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Motivations for undertaking physical activity by first-year students of Faculty of Physical Education in 2000 and 2010

Authors' Contribution:

- A – Study Design
- B – Data Collection
- C – Statistical Analysis
- D – Data Interpretation
- E – Manuscript Preparation
- F – Literature Search
- G – Funds Collection

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Key words: *physical activity, students, motivations for physical activity.*

Abstract

- Background:** *During the last several years, diametrical difference in attitude to physical activity in youth has been noticed. Engagement in any form of physical activity always goes together with motivation for its undertaking, most often connected with realization of personal expectations. Its sources are perceived, among others, in interior factors, such as: joy resulting from participation in physical activity itself, personal achievements, and pleasure of finding release in movement or social contacts, e.g. spending time with friends. The present paper attempts to assess the motivation for additional physical activity undertaken by first-year students of the Faculty of Physical Education at the Gdansk University of Physical Education and Sport in 2000 and 2010 in their free time.*
- Material/Methods:** *The research involved first-year students studying at the Faculty of Physical Education at the Gdansk University of Physical Education and Sport in the years 2000 and 2010. Generally, 639 students (42% women and 58% men) were examined. The research was conducted by means of a diagnostic poll with the use of authors' own questionnaire.*
- Results:** *The students from 2000 differed in a statistically significant way in taking care of their health, looks and figure and they were enjoying physical activity more. Important statistical differences were noted in undertaking physical activity in order to socialize in the following time points of the research. Both groups of students from 2000 and 2010, quoted a lack of financial means as the main reason limiting their physical activity.*
- Conclusions:** *The research indicates the difference in motivation for physical activity between first-year students in 2000 and 2010.*

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Introduction

Physical activity (PA) is not only one of the forms of spending free time, but also an opportunity of important health-preventive meaning, given a man in the process of self-realization [1, 2]. Within the last few years a diametrical difference in the approach of youth towards physical activity has been noticed. The period of adolescence is a stage in which an individual forms his/her own identity and sets goals and values that give meaning to his/her life. Under certain circumstances they can also choose their own attitude towards activity, which in effect is manifested in their behaviour [3]. No doubt that the popularity of various forms of this activity increases, which is connected with increasingly growing offer of programmes and recreational and sport events and better infrastructure. Unquestionably, however, there are certain factors which on the one hand motivate to participate in motor activity, but on the other hand, constitute barriers limiting participation [4]. Getting engaged in any form of physical activity is always accompanied by motivation to undertake it, most often connected with realization of personal expectations. Its sources are seen, among others, in inner factors, such as enjoyment from participation itself in the physical activity, personal achievements, pleasure of experiencing activity through movement or social activity, e.g. spending time with friends. When young people take up physical activity they will be physically active their whole adult life.

The specificity of physical activity in various groups is determined, among others, by forms of motor exercises and motives of undertaking them. "Equally important as recognizing motives for participation in motor activity is also an analysis of reasons for resignation from this pro-health form of spending free time" [5]. Taking into consideration the results of GUS (Central Statistical Office) research [4], active Poles are characterized by ludic attitudes (entertaining), in which 51.3% are motivated by pleasure and enjoyment, and 36.7% of respondents by preserving health, keeping fit and maintaining their physical condition. Achieving the desired figure is mentioned in a lot of research as an important motivating factor of physical activity. Health is on a high position in the system of values of an individual - usually it is appreciated more by the elderly than by the young ones. As the report Participation of Poles in Sports shows, care for physical fitness and health frequently comes with age, but among the surveyed part of the society this motivation only takes the first place after approx. the 45th year of life and is more pronounced in the elder age brackets.

The authors attempted to assess the limits and motivations for undertaking physical activity in their free time by first-year students of the Department of Physical Education at AWFIS. Moreover, another goal was to assess the dominant motivations for undertaking it. The assumption was that both in 2000 and 2010 the dominant motivations would be the health-preventive ones, and that limitations would gain in variety without any of them being significantly dominant. The research questions posed are concerned with motivations for physical activity and their limitations in both time points. Motivations for undertaking physical activity were divided according to the researchers' own conception, taking into account determinants that concern the self (internal motivations), i.e. taking part in physical activity in anticipation to gain potential health benefits, experienced pleasure, self-realisation and impressing peers with physically active attitude. However, those aims which an individual pursues and realises as a result of external influence, i.e. undertaking physical activity because of following the family pattern, searching for social, business, financial contacts or lacking another interesting activity, have been categorised as external motivations.

Material and method

The research was conducted on a sample of 639 first-year students (42% female, 58% male) of the Faculty of Physical Education at Gdansk University of Physical Education and Sport (AWFiS) in Gdansk. In the selection process the subjects' gender, age, BMI (kg/m²), height (m), and body mass (kg) were taken into consideration. Moreover, the sample excluded competitive athletes. At the first time point of the research – the year 2000 – the sample involved 327 students, and at the second time point: 2010 – 312. The respondents' age and anthropometric characteristics are displayed in Table 1.

Tab. 1. Anthropometric characteristics of the tested students ($\bar{x} \pm SD$)

Gender	Women		Men	
	Year of research 2000 n = 152	2010 n = 119	2000 n = 175	2010 n = 193
Age (years)	20.1±1.27	19.3±1.14	20.6±1.52	19.8±1.43
Mass (kg)	59.95±5.73 ^a	66.71±8.26	74.86±9.37^b	78.00±7.85
Height (m)	1.68±2.84	1.71±1.07	1.77±1.73	1.79±0.9
BMI (kg/m²)	21.16±1.05^c	22.85±1.76	23.74±1.67^d	24.34±1.68

t-Student test between mean values, level of significance $p < 0.05$,
^a $p = 0.0000$, ^b $p = 0.005$, ^c $p = 0.0000$, ^d $p = 0.0007$

The research was conducted by means of a diagnostic survey and anthropometric measurements. The primary research tool was a questionnaire, developed by the authors, consisting of questions that dealt with motivations for undertaking physical activity and its limits. The studies based on questionnaires were conducted by an auditorial method, following the rule of anonymity. On the grounds of the conducted anthropometric studies of height and body mass, in which Stadiometr Seca 217 and Tanita Body Composition Analyzer equipment was used, the BMI was calculated. The statistical analysis was conducted with a use of computer software STATISTICA version 10 (StatSoft Polska). The values of the analysed measurable parameters were presented in form of arithmetic mean values and standard deviations and for non-measurable by means of count and percentage. In order to examine dependency between two nominal variables in the following years of studies (in particular time points of the research), the test of independence chi-square was applied and for mean values t-Student test, assuming the level of significance at $p < 0.05$.

Results

The results of the conducted survey show differences in first-year students' motivations in the two time points: the years 2000 and 2010 (Table 2). The main determinants of undertaking physical activity at the first time-point (in 2000) were: caring for health and looks (78.29%), self-realisation (60.24%) and pleasure (59.02%). At the second time point (in 2010) the tested students indicated self-realisation (59.62%), health and looks (57.05%) and social contacts (49.04%) as their motivations. It is an alarming fact that, for both women and men at the second time point, physical activity was not the primary determinant of health, as it was for the respondents at the first time point. First-year students at the first time point showed a statistically greater difference in their motivations for undertaking physical activity, compared to their colleagues at the second time point - they did it out of care for their health, looks and figures ($p = 0.0000$) as well as due to their need to rest ($p = 0.0253$). A statistically significant difference ($p = 0.0003$) was found in undertaking physical activity with the aim of making social contacts - this phenomenon occurred more often among the students tested in 2010. Statistically more often those students also pointed to a lack of money as their main deterrent from undertaking physical activity. The increase in significance of the financial factor should be noted. At subsequent time points an increase in the percentage of students who considered it a more important determinant of physical activity was 29.28%, although the difference was not statistically significant. Similar differences in both motivations and limitations were observed among both genders in both years of the research (Table 3).

Tab. 2. Motivations and limitations to undertaking physical activity (PA) in the years 2000 and 2010

Year of research		2000		p-value	2010	
		n=327	%		n=312	%
MOTIVATION FOR PA						
inner	health, looks, figure	256	78.287	0.0000	178	57,05
	pleasure /rest	193	59.021	0.0253	146	46,79
	self-realisation	197	60.245	0.9078	186	59,62
	wish to show off	14	4.281	0.2454	51	16,35
	cultivating family patterns	152	46.483	0.7412	139	44,55
exterior	social contacts	81	24.771	0.0003	153	49,04
	lack of other interesting activities	33	10.092	0.5165	6	1,92
	financial factors	8	2.446	0.0807	99	31,73
LIMITATIONS TO PA						
lack of money		112	34.25	0.0000	0.0000	59.29
lack of interest in sport		6	1.83	0.6954	0.6954	5.77
difficult access to equipment and sport facilities		33	10.09	0.6555	0.6555	13.46
family situation		35	10.70	0.4120	0.4120	16.99
health problems		51	15.60	0.3193	0.3193	7.05
lack of time caused by enrolling in studies at other faculties		46	14.06	0.0013	0.0013	24.04
lack of time caused by taking paid work		48	14.68	0.0000	0.0000	34.29

Tab. 3. Motivations and limitations to physical activity (PA) among men and women in the years 2000 and 2010

Gender		Female				Male					
Year of examination		2000		p-value	2010		2000		p-value	2010	
		N=152	%		N=119	%	N=175	%		N=193	%
MOTIVATION FOR PA											
in- ner	health, looks, figure,	117	76.97	0.0047	68	57.14	139	88.51	0.0000	110	56,99
	pleasure/ rest	80	52.63	0.3851	71	59.66	113	69.07	0.0000	75	38,86
	self-realisation	82	53.95	0.8256	62	52.10	115	72.89	0.1077	124	64,25
	wish to show off	3	1.97	0.5168	19	15.97	13	8.03	0.4552	32	16,58
	cultivating family patterns	65	42.76	0.6353	56	47.06	87	54.47	0.1351	83	43,01
exte rior	social contacts	38	25.00	0.0307	56	47.06	43	26.82	0.0098	97	50,26
	lack of other interesting activities	20	13.16	0.6352	2	1.68	13	8.12	0.6721	4	2,07
	financial factors	2	1.32	0.2092	39	46.48	6	3.86	0.1594	60	31,09
LIMITATIONS TO PA											
lack of money		52	34.21	0.0443	63	52.94	60	34.29	0.0002	122	63.21
lack of interest in sport		2	1.32	0.7672	8	6.72	4	2.29	0.8108	10	5.18
difficult access to equipment and sport facilities		15	9.87	0.6518	18	15.13	18	10.29	0.8290	24	12.44
family situation		16	10.53	0.5431	21	17.65	19	10.86	0.5743	32	16.58
health problems		22	14.47	0.6312	10	8.40	29	16.57	0.3782	12	6.22
lack of time caused by enrolling in studies at other faculties		24	15.79	0.0251	32	26.89	22	12.57	0.0147	43	22.28
lack of time caused by taking paid work		16	10.53	0.0001	35	29.41	32	18.28	0.0001	72	37.31

Discussion

The results presented in this study indicate physical activity among students as an important health-preventive factor. Because of this, setting a goal of undertaking physical activity is justified by analysis of motivations for undertaking it. Despite the observed decreasing trend of physical activity among students [4, 6, 7, 8] the statistical significance of pleasure as motivation for undertaking physical activity, constant in the authors' research both in 2000 and 2010, may confirm it as the goal among the tested students.

Physical activity benefits making social contacts. In the year 2000 nearly 1/4 of the respondents motivated their participation in physical activity by social factors, in 2010 the percentage was close to 50%. Enhancement of social relations was also found to be a motivation for undertaking physical activity in the Caglar study [9]. Social goals were also mentioned in other research [4, 10, 11, 12]. Physical activity undertaken for recreation and renewal of psychophysical energy is another factor featuring strongly in the responses in 2000. Current free-time offers provide students with more varied possibilities of passive, sedentary activity (cable TV, computer games, etc.) which is probably the cause of the decreased percentage of students who consider physical activity a pleasure [13].

In our study, in the respondents' opinion cultivating family patterns is a determinant (motive, aim) of physical activity remaining at the same level. This can prove an important meaning of family background as a factor strengthening and motivating to undertake physical activity. The family model influences shaping of the physical activity habit. Those elderly people are more frequently physically active who in their youth were also active [14]. The influence of the family environment on undertaking physical activity is an important factor to which Skonieczka [15] Kaiser et al. [14], Jagusz et al. [16], Nowak-Zaleska [17], Kalecinska [18, 19] draw attention.

Limitations to physical activity pointed out by the surveyed youth also refer to the financial factor and are perceived differently from those of their peers from other University level schools [20, 21]. Among other reasons for not taking up physical activity, the most often mentioned by students in literature [22, 23, 24] is lack of time and their own laziness, which was also declared in our own studies. The dominating barrier limiting PA in our studies in the following years of research was a financial factor. The percentage of subjects who declared that they had not taken part in physical activity due to lack of money and due to simultaneously continued education or paid work in free time was higher in subject in 2010 ($p < 0.05$). In an analysis of physical activity and free time management in academic youth Sołtysik [25] finds a significant connection with employment within the surveyed group. The financial barrier as a limiting factor to physical activity was found in other research as well, but this involved older population [5].

Physical activity is an essential component supporting health, but also its positive measurement [26, 27]. Most recommendations mention a daily portion of physical activity in the amount 60-90 min a day for adults [7]. It may be concluded from various studies [2, 4, 6, 8, 17] that the percentage of youths with satisfactory levels of physical activity is decreasing. Studies on the conditions of physical activity indicate many significant factors increasing the importance of individual's "good choices", significant from the point of view of recommendations for stimulating and modifying health-preventive behaviours.

Conclusions

The trends of change in undertaking physical activity by individuals indicate an increase of its significance among both internal and external goals of physical activity.

Internal motivations for physical activity, such as health, looks, figure, pleasure, self-realisation appearing in the subjects' assessment allow confirming multi-factorial health care. Physical activity is an impulse for shaping it.

Family environment is important in continued undertaking of physical activity.

Lack of time (2000, 2010) and financial factors (2010) are limitations to undertaking of physical activity by the subjects.

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