

ORIGINAL RESEARCH PAPER

PHYSICAL ACTIVITY AND HEALTH BEHAVIOR OF STUDENTS OF UNIVERSITY OF PHYSICAL EDUCATION AND SPORT IN BIALA PODLASKA

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Abstract

Increasing physical activity is more and more often accompanied by an incorrect lifestyle and health disorder. The aim of this research was to diagnose physical activity and health behavior students of University of Physical Education and Sport in Biala Podlaska (Poland). The research comprised 162 students (47 sportsmen) of University of Physical Education and Sport in Biala Podlaska (Poland). The average age of respondents was ($M= 20.27$ years). The subject was interviewed by means of questionnaire IPAQ (Sjöström et al. 2000) and HBUSQ (Litwiniuk & Grants 2010) and physical features body height and body weight were assessed. Slightly less than every third one (28.1%) is a person who systematically attends sporting activities organized at various kinds of sports clubs, including Academic Sports Associations while the remaining 71.3%, of respondents participated individually in organized recreational activities as well as in agility-based educational activities. The largest contribution in total volume of weekly physical activity of students and their energy expenditure have physical effort of medium and high intensity. Healthy behaviors promoting health in the field of nutrition prevailed mainly among sportsman students taking sports. Physical Education students as future teachers, instructors and trainers are well prepared to represent authority and to promote healthy behaviors among alumnus.

Key words: *physical activity, health behavior, students, IPAQ 7 days, HBUSQ*

Introduction

From the point of view of health sciences, university students constitute a social group of extraordinary significance (Barabasz & Zadarko, 2011). Insufficient physical activity constitutes an important but still underestimated factor which affects health condition, morbidity and mortality of societies (Leon, 1987). A decline in physical activity among school-aged children and youth as well as among university students and the rest of the population is becoming more and more a public health issue (Pate et al., 1995; Blair et al., 2001).

A meta-analysis of the available studies shows that physical activity reduces the occurrence of atherosclerosis risk factors among healthy population and contributes to the reduction of the incidence of other lifestyle diseases. The positive effects of regular physical exercise in prophylaxis were demonstrated in long-lasting epidemiological studies carried out in the United States (Morris, et al. 1993; Paffanbarger et al., 1993; Drygas et al., 2000).

Physical culture at universities and in other types of higher education institutions should play an important role by stimulating the subsequent psychophysical development as well as by constituting a continuation of previously acquired movement, hygiene and health habits of students. The tradition of conducting research on physical culture of students in Poland can be traced back to the late 19th century. The very first dissertations referred to health conditions, physical development and physical fitness as well as habits and conditions of hygiene (Mirkiewicz, 1983; Muszkieta & Bronikowski, 2003; Litwiniuk et al., 2004; Baj-Korpak et al., 2010).

Until a few years ago, there was a scarcity of research concerning physical and sports activity of students. Recently, however, the situation has been slightly changing as new projects emerge, including the ones undertaken in cooperation with partner universities not only from Europe.

Numerous studies prove that additional advantage resulting from physical activity is the role it plays in the fight against social pathologies such as tobacco smoking, alcohol abuse and the use of psychoactive substances, including harmful drugs. As a rule, physical activity eliminates addictions mainly due to physiological reasons. Physical activity is a form of leisure-time occupation (sporting, recreational and tourism activity). The level of physical activity and the diet, indirectly, may be indicative of the vitality of not only students but also of the whole population. Physical activity should be an important element of health behaviours of young people. Nowadays, it is desirable for a person to devote a part of their leisure time to motor activity. It has its explanation in the positive impact on

the somatic, social and mental health (Caspersen, 1994; Strawbridge, et al. 2004). Implementation of research results which indicate the positive effects of regular physical effort is highly necessary not only in Poland. Perhaps, this will affect the quality of life of an individual as well as of the whole society (Haskel et al., 1992; Charzewski, 1997; Martinez-Gonzales et al., 2001; Haskell et al., 2007; Biernat & Tomaszewski, 2015).

Developing positive habits of spending leisure time, ways of strength recovery and active recreation requires knowledge of the current level of participation of selected social groups and, in particular, university students, i.e. individuals with a higher level of education, who in the future will contribute to governing the country and making key economic choices and health-related decisions (Eurobarometer, 2010). The purpose of this research was to diagnose physique, physical activity and health behavior of university students from the University of Physical Education and Sport in Biala Podlaska (Poland).

Material and methods

The research included 162 male students from the University of Physical Education and Sport in Biala Podlaska (Poland). Forty-seven study participants (28.1%) were sportsmen (handball, volleyball, basketball, football, MMA, taekwon-do, swimming and athletics). The average age of respondents was (M=20.27 years) the subjects were interviewed with the use of IPAQ (Sjöström et al. 2000) and HBUSQ (Litwiniuk, Grants 2010) questionnaires. The students' body height and body weight were assessed. The measurements were conducted according to the principles accepted in anthropometry, using standardized instruments. The procedures of the study were reviewed and accepted by the ethical committee. The results obtained were subjected to a statistical analysis using Statistica 12.0 software.

Results

Physical activity is one of the key elements of a healthy lifestyle. Analysis of the study material indicated that the majority of respondents preferred an active model of spending their leisure time, which may be linked to the area of their studies.

Slightly less than a third of the subjects (28.1%) regularly attended sporting activities organised at various kinds of sports clubs, including Academic Sports Associations, while the remaining 71.3%, of the respondents participated individually in organised recreational activities as well as in physical educational activities (Fig. 1).

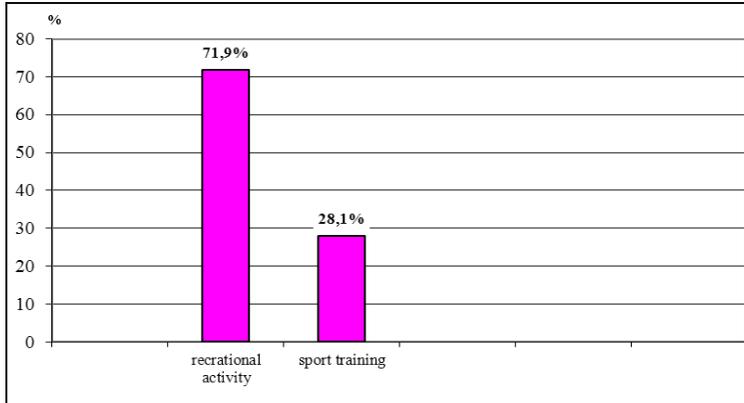


Figure 1. Type of physical activity of respondents (n=162)

There were no significant differences in physical activity associated with intensity. The results of the study showed that most students are characterised by high physical activity (Fig. 2).

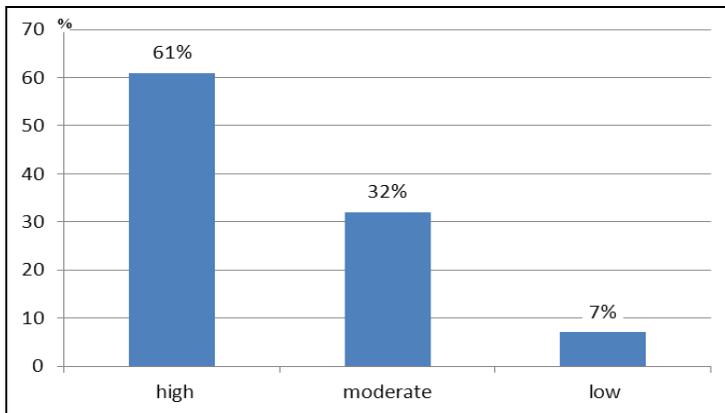


Figure 2. Physical activity percentage summary diagnosed with the use of IPAQ questionnaire taking into account intensity (n=162)

More than half of the respondents participated in sports and recreational activities 5 times a week, while similar percentage of

respondents claimed to have been involved in sports activities either 3 times a week or everyday (Fig. 3).

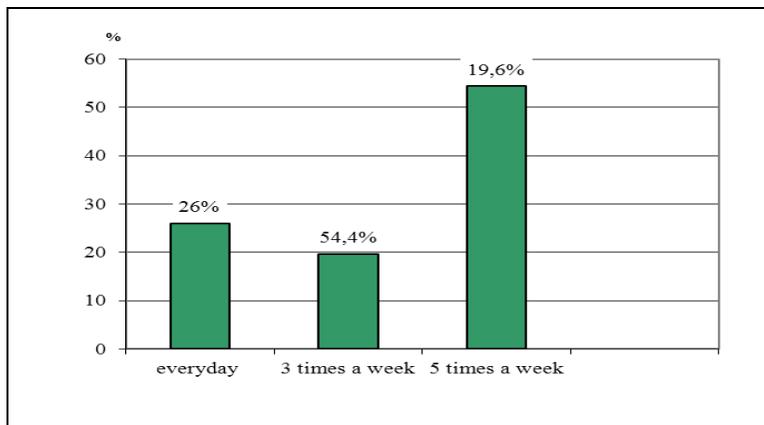


Figure 3. Frequency of sports and recreational activity participation of respondents (n=162)

Adequate nutrition is one of the elements of a healthy lifestyle. Nevertheless, as proved by the research results obtained with the use of Health Behaviour in University Students Questionnaire (HBUSQ), it is only every third student (31.7%) who has meals on a regular basis during the day, while students who do sports have meals twice as often (68.2%).

Table 1

Diet of the student respondents depending on the type of sports and recreational activity (n=162)

		Student (n=115) (%)	Student athletes (=47) (%)
Regular consuming of meals		31,7	68,2
Number of meals during a day	Below 3	7	-
	Three times per week	56	22
	Five times per week	37	78
Seven day per week consuming fruits and vegetables		7	36
Limited of sweets		6	12
Taking extra supplements of diet (complete diet)		67	100
Salt extra in a meal		31	29

The number of meals remains unsatisfactory as 37% of the students and 60% of student athletes eat 4-5 meals a day, which has a beneficial impact on the prevention of obesity and helps to develop good eating habits. On the other hand, a small number of students, i.e.: 6% of the students and 12% of the student athletes reduce the consumption of sweets. Additionally 31% of the students and 29% of the student athletes add salt to foods. The

level of awareness of both students and student athletes may influence the use of dietary supplements, as meals consumed in student canteens do not ensure a balanced diet adjusted to physical effort during practical and educational courses as well as training.

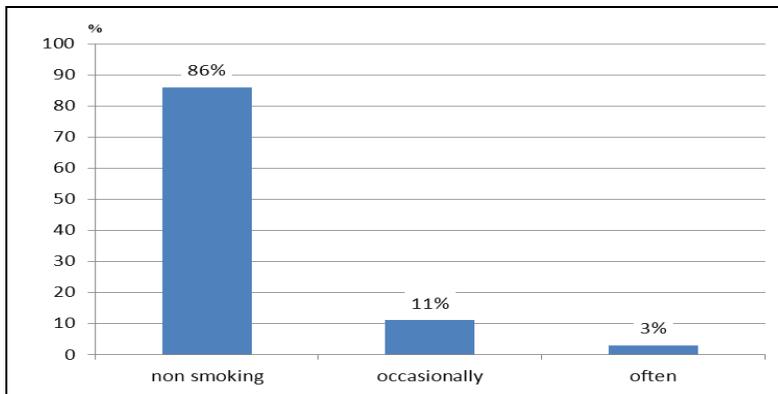
More than a half of the respondents admitted to consuming alcohol on a weekly basis. Alcohol consumption is more frequent among regular students than student athletes. A weekly consumption of beer concerns 51% of the students and 78% of the student athletes. This is due to the fact that according to some dietary theories, low-alcohol drinks contribute to a quicker recovery after a training session. On the other hand, consumption of spirits, i.e. vodka and alcoholic drinks is less frequent, while champagne or wine are drunk sporadically and the frequency of their consumption among students and student athletes is reversed (Tab. 2).

Table 2

Frequency of alcoholic beverages consumption by students depending on the type of sports and recreational activity (n=162)

Kind of alcohol	Frequency (%)									
	Everyday		In every week		In every month		Seldom		Never	
	Student	Student athletes	Student	Student athletes	Student	Student athletes	Student	Student athletes	Student	Student athletes
Beer	-	-	51	78	41	11	3	1	7	-
Wine	-	-	-	-	6	3	87	96	1	7
Wodka	-	-	-	-	37	54	61	46	2	-
Champagne	-	-	-	-	-	-	84	99	16	1
Drinks	-	-	3	7	47	74	46	15	4	4

The majority the respondents declared the lack of addiction to smoking, while only 11% of the respondents admitted to smoking on an occasional basis or for social reasons (“social smoking”). Only a few students stated that they smoked but they did it very rarely (Fig. 4).

**Figure 4.** The prevalence of smoking among students (n=162)

It has been reported that competitive athletes sometimes use tobacco and alcohol despite the fact that these substances are harmful to human health. The majority of them have no beneficial effects on sports performance.

Discussion

The present state of knowledge referring to the lifestyle of academic youth does not provide an explanation to numerous matters concerning the way and organisation of leisure time of students, including student athletes. Research on physical activity was conducted with the use of various diagnostic tools. IPAQ questionnaire applied hereinafter enables objective analysis and comparison of different social and vocational groups (Biernat & Stupnicki, 2005; Thomas et al., 2005; Sjöström et al., 2006; Bouchard & Blair, 2007). Similarly to the assessment of health and risk behaviours, unifying the tools would be beneficial (Litwiniuk & Grants, 2010).

This article concerns health behaviours characteristic to a specific vocational group of Physical Education students. Research has shown that students of Physical Education at Polish and other European universities demonstrated a higher level of physical activity in comparison to students in other educational disciplines (Wojtyczek, 2006). This is probably due to the specific nature of this discipline and it stems from the fact of shaping the habits and sports interests in previous years.

A crucial element of a healthy lifestyle is the avoidance of health-risk behaviours. Research has shown that the area of study determines the level of physical activity and health-risk behaviours such as avoidance of smoking, alcohol abuse and avoidance of psychoactive substances. Research results were much different from the ones that were obtained from students of other types of higher education institutions (Mellibruda et al., 2003; Pach et al., 2006; Rzeznicki et al., 2007).

Other authors' research shows that alcohol is most popular among students, followed by tobacco and "cannabis products" such as marijuana and hashish. In the case of smoking, addiction may occur after a few weeks of occasional smoking. It is also important to note that smokers are 4-5 times more at risk of developing alcohol addiction in comparison to non-smokers (Zatorski & Przewoźniak, 1996; Kurpas et al., 2013; Kalupa et al., 2013; Wójtowicz-Chomicz, et al., 2014).

Rational nutrition involves, among others, the number (4-5 times a day) and regularity of consuming meals – breakfast, eaten before going to university classes is conducive to effective learning and training and it ensures better well-being (SCF/CS/NUT/SPORT/5, 2001; WHO Technical Report Geneva, 2007). The review of the literature has shown that breakfast

is the most important element (Walentukiewicz, 2009). Low blood glucose concentration after a long night pause can result in mental or psychological impairments among those who did not have breakfast. The lack of this meal leads to forenoon fatigue and causes reduction of cognitive abilities, especially the ability of recalling (Skibniewska et al. 2007; Markiewicz, et al., 2007). In the case of Physical Education students, rational nutrition is hindered by a great number of practical classes (Maughan, 2000; Zajac et al., 2007).

Conclusions

According to the latest standards of the World Health Organization (WHO) and American College of Sports Medicine (ACSM), all the surveyed students of physical education followed all recommendations regarding healthy physical activity and their level of physical activity was mostly determined by practical classes at university and training. Medium- and high-intensity physical activity constituted the largest part of weekly physical activity and energy expenditure of the students.

Healthy behaviours in the field of nutrition prevailed mainly among students who practised sports. No health-risk behaviours such as alcohol and nicotine abuse or taking psychoactive substances and drugs were observed among the students.

Physical Education students as future teachers, instructors and coaches are well prepared to represent authority and to promote healthy behaviours among school students because during studies they have acquired necessary knowledge and skills which now they can put into practice in school or by conducting sports activities among youth and adults. Previous studies may contribute to an even better diagnosis of lifestyle of students of different faculties in Poland and Europe as a reference material. Research results may contribute to more complementary look at the lifestyle of students and they (results) can provide a basis for organisation of students' leisure and prevention in terms of health-risk behaviours.

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