

Leisure Time Physical Activity of Students of the Institute of Health Sciences at the State Higher Vocational School in Tarnów

Aktywność fizyczna w czasie wolnym studentów Instytutu Ochrony Zdrowia PWSZ w Tarnowie

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Article history:

Otrzymano/Received: 22.02.2019

Przyjęto do druku/Accepted for publication: 04.03.2019

Opublikowano/Publication date:

Marzec 2019/March 2019

Abstract

Introduction: Physical activity, apart from supporting the proper functioning of the body, is a natural need of every human being, and when practised systematically brings many health benefits. The aim of the study was to determine the level of physical activity during leisure time and to show the preferred forms of movement among students.

Materials and methods: The research was conducted in the academic year 2017/2018 among the first year students of the State Higher Vocational School in Tarnów, majoring in Physical Education, Physiotherapy and Nursing. The survey covered the total of 209 students, 153 female (73.2%) and 56 male (26.8%). A diagnostic survey was applied as the research method, and the empirical material was collected with the use of a questionnaire.

Results: The research showed that the level of students' physical activity varied depending on both sex and the field of study. The majority of the respondents (66.5%) showed a low level of physical activity. The female students most frequently practised swimming (22.2%) and running (13.1%), whereas the male students preferred football (32.1%), gym workout (17.9%) and, similarly to the females, swimming (14.3%).

Conclusions: On the basis of the research results and the formulated conclusions it can be stated that taking decisive and effective actions in order to develop positive attitudes towards physical culture among children and youth and to prepare them for lifelong care for their body should be a priority.

Keywords: physical activity, students, leisure time

Introduction

Physical activity at every stage of human life plays an important role. During the anaphase period, it supports the normal development of the body, maintains the achieved level of development in mesophase, and prevents involution processes in cataphase.

Cyclical physical activity also brings many health benefits. It counteracts the occurrence of certain diseases, increases the exercise capacity of the body, improves mood and reduces stress [1]. The importance of physical activity for a person cannot be associated solely with satisfying his biological needs, as it also affects the mental and social sphere and satisfies the needs of an aesthetic nature [2]. The greatest benefit from participation in

physical activity is when the exercises that follow are performed before the disappearance of previously obtained effects [3]. It is therefore advisable to do exercises daily.

Physical activity, due to its values, should be a priority in daily functioning of people from an early age. According to B. Woynarowska [4], the right amount of movement in childhood and youth, as well as positive experiences associated with it, create a chance for lifelong participation in broadly understood physical culture.

However, the results of studies conducted in various age groups have shown that the level of interest in physical activity, especially in free time, decreases with age [5]. Low or no physical activity may be the cause of many serious diseases, such as heart disease, hypertension, osteoporosis or obesity [6].

In contrast, research performed by Lagerros et al. [7] showed that physically active women are at lower risk (20–30%) of de-

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veloping breast cancer than inactive women. Regular exercise can reduce the risk of prostate cancer [8], uterus [9], lung [10] and in the case of large intestine by as much as 40–50% [11]. It should also be noted that lack of physical activity is the cause of 6% of deaths in the world [12]. The consequences of movement deficiency encourage both reflection and attention to the appropriate level of human participation in physical activity.

Awareness of the impact of physical activity on health should accompany especially academic youth, who in the future, as the intellectual elite, will be responsible for promoting health-conscious behaviours [13, 14]. Unfortunately, quite often the lifestyle of studying youth displaces from their consciousness the fact that delaying the moment of aging and maintaining high physical activity in old age are one of the factors predicting longer life [14, 15].

The aim of the research was to diagnose physical activity during leisure time and preferred forms of movement among first-year students of the Institute of Health Protection at the SHVS in Tarnów.

The obtained results were meant to provide answers to the following research questions:

1. What is the level of students' physical activity?
2. What is the frequency and volume of physical activity of the participants of the research?
3. What forms of movement do the surveyed students prefer?
4. Is the level of physical activity varied depending on sex and the field of study?

Material and methods

The research was carried out in the academic year 2017/2018 among the first year students of the State Higher Vocational School in Tarnów, majoring in: Physical Education, Physiotherapy and Nursing. The survey covered the total of 209 students, 153 female (73.2%) and 56 male (26.8%).

The research was carried out using the diagnostic survey method, and the survey technique was used to obtain the necessary

information and data, whereas the research tool was the Adult Physical Activity Questionnaire (APAQ) created by E. Madejski (2013). The questionnaire contained closed questions. The questions had ready-made answer scales, from which the respondent chose one or two proposals. Often, these questions were accompanied by additional questions that supplemented the respondents' answers. Almost all closed-ended questions were scored. The respondent could obtain from 0–24 points, which were the basis for determining three numerical ranges (levels): low – 0–8 points, medium – 9–16 points, high – 17–24 points.

All research results have been prepared in the programs: Microsoft Excel 2007 and IBM – SPSS Statistics 21. A summary of abundance and percentage was used for the statistical description of qualitative data, and *chi*-square statistical significance tests were applied to examine the relationship between qualitative data. The correlation strength of two features was determined using the Spearman's *rho*.

Results

The level of physical activity of the surveyed students was determined on the basis of past and current sport practice, frequency and volume of physical activity per week, performance of morning and relaxation exercises after physical or mental work and in stressful situations.

The research showed that the level of students' physical activity varied depending on both sex and the field of study. The majority of the respondents (66.5%) showed a low level of physical activity. The male students compared to the female students obtained significantly better results, and these differences proved to be statistically significant (Table 1). The Physical Education students showed the highest level of physical activity, and the Nursing ones the lowest. Similarly to sex, the field of study was also a statistically significant variable ($p < 0.001$) that affected their level of physical activity (Table 2).

Almost every third respondent does not exercise during leisure time at all. The female students do not engage in physical activity more often than the male ones ($p < 0.05$). The Nursing

Table 1.

Level of physical activity of the surveyed persons depending on their sex

Level of physical activity	Sex				In total	
	F		M		N	%
	N	%	N	%		
Low	112	73.2	27	48.2	139	66.5
Medium	38	24.8	26	46.4	64	30.6
High	3	2.0	3	5.4	6	2.9
In total	153	100	56	100	209	100

Statistical significance analysis: $\chi^2(2) = 11.74; p = 0.003$

Table 2.

Level of physical activity of the surveyed persons depending on their field of study

Level of physical activity	Field of study					
	PE		PHYS		NURS	
	N	%	N	%	N	%
Low	9	31.0	50	54.3	80	90.9
Medium	18	62.1	38	41.3	8	9.1
High	2	6.9	4	4.4	0	0.0
In total	29	100	92	100	88	100

Statistical significance analysis: $\chi^2(4) = 46.39; p < .001$

students showed the least activity. Among the respondents, regardless of sex and the field of study, recreational activity predominated. Competitive sports are most often practised by the male students and those studying Physical Education. (Tables 3 and 4).

Analysis of the results shows that the female students most frequently practised swimming (22.2%) and running (13.1%),

The largest percentage of respondents (14.4%) practise sport twice a week. Only 5.7% of the students are active every day. The male students usually exercise three times a week, and the female ones twice (Table 7). The Physical Education students are the most active three times a week, the Physiotherapy ones more than three times a week, and the Nursing ones twice a week (Table 8). The largest percentage of respondents, regard-

Table 3.

Students' physical activity during leisure time depending on their sex

Physical activity	Sex				In total		Correlations
	F		M		N	%	
	N	%	N	%			
Not exercising	59	38.6	12	21.4	71	34.0	-0.16*
Exercising professionally	14	9.2	10	17.9	24	11.5	0.12
Exercising recreationally	81	52.9	34	60.7	115	55.0	0.07

* $p < 0.05$ **Table 4.**

Students' physical activity during leisure time depending on their field of study

Physical activity	Field of study						Correlations
	PE		PHYS		NURS		
	N	%	N	%	N	%	
Not exercising	2	6.9	15	16.3	28	31.8	0.45*
Exercising professionally	10	34.5	22	23.9	19	21.6	-0.17*
Exercising recreationally	17	58.6	57	61.9	50	56.8	-0.31*

* $p < 0.05$

whereas the male students preferred football (32.1%), gym workout (17.9%) and, similarly to the female ones, swimming (14.3%). A correlation between sexes was noted in the case of two forms of movement (Table 5): football ($p < 0.01$) and gym ($p < 0.05$). Volleyball was the most popular in all fields of study. Football was also very popular among the students of Physical Education and Physiotherapy, and running among the Nursing students. A statistically significant correlation ($p < 0.001$) was recorded only among footballers (Table 6).

less of sex, spends over 4 hours a week on physical activity (Table 9). Similar trends were noted among the students of Physical Education and Physiotherapy. In contrast, the Nursing students usually devote 1 hour per week to movement. Spearman's *rho* correlation analysis showed small but statistically significant sex differences ($p < 0.05$) and between the fields of study ($p < 0.001$) in the frequency and volume of physical activity.

Table 5.
Students' preferred forms of physical activity depending on their sex

Forms of physical activity	Sex				In total		Correlations
	F		M		N	%	
	N	%	N	%			
Swimming	34	22.2	8	14.3	42	20.1	-0.09
Running	20	13.1	4	7.1	24	11.5	-0.08
Other	15	9.8	8	14.3	23	11.0	0.06
Football	4	2.6	18	32.1	22	10.5	0.43**
Gym	11	7.2	10	17.9	21	10.1	0.16*
Volleyball	9	5.9	2	3.6	11	5.3	-0.05
Bicycle	8	5.2	3	5.4	11	5.3	0.00
Gymnastics	5	3.3	4	7.1	9	4.3	0.08
Aerobic	8	5.2	0	0.0	8	3.8	-0.12
Basketball	3	2.0	1	1.8	4	1.9	-0.01

* $p < 0.05$, ** $p < 0.01$

Table 6.
Students' preferred forms of physical activity depending on their field of study

Forms of physical activity	Field of study						Correlations
	PE		PHYS		NURS		
	N	%	N	%	N	%	
Volleyball	7	24.1	25	27.2	17	19.3	0.461
Football	13	44.8	16	17.4	5	5.7	< 0.001
Running	0	0.0	10	10.9	14	15.9	0.065
Basketball	3	10.3	9	9.8	12	13.6	0.706
Swimming	2	6.9	13	14.1	9	10.2	0.505
Other	2	6.9	9	9.8	7	7.9	0.854
Handball	3	10.3	6	6.5	4	4.6	0.528
Bicycle	1	3.5	3	3.3	6	6.8	0.503
Gym	2	6.9	3	3.3	4	4.6	0.696
Dancing	1	3.5	5	5.4	2	2.3	0.541
Martial arts	2	6.9	3	3.3	1	1.1	0.263
Tennis	3	10.3	1	1.1	1	1.1	0.011
Skiing	1	3.5	3	3.3	1	1.1	0.599
Athletics	2	6.9	0	0.0	2	2.3	0.059
Gymnastics	0	0.0	3	3.3	1	1.1	0.421

Table 7.
Frequency of systematic physical activity of students depending on their sex

Systematic physical activity	Sex				In total		Correlations
	F		M		N	%	
	N	%	N	%			
Not exercising	84	54.9	19	33.9	103	49.3	0.021*
Once	7	4.6	1	1.8	8	3.8	
Twice	21	13.3	9	16.1	30	14.4	
Three times	17	11.1	12	21.4	29	13.9	
More than three	17	11.1	10	17.9	27	12.9	
Every day	7	4.6	5	8.9	12	5.7	
In total	153	100	56	100	209	100	

* $p < 0.05$

Table 8.

Frequency of systematic physical activity of students depending on their field of study

Systematic physical activity	Field of study						Correlations
	PE		PHYS		NURS		
	N	%	N	%	N	%	
Not exercising	3	10.4	30	32.6	70	79.6	< 0.001
Once	0	0.0	6	6.5	2	2.3	
Twice	7	24.1	14	15.2	9	10.2	
Three times	11	37.9	15	16.3	3	3.4	
More than three	4	13.8	20	21.8	3	3.4	
Every day	4	13.8	7	7.6	1	1.1	
In total	29	100	92	100	88	100	

Table 9.

Volume of systematic physical activity of students depending on their sex

Systematic physical activity	Sex				In total		Correlations
	F		M		N	%	
	N	%	N	%			
Not exercising	84	54.9	19	33.9	103	49.3	0.25*
1 hour	13	8.5	1	1.8	14	6.7	
2 hours	14	9.2	7	12.5	21	10.0	
3 hours	10	6.5	4	7.1	14	6.7	
4 hours	13	8.5	7	12.5	20	9.6	
Over 4 hours	19	12.4	18	32.1	37	17.7	
In total	153	100	56	100	209	100	

* $p < 0.05$ **Table 10.**

Volume of systematic physical activity of students depending on their field of study

Systematic physical activity	Field of study						Correlation
	PE		PHYS		NURS		
	N	%	N	%	N	%	
Not exercising	3	10.4	30	32.6	70	79.6	< 0.001
1 hour	1	3.5	7	7.6	6	6.8	
2 hours	3	10.3	15	16.3	3	3.4	
3 hours	6	20.7	5	5.4	3	3.4	
4 hours	5	17.2	10	10.9	5	5.6	
Over 4 hours	11	37.9	25	27.2	1	1.2	
In total	29	100	92	100	88	100	

Discussion

Despite the fact that physical activity and its importance for human health has been the subject of many studies, conferences, publications and discourse of various scientific communities, it remains a current problem, and monitoring of such an important area in the context of occurring changes reaches a new dimension. This applies, inter alia, to the study of the physical activity of young students, especially in medical and physical culture related fields. This group of students is expected not only to have a high level of awareness of a healthy lifestyle, but also to the exemplary promotion of healthy behaviours. The research shows that 34% of the respondents studying Physical Education, Physiotherapy and Nursing do not engage in physical activity at all in

their free time. However, the above results are better than those obtained in other authors' researches [16–18]. The male students showed a higher level of physical activity. The vast majority of the exercising students (55%) engage in the selected form of movement recreationally.

The largest percentage of the respondents exercise twice a week, and only about 6% of the students are active every day. A slightly higher percentage (7%) was recorded among the students of the Silesian Medical Academy [17]. The male students usually exercise three times a week, and the female ones twice. Most respondents, regardless of their sex, spend more than 4 hours a week on this type of activity. Similar results were recorded among the Physical Education and Physiotherapy students. In contrast, the Nursing students usually devote only 1

hour per week to exercises.

The most popular forms of physical activity among the students are: swimming (20.1%), running (11.5%), gym exercises (10.1%), and among team sports games football (10.5%). Similar preferences as in own research, although clearly higher percentage values, were recorded among students of University of Physical Education and Sport (UPHES) in Gdańsk (swimming – 66.6%, running – 59%, walking – 52.5%) [19]. Slightly different forms of movement were declared by students in the studies of Sochocka and Wojtyłka – cycling, walking and team games [20].

Conclusions

Physical activity undertaken during leisure time by the examined students is disproportionately low in relation to the anticipated expectations. Both sex and the field of study clearly differentiated the level of activity studied.

Preferred forms of movement among the female students are swimming and running, whereas for the male students these are football and gym exercises. Volleyball was the most popular team game in all fields of study.

It would be advisable to continue this type of research, primarily to further search for the reasons for such low physical activity of students. It also seems justified to intensify actions to motivate academic youth to physical activity during their leisure time.

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Streszczenie

Wstęp: Ruch, poza wspomaganie prawidłowego funkcjonowania organizmu jest naturalną potrzebą każdego człowieka, a podejmowany systematycznie przynosi wiele korzyści zdrowotnych. Celem badań było określenie poziomu aktywności fizycznej w czasie wolnym oraz wykazanie preferowanych form ruchu wśród studentów.

Material i metody: Badania przeprowadzono w roku akademickim 2017/2018 wśród studentów I rocznika Państwowej Wyższej Szkoły Zawodowej w Tarnowie na kierunkach: wychowanie fizyczne, fizjoterapia i pielęgniarstwo. Ogółem przebadano 209 studentów, w tym 153 kobiety (73,2%) i 56 mężczyzn (26,8%). W badaniach zastosowano metodę sondażu diagnostycznego, a do zebrania materiału empirycznego wykorzystano ankietę.

Wyniki: Badania wykazały, że poziom aktywności fizycznej studentów był zróżnicowany zarówno pod względem płci jak i kierunku studiów. Większość (66,5%) respondentów prezentowało niski poziom aktywności fizycznej. Kobiety najczęściej ćwiczyły pływanie (22,2%) i bieganie (13,1%), a mężczyźni preferowali piłkę nożną (32,1%), ćwiczenia na siłowni (17,9%) oraz podobnie jak kobiety pływanie (14,3%).

Wnioski: Na podstawie wyników badań i sformułowanych wniosków można stwierdzić, iż podejmowanie zdecydowanych i skutecznych działań w kształtowaniu u dzieci i młodzieży pozytywnych postaw wobec kultury fizycznej oraz przygotowywaniu ich do całonocnej dbałości i troski o ciało, powinno być priorytetem.

Słowa kluczowe: aktywność fizyczna, studenci, czas wolny
