

## Proceeding

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# Sports gymnastics as a part of curriculum of Sports Management university studies in the Czech Republic


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### ABSTRACT

Hruša P, Hrušová D. Sports gymnastics as a part of curriculum of Sports Management university studies in the Czech Republic. *J. Hum. Sport Exerc.* Vol. 8, No. Proc2, pp. S107-S113, 2013. Current approaches to systemize gymnastics differ in understanding the content of this concept; however, the authors agree that gymnastics is an open system of human conscious motion activities that contribute to the physical, aesthetic and social development. In our study we focused on studies of sports management, as a young field of study that appeared at Czech universities in the past two decades. The aim was to analyze sports gymnastics as a subject with practical applications in the field of sports management, to find out sports gymnastics representation in this field at selected universities in the Czech Republic and to compare practical entrance exams and subjects of curricula with focus on sports gymnastics, by content analysis. We analysed and compared curricula of full-time bachelor's studies of sports management, with regard to sports gymnastics, at the universities in the Czech Republic. We give results for two consecutive academic years (2009/10, 2010/11) regarding the number of students enrolled to the subjects of sports gymnastics within their curriculum, and their success rate for credit requirements in the given subjects. Gymnastic training is targeted to develop coordination and motor-functional preparedness. An approach based on health related physical fitness and optimal physical function requires an effective involvement of the deep stabilization system, which ensures strengthening and stabilization of spine. In gymnastics the body strengthening and stabilization is essential for proper technical execution of each exercise. Here we find a relationship between the function of motion system and gymnastic exercises, and we recommend them as a basis for other sports. **Key words:** GYMNASTIC SYSTEM, GYMNASTIC TRAINING, BACHELOR'S STUDY, STUDY SUBJECT

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## INTRODUCTION

In our paper we focus on sports gymnastics as a subject being part of the curriculum of bachelor's Sports Management study. We provide perspective on sports gymnastics based on its characteristics, systematization, and relevance for one's physical and mental development, in reference to Sports Management. We analyze and compare entrance exam requirements with regard to sports gymnastics and inclusion of sports gymnastics in the curriculum of bachelor's Sports Management study at Czech universities.

Physical exercises that can be subsumed under the concept of gymnastic exercises were already used in the ancient times. Gymnastics (Greek "*gymnos*" - naked, "*gymnasein*" - practicing naked, Kos, 1990) have included all physical exercises, which lead to development of both physical and mental component - the ideal of ancient Greece known as "*kalokagathia*". This is consistent with the definition of gymnastics stated by Klimeš (1998, p. 242): physical exercises (both on apparatus and without), aimed at a complex physical development.

Opinions of the definition of gymnastics differ by an approach to understanding its content. When defining the concept and content of gymnastics, among others we work on publication of Novotná (2004). She analyzed and evaluated the definitions and knowledge in the field of gymnastics having been published in the Czech Republic, where the systematization of gymnastics has great tradition, in the past fifteen years by the authors Kos, Appelt, Svatoň, Perečinská, Novotná and Skopová. Novotná (2004, p. 4) describes gymnastics as "*a system of consciously performed physical activities that aim to affect the state of motor system, the level of physical fitness, motion expression of the athlete. It participates in physical, aesthetic and social human development.*" In agreement with this definition also Krištofič (2004) speaks of gymnastics in a broader context as an open system of physical activities. Gymnastic movement is characterized by features that play an important role in sustaining the effect of exercise - movement, course, position, execution, expression, plan and experience (Novotná, 2004). Experience as a part of physical exercises is also emphasized by Svatoň (1995) and Neumann et al. (1999). Experiencing is associated with an active will to form, change and do something, it occurs under certain mental and physical tension.

In the system of gymnastic division the authors Kos and Wálová (1977), Kos (1990), Krištofič (2000) and Jarkovská and Jarkovská (2005) congruently define gymnastics with performance and the competitive focus, the so called "gymnastic sports" (Skopová & Zítko, 2008; Novotná, 2004, 2005). Further categorization differs in terms of terminology, but the essence remains the same – today it is generally emphasized that the term is not important, but the usefulness and effectiveness of the exercise. The main sense remains in physical and mental relaxation, maintaining and improving health, fitness and performance, physical development and self-confidence. Novotná (2004) uses the term "gymnastic kinds" for this category.

We can specify key areas of effect of each physical exercise on human body (Velínská, 2004): fitness (aerobic and muscular fitness), compensation (muscle imbalances reduction and posture improvement) and coordination (development of space-time orientation, assembling simple movements into complex units, ability to use own body to achieve the target). Sports gymnastics as a subject of curriculum of Sports Management university study affects human body in all the above mentioned areas. It takes a specific position within the classification system of gymnastic division – on the border between gymnastic sports and gymnastic kinds, due to the fact that it partially meets the requirements of both the categories (it affects

motor coordination, motor-functional preparedness, physical fitness, physical improvement and self-confidence, makes demands on the technical side of movement, execution and evaluation is according to a given set of rules and regulations).

According to the defined profile a sports management graduate is a competent, modern and long-term competitive creative expert in management and marketing in the field of sport, leisure and recreation. Graduates find employment in management and marketing (sports clubs, associations and organizations, sports centres), tourism (experience tourism, outdoor programmes, and fitness-wellness programmes), services and facilities offering sports and recreation products, and in wellness and health resort.

Sports manager's education includes both theory and practice. In the field of practice Půža and Komeščík (2012) emphasize, in accord with the current trend (social need and demand for more attractive and more intense experiences in leisure, recreation and tourism), active and meaningful use of leisure time, which is based on positive and meaningful experiences, verification of one's own physical and mental strength, willingly taking load, and the resulting satisfaction of performance.

Performance, experiences and physical and mental stress are part of gymnastic training, which develops coordination and motor-functional preparedness. We focus on sports gymnastics as a part of the curriculum of Sports Management study, because we believe gymnastics to be an important factor of both physical and mental development. In gymnastics the body strengthening and stabilization is essential for proper technical execution of each exercise, strengthening and stabilization of spine and major joints require an effective involvement of the deep stabilization system. Here we find a relation between gymnastic exercises and function of motor system, we consider them to be a good basis for other sports, and thus needed and useful for sports manager practice.

## **MATERIAL AND METHODS**

### *Aim and tasks*

The aim of the study was to analyse sports gymnastics (SG) as a subject of curriculum in full-time bachelor's Sports Management (SM) studies at Czech universities, based on theoretical and practical approaches. In order to compare requirements of the studies with regard to sports gymnastics, we analysed and compared content of practical entrance exams and curricula of full-time bachelor university studies of SM. We also analysed and compared compulsory subjects of SG in SM in the selected universities in the consecutive academic years of 2009/10 and 2010/11 based on the number of students enrolled and the number of students having passed the credit assignments.

### *Sample*

All the universities in the Czech Republic were comprised in the basic sample. Regarding the research sample, we set the intentional selection criterion. We claimed that the university offered a full-time bachelor's Sports Management study (or Recreology). Four universities met the given criterion. We itemized them giving the name of the university, faculty and department that guarantee the SM study:

- University of Hradec Králové (UHK) - Faculty of Informatics and Management - Department of Recreology and Tourism.
- Charles University in Prague (CUP) - Faculty of Physical Education and Sports - Department of Kinanthropology, Humanities and Sport Management.

- Palacký University Olomouc (PUO) - Faculty of Physical Culture - Department of Recreology.
- Technical University of Ostrava (TUO) - Faculty of Economics - Department of Management.

As an approach to solve the given problem we used a descriptive comparative research study with qualitative and quantitative data analyses. We set two key constructs, sports gymnastics in practical entrance exams and sports gymnastics as a subject in the curriculum of SM. To collect the data we used comparative content analysis of universities websites and educational and pedagogical documents and the method of an interview with representatives of the selected universities, faculties and departments and guarantors of the subjects of sports gymnastics. We organized, processed and evaluated the data using basic methods of mathematical-statistical analysis, with regard to the extent of the selected research sample we used absolute and relative frequency of occurrence of the set constructs.

## RESULTS

There are four universities offering the study of Sports Management in the Czech Republic: University of Hradec Králové (UHK), Charles University in Prague (CUP), Palacký University Olomouc (PUO), and Technical University of Ostrava (TUO). We analysed the content of their curricula with regards to the set constructs of the research and found out the following results:

There are practical (physical) entrance tests in 75 % of bachelor’s full-time SM studies (UHK, PUO and TUO – see Table 1). The tests at UHK consist of athletics (100 metres run, 1500 metres run), sports games (optional volleyball or basketball), swimming (100 metres free) and sports gymnastics. The tests at PUO consist of swimming (100 metres free), sports games (optional volleyball or basketball) and sports gymnastics. The tests at TUO consist of motoric tests (long jump with legs together, sit-ups, 3 kilograms ball throw from kneeling position, 12 minutes run).

**Table 1.** Sports gymnastics in practical entrance exams.

<b>SG in entrance exams</b>				
<b>University</b>	<b>UHK</b>	<b>CUP</b>	<b>PUO</b>	<b>TUO</b>
<b>Practical entrance exams</b>	<b>YES</b>	<b>NO</b>	<b>YES</b>	<b>YES</b>
<b>SG in entrance exams</b>	<b>YES</b>	<b>NO</b>	<b>YES</b>	<b>NO</b>

Notes: UHK - University of Hradec Králové, CUP - Charles University in Prague, PUO - Palacký University Olomouc, TUO - Technical University of Ostrava.

Only two universities (UHK and PUO – see Table 1) have SG as a part of the practical entrance tests and the requirements cover acrobatic exercises at both universities plus repeated upstarts on the horizontal bar at UHK. SG is a compulsory part of curriculum of bachelor’s full-time SM studies at 50 % of universities (UHK and PUO – see Table 2). This corresponds to the findings of inclusion of SG into practical entrance tests. The training is integrated into two terms. To illustrate the extent of the realised SG teaching at both universities, we give data (see Table 3) concerning the number of students enrolled to the subject and their success rate having passed the credit assignments.

**Table 2.** Sports gymnastics as a compulsory subject in the curriculum of SM.

SG as a subject in the curriculum of SM				
University	UHK	CUP	PUO	TUO
<b>Sports gymnastics</b>	<b>YES</b> - GYMN2 - GYMN3	<b>NO</b>	<b>YES</b> - KAS/GYS1 - KAS/GYS2	<b>NO</b>
<b>Extent: number of terms/ number of lessons</b>	<b>2 terms/ 13 lessons</b>	<b>0</b>	<b>2 terms/ 13 lessons</b>	<b>0</b>

Notes: UHK - University of Hradec Králové, CUP - Charles University in Prague, PUO - Palacký University Olomouc, TUO - Technical University of Ostrava.

**Table 3.** Students' enrollment and successfulness in subjects of SG in 2009/10 and 2010/11.

Subject of SG - students						
University	UHK		CUP	PUO		TUO
Subject	Winter term GYMN3	Summer term GYMN2	---	Winter term KAS/GYS1	Summer term KAS/GYS2	---
<b>year 2009/10</b>	<b>23/14</b>	<b>20/5</b>	<b>---</b>	<b>44/38</b>	<b>0/0</b>	<b>---</b>
<b>Success rate (%)</b>	<b>60.9</b>	<b>25</b>	<b>---</b>	<b>86.4</b>	<b>0</b>	<b>---</b>
<b>year 2010/11</b>	<b>43/19</b>	<b>27/15</b>	<b>---</b>	<b>92/69</b>	<b>38/25</b>	<b>---</b>
<b>Success rate (%)</b>	<b>44.2</b>	<b>55.5</b>	<b>---</b>	<b>75</b>	<b>65.8</b>	<b>---</b>

Notes: Blue figures give number of students enrolled to the subject/ number of students having passed the credit assignments; UHK - University of Hradec Králové, CUP - Charles University in Prague, PUO - Palacký University Olomouc, TUO - Technical University of Ostrava.

## DISCUSSION

The requirements of Sports Management studies are not fully unified concerning sports gymnastics as a part of practical entrance exams and the curriculum at universities in the Czech Republic. Our aim was to analyse and compare the study content and requirements. The importance and benefit of gymnastic exercise are generally accepted (Kos, 1990; Novotná, 2004, 2005; Křištofič, 2004; Svatoň, 1995; Kos & Wálová, 1977; Jarkovská & Jarkovská, 2005; Skopová & Zítko, 2008; Velínská, 2004), in accord with our opinion. We have good experience with a basic gymnastic training as a part of a specific training in other sports, because it requires effective strengthening and stabilization of spine and major joints, and thus involves muscles of the deep stabilization system. Positive influence of gymnastic exercises on physical health was verified for example by Erlandson, Kontulainen and Baxter-Jones (2011), in the sense of greater bone strength in gymnasts.

Gymnastics can affect not only physical development, covering development of condition and coordination motor abilities and acquiring new motor skills, but also psychological and social development of a man. We would particularly like to emphasize the psychological development, which helps a sports manager to develop their professional managerial skills through the field of control and management of emotions in SG (Snyder, 1990). When training sports gymnastics, one must manage nervousness and emotions (through concentration and mental preparation), fear of pain and injury (caused by risk and danger involved in SG), frustration, disappointment and sadness (associated with a threat of injury, failure, defeat), happiness, joy and pride (associated with successful performance). It is important to point out that sports gymnastics in the concept of SM study is not performed on a competitive level, but it is categorized somewhere on the border of gymnastic sports and gymnastic kinds (see Introduction). Students thus have a chance to try basic gymnastic exercises and elements, learn new skills and experience challenging and emotional atmosphere (social psyching-up) of the training. In our opinion basics of SG training are a meaningful, beneficial, convenient part of the curriculum of SM.

## CONCLUSION

According to the set aim of the research study, we found out information illustrating the situation regarding bachelor's full-time Sports Management study at Czech universities as to the sports gymnastics and its significance in the given field. Practical (physical) entrance tests occur at 75 % of universities, SG as a part of practical entrance tests occur in 50 % of universities, and in accord SG as a compulsory subject of the curriculum occur in 50 % of universities.

We see the significance and benefit of sports gymnastics being covered in the SM study in three levels of effect on a man – physical aspect (motor skills and abilities, posture, muscle strengthening and stabilization - physical fitness and health), psychological aspect (control and management of emotions - confidence, self-esteem, experiencing - psychological health, emotions as self-feelings, embodied feelings, mental states), and social aspect (social psyching-up – interpersonal experience). We consider basic gymnastic training to be a good basis for other sports, and thus needed and useful for sports manager practice.

Some of the universities advocate an innovative approach to abandon practical (physical) entrance tests, some of them do not require sports gymnastic tests and some of them do not offer sports gymnastics as a part of the curricula at all. The study of Sports Management has been in existence for about twenty years, however, this innovative approach is quite new and the results and impacts are to be surveyed yet. We

recommend finding out the situation at foreign universities with the same or similar studies which could provide further information for comparison and evaluation.

## REFERENCES

1. ERLANDSON MC, KONTULAINEN SA, BAXTER-JONES ADG. Precompetitive and recreational gymnasts have greater bone density, mass, and estimated strength at the distal radius in young childhood. *Osteoporosis International*. 2011; 22(1):75-84.
2. JARKOVSKÁ H, JARKOVSKÁ M. *Posilování s vlastním tělem 417krát jinak*. Praha: Grada Publishing, 2005.
3. KLIMEŠ L. *Slovník cizích slov*. Praha: SPN, 1998.
4. KOS B. *Gymnastické systémy: historický vývoj a charakteristika*. Praha: Fakulta tělesné výchovy a sportu Univerzity Karlovy, 1990.
5. KOS B, WÁLOVÁ Z. *Kondiční gymnastika*. Praha: SPN, 1977.
6. KRIŠTOFIČ J. *Gymnastická příprava sportovce: 283 cvičení pro všestranný rozvoj pohybových dovedností*. Praha: Grada Publishing, 2004.
7. KRIŠTOFIČ J. *Gymnastika pro kondiční a zdravotní účely*. Praha: ISV, 2000.
8. NOVOTNÁ V. *Gymnastika I.: 1. a 2. lekce*. [online]. 2004. Last revision 2nd July 2007 [retrieved 2012-04-02]. <<http://www.ftvs.cuni.cz/informacni-sluby/elektronicke-publikace-a-studijni-opory/423-gymnastika.html>>.
9. NOVOTNÁ V. System of general gymnastics in the Czech Association Sport for All. *Kinesiology*. 2005; 37(1):106-111.
10. NOVOTNÁ V, ČECHOVSKÁ I, BUNC V. *Fit programy pro ženy*. Praha: Grada, 2006.
11. PŮŽA B, KOMEŠTÍK B. *Sportovně rekreační aktivity v cestovním ruchu*. Hradec Králové: Gaudeamus, 2012.
12. SKOPOVÁ M, ZÍTKO M. *Základní gymnastika*. Praha: Karolinum, 2008.
13. SNYDER EE. Emotion and sport: a case study of collegiate women gymnasts. *Sociology of Sport Journal*. 1990; 7:254-270.
14. SVATOŇ V. *Gymnastika metodicky a hrou*. Olomouc: Hanex. 1990.
15. VELÍNSKÁ L. *Aerobik: speciální učební text*. Praha: Česká asociace Sport pro všechny, 2004.