<.0001)						
Physical Education	Chi=148.00 (p<.0001)	Chi=71.04 (p<.0001)					
Kinesiology	Chi=49.84 (p<.0001)	Chi=119.8 (p<.0001)	<b>Chi=2.14</b> <b>(p&lt;.1435)</b>				
Health	Chi=147.85 (p<.0001)	Chi=233.95 (p<.0001)	Chi=17.56 (p<.0001)	Chi=32.31 (p<.0001)			
Exercise	Chi=26.51 (p<.0001)	Chi=81.61 (p<.0001)	Chi=12.17 (p<.0005)	<b>Chi=3.94</b> <b>(p&lt;.0463)</b>	Chi=58.23 (p<.0001)		
Other	Chi=26.00 (p<.0001)	Chi=89.32 (p<.0001)	Chi=12.14 (p<.0005)	<b>Chi=3.43</b> <b>(p&lt;.0623)</b>	Chi=56.36 (p<.0001)	<b>Chi=.02</b> <b>(p&lt;.8887)</b>	

Table 5. Differences within Europe in the frequency of the terms used in the official names of the higher education study programmes in the field of human movement studies

	Sport	Movement Science	Physical Education	Kinesiology	Exercise	Other
Sport						
Movement Science	Chi=38.7 (p<.0001)					
Physical Education	<b>Chi=6.88</b> <b>(p&lt;.0887)</b>	Chi=19.36 (p<.0001)				
Kinesiology	Chi=43.47 (p<.0001)	<b>Chi=.12</b> <b>(p&lt;.7290)</b>	Chi=119.36 (p<.0001)			
Exercise	Chi=28.64 (p<.0001)	<b>Chi=2.57</b> <b>(p&lt;.0973)</b>	Chi=8.23 (p<.0041)	<b>Chi=2.74</b> <b>(p&lt;.0973)</b>		
Other	Chi=13.54 (p<.0001)	Chi=8.58 (p<.034)	<b>Chi=.97</b> <b>(p&lt;.3247)</b>	<b>Chi=3.2</b> <b>(p&lt;.0723)</b>	<b>Chi=.32</b> <b>(p&lt;.0887)</b>	

The results of the statistical analysis displayed in Table 5 indicate that the situation in Europe is quite different as regards the differences between usage frequency of terms in the official names of the higher education study programmes in the field of human movement studies. The most frequently used terms in Europe were *sport* and *physical education* and there were no statistically significant differences between them. At the same time statistically significant differences between the terms *sport* and *physical education* compared with the terms *kinesiology*, *exercise* and *movement science* were determined. Contrary to that no statistically significant differences in the usage frequency between the terms *kinesiology*, *exercise* and *movement science* were found.

### Discussion

The academic field of human movement studies varies widely in the usage frequency of the terms for the official names of university departments or faculties when comparing America and Europe. Contrary to the USA, the most frequently used terms in the official names of the higher education institutions in the field of human movement studies in Europe are *sport* (*sport sciences*, *sport studies*, etc.) and *physical education*. In the USA, the most frequently used term is *health*. At the same time there is only one higher education institution that uses the term *health* in its official name in Europe. The term *sport* is not so frequent in America.

## Physical education (PE)

The term *physical education* is the second most frequently used term in the USA. We found 100 study programmes that use only the term *physical education* in their names, or about 58% of all the study programmes that use the term *physical education*, i.e. about 12% of all the study programmes in the USA encompassed by our investigation. When *physical education* is combined with other terms, in most cases the terms: *exercise science*, *health and recreation* or *wellness* are used. There is only one department that combines the term *physical education* with the term *kinesiology*. Like in the USA, the term *physical education* is the second most frequently used term in Europe. In most cases (about 76%) the term *physical education* is combined with the terms *sport* or *sport science(s)*. We found only 5 university departments or faculties in Europe that use exclusively the term *physical education* or about 4% of all the study programmes in Europe encompassed by this survey.

Both in Europe and the USA the term *physical education* is widely used as the name for higher education institutions. It is the only term that has a similar status both in Europe and the USA. This can be explained by the historical fact that *physical education* was the first commonly used term when the first high school and university departments or faculties in the field of human movements studies were established in Europe and the USA. Scientific understanding and appreciation of human movement studies have emerged from the field of PE which is today ever more considered as only one of the areas of human activity in which findings of the science in question are applied. The majority of PE departments in Europe and the USA were established at the beginning of the 20<sup>th</sup> century and soon after World War II with the purpose to prepare PE teachers. With the growth of fundamental scientific knowledge in the field of human movement studies, scholars realized that PE teaching was not the only area where this knowledge can be applied. Further, they realized that the term *physical education* is not an adequate term for the name of science and that, if they wanted to be recognized and appreciated by the scientific community, they needed a more appropriate term that would better describe and define this scientific discipline. During the fifties, sixties and seventies of the twentieth century, the divergences in terminology started. Terms like *sport*, *sport science*, *exercise science*, *human performance*, *movement science*, *human kinetics*, *kinesiology*, *kinanthropology*, *health*, *physical culture*, *recreation*, *leisure studies* and other terms or their combinations emerged in Europe and the USA in the pursuit of the best or most convenient term. Although the term *physical education* is still frequently used in the USA and Europe, where about 20% and 24% of all the

university study programmes use this term in their names, respectively, its usage frequency has gradually decreased in recent decades. The main difficulty with the term *physical education* is the traditional heritage and understanding that PE study programmes are focused on the occupational preparation and therefore lacking in scientific substance. However, fundamental scientific knowledge that supports PE studies is the same as in other disciplines of the science in question and therefore physical education can be considered as a part of a bigger whole, or a branch of general science, that is, it is its applied area.

## Sport

The term *sport* is very often used in Europe. We found that 54 study programmes, or about 44% of all the university departments or faculties, use the term *sport*. In most cases it is *sport science(s)*, *sport studies* or just *sport*. About 25% of all the study programmes in Europe encompassed by this investigation use the term *sport science(s)*. The predominance of the term *sport*, like in *sport science(s)* or *sport studies*, in Europe is probably a product of social, economic and historical significance of the term *sport* on the old continent. *Sport* is a word used in almost all the European languages; it is widely recognized and common in everyday use. European culture and history has become less flexible to accept a different term. Since the middle of the 1960s, the concept of sport science, based on the theory of PE, has started to emerge. Unstoppable change in social conditions and the increasing social importance of organized sport led to the implementation of academic chairs for sport science first at the universities in German-speaking countries and partly in other European countries in the 1970s. During the 1980s, the differentiation from PE was mostly finished and sport science with its theoretical framework and interdisciplinary character was established in Europe. The European social and political situation strongly influenced sport science during the 1990s.

Scientists from the former East-European block countries are considered to have been dominant in scientific achievements in human movement studies in Europe before 1990s. After the fall of the communist regimes in Eastern Europe, the term *physical culture*, previously so popular, was widely replaced by the term *sport*.

The foundation of the European College of Sport Science (ECSS) in 1995 was a decisive step in the process of promoting sport science as an international discipline, at least in Europe (Müller, 2008). Nowadays the European College of Sport Science (ECSS) is the strongest and most important scientific organization in Europe in the field in question. It promotes sport science through the organization of international and multidisciplinary

congresses on sport science annually; through the publication of the scientific journal the *European Journal of Sport Science*, and by supporting both the concept and the term *sport science* with position statements on central issues, concerns, or areas of interest. Therefore, these are the reasons why the term *sport* prevails in European higher education institutions' names. However, since *sport* is also a form of human activity, we consider this term hardly a proper name for this scientific discipline or for a university department or a faculty. In addition, sport does not comprise all aspects or applied areas of the science in question. Furthermore, Mills (1992) has argued that *sport* or *sport science* is less descriptive and narrower in scope than *physical education*. Therefore, *sport* can be just one of the areas of human activity in which science in question is applied.

## Health

The USA higher education system, contrary to the European one, is widely open and connected to the market and economy. This may be a reason why *health* is the most frequently used term in the names of the North American higher education institutions. Among 261 study programmes that use the term *health* as the first or dominant term in their official names, we found only 28 higher education institutions or about 11% that use exclusively the term *health* (*health sciences/studies*). All other study programmes using the term *health* as the first word of their official names, combine it with other terms, most often with: *physical education*, *kinesiology*, *human performance/science/kinetics*, *exercise* or *sport science*. It is understandable that names of the departments or courses have to be attractive to recruit larger numbers of students. Health preservation is one of the largest issues of modern, ever older society. The economic costs of physical inactivity affect national economies, as shown by the following examples taken from the studies of particular policy interest. In one US study, costs associated with inactivity were between US\$ 24.3 billion (2.4% of the total health care costs) and US\$ 37.2 billion (3.7%) for the direct health care (Colditz, 1999). When obesity costs are included, a minimum of 9.4% of all the direct costs incurred in delivering health care in the USA are attributable to the insufficient energy expenditure, which directly leads to medical conditions or/and to the accumulation of adipose tissue, which then contributes to excessive morbidity and mortality (Colditz, 1999). Conversely, the potential cost reduction of treating heart disease if sedentary adults walked regularly has been calculated in the United States (Jones & Eaton, 1994): US\$ 5.6 billion would be saved annually if 10% of adults began a regular walking programme. Physical activity is probably one of public health "best buys" (Morris, 1994).

Health, health care and disease prevention have a big market in North America and, respecting the market demands, health-related programmes have entered the universities. Nevertheless, health that can be connected with recreation, leisure, fitness, wellness, physical therapy or general exercise is just another applied area of the science in question.

## Kinesiology

The term *kinesiology* is much more in use in higher education institutions' names in the USA than in Europe. When comparing it to other terms, we can conclude that the term *kinesiology*, together with the terms *health* and *physical education*, is the most frequently used term in the USA. *Kinesiology* is the most often used term in those study programmes that use only one term in their name. At the moment about 13% of all the human movement study programmes in the USA (108 higher education institutions), encompassed by this survey use only the term *kinesiology* in their official name. *Kinesiology* is in most cases combined with the term *health* (*health*, *health education*, *health promotion*).

Two organizations exist in the USA that promote kinesiology as an academic field and scientific discipline. The American Kinesiology Association (AKA) was established in 2007 to promote and enhance kinesiology as a unified field of study at the higher education system of North America and advance its many applications. The American Kinesiology Association defines kinesiology as the academic discipline which involves the study of physical activity and its impact on health, society, and quality of life. The American Kinesiology Association was established to represent and advocate for kinesiology at academic, governmental, and professional events, both nationally and internationally. The American Academy of Kinesiology and Physical Education (AAKPE) encourages and promotes the study and educational applications of the art and science of human movement and physical activity. According to AAKPE, kinesiology is the common name for college and university departments that include many specialized areas of study in which the causes and motives as well as consequences of physical activity are examined from different perspectives.

The term *kinesiology*, unlike in the USA, is quite uncommon in Europe. Currently, there are only three university faculties that use the term *kinesiology* in their names. These are: one faculty in Belgium (the Catholic University of Leuven, the Faculty for Kinesiology and Rehabilitation Sciences) and two faculties in Croatia (the University of Zagreb, Faculty of Kinesiology and the University of Split, Faculty of Kinesiology). The first official use of the term *kinesiology* in Europe was in 1967 in Croatia when the Institute for Kinesiology was



established at the University of Zagreb, Faculty of Physical Culture. Since then Croatia is one of the leading nations in Europe in promoting the term *kinesiology*. The Society for Kinesiology (Vereniging voor Kinesiologie), was founded in 1996 in Belgium and consists of researchers from four Flemish universities: Antwerp, Brussels, Ghent and Louvain (Leuven) (Borms, 2006). In the academic year 2008/2009 kinesiology was listed in the official nomenclature of scientific disciplines in Croatia.

Although there are only three higher education institutions in Europe that use the term *kinesiolo-*gy in their official names, it is present in the European scientific community and today it appears in the names of scientific journals, scientific institutions, organizational units of higher education institutions and curriculum subjects in a number of cases (Table 6).

more recognized and accepted as an adequate term for the science that deals with the broad area of multifaceted research of human movement, regular physical activity of various duration, intensities, purposes and contents as well as with its effects on organism and lives of individual persons and society in general. As shown in Table 1, the *Department of Kinesiology* is currently the most frequently used name in the USA. In Europe, the term *kinesiology* is not widely spread although it is in use in various ways in at least 9 European countries (Table 6).

Kinesiology as a fundamental science finds application of its theories, concepts, findings, advances and laws in many different fields of human everyday activities such as sport, physical education, health-related exercise, recreation, exercise, physical therapy, sport management, etc. As kinesiology embraces principles that are fundamental to all of

Table 6. *Kinesiology in Europe*

<b>UNIVERSITY DEPARTMENTS AND FACULTIES</b>	<b>Country</b>
Faculty of Kinesiology (University of Zagreb)	Croatia
Faculty of Kinesiology (University of Split)	Croatia
Faculty of Kinesiology and Rehabilitation Sciences (Catholic University Leuven)	Belgium
<b>SCIENTIFIC JOURNALS</b>	<b>Country</b>
Kinesiology – International Journal of Fundamental and Applied Kinesiology (since 1971)	Croatia
Kinesiologia Slovenica	Slovenia
Acta Kinesiologiae Universitatis Tartuensis	Estonia
Acta Kinesiologica	Bosnia and Herzegovina
Chinesiologie	Italy
<b>SCIENTIFIC INSTITUTIONS OR ORGANIZATIONAL UNITS OF HIGHER EDUCATION INSTITUTIONS</b>	<b>Country</b>
Institute of Kinesiology (University of Ljubljana, Faculty of Sport)	Slovenia
Department of Kinesiology (Institute of Sport, Warsaw)	Poland
Institute of Kinesiology (University of Pécs, Faculty of Medicine)	Hungary
Department of Kinesiology (University of Tartu, Faculty of Exercise and Sport Sciences)	Estonia
Department of Sport Science and Kinesiology (University of Salzburg)	Austria
Society for Kinesiology	Belgium

## In conclusion

Recognizing the fact that at this moment we do not have one name accepted globally for the science in question, we have tried to determine the differences in the usage frequency of different terms in Europe and the United States of America in higher education institutions' names in the field of human movement studies. We can conclude that nowadays the term *kinesiology* is becoming ever

them, it is only a matter of academic and scientific consensus to accept the term *kinesiology* as a global and universal term for the science and profession in question. But such agreements are often more of a political than of a true scientific nature. However, in this case the recent development in the USA might inspire European institutions to use kinesiology as a common descriptor for the science of human movement and humans in movement.

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## KINEZILOGIJA U NAZIVIMA VISOKOŠKOLSKIH INSTITUCIJA U EUROPI I SJEDINJENIM AMERIČKIM DRŽAVAMA

Cilj je ovog rada bio ustanoviti razlike između i unutar Europe i Sjedinjenih Američkih Država, u terminima koji se javljaju u službenim nazivima fakulteta ili sveučilišnih odjela koji organiziraju studijske programe na području znanosti o ljudskom kretanju (N=980). Istraživanje obuhvaća nazive 858 sveučilišnih odjela iz SAD-a i nazive 122 fakulteta ili sveučilišna odjela iz Europe. Uporabom hi-kvadrat testa utvrđene su statistički značajne razlike u frekvencijama pojavljivanja različitih termina između i unutar Europe i SAD-a. Najčešće korišteni termini u nazivima sveučilišnih programa o ljudskom kretanju u Americi jesu *zdravlje* (n=261), *tjelesno obrazovanje/odgoj* (n=172) i *kineziologija* (n=145). Najčešći termini u Europi jesu *sport* (n=54) i *tjelesno obrazovanje/odgoj* (n=29). Razlike između Eu-

rope i Amerike u terminima koji se koriste u nazivima sveučilišnih programa na području znanosti o ljudskom kretanju proizlaze iz društvenih, ekonomskih i povijesnih specifičnosti razvoja tog područja u Europi i Americi. Termin *kineziologija* učestalo se pojavljuje u Americi, dok je još uvijek rijedak u Europi. Smatramo da je termin *kineziologija* najprije rabilo u akademskoj i znanstvenoj zajednici za znanost o ljudskom kretanju i zakonitostima procesa vježbanja.

**Ključne riječi:** *terminologija, tjelesni odgoj, sport, sportske znanosti, zdravlje, studij o kretanju čovjeka, znanost o vježbanju, fizička kultura, čovjekove performanse (uspješnost), rekreacija, studij aktivnosti u dokolici*

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Correspondence to:  
Zrinko Čustonja, MagEd  
Faculty of Kinesiology, University of Zagreb  
Horvaćanski zavoj 15  
10 000 Zagreb, Croatia  
Phone: + 385 1 365 87 17  
Fax: + 385 1 36 34 146  
E-mail: zrinko.custonja@kif.hr