

MOTIVATION TO WORK AND STUDY AMONG POSTGRADUATE OF THE PHYSICAL CULTURE

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Keywords:

- motivation,
- physical culture,
- postgraduate studies.

Abstract:

Introduction: The research based on Deci and Ryan's self-determination theory which applies to realm of physical education on postgraduate level. According to this theory, human motivation consists of extrinsic motivation, intrinsic motivation and amotivation.

The aim of the work was to identify and to compare motivation to study and to work of postgraduates whose study is connected with physical culture.

The material and the methodology: The study is based on the outcomes of the survey questionnaire completed by 55 postgraduates (32 females and 23 males) of The Jerzy Kukuczka Academy of Physical Education in Katowice. The used research tools were two questionnaires: *The Academic Motivation Scale* by Vallerand, Pelletier, Blais, Brière, Senécal, Vallières and *Echelle de motivation au travail* by Blais, Brière, Lachance, Vallerand.

Results: Among all levels of motivation to study and to work the intrinsic motivation to know got the highest average. There were significant differences ($p < 0,05$) between most levels of motivation to study and to work. The significant differences between females and males motivation ($0,97 > p > 0,22$) were not found.

Conclusions: Based on the research it was found the intrinsic motivation to know was the most important. There were significant differences between all levels of intrinsic motivation to study and to work, identified extrinsic motivation and amotivation. There were no found significant differences between females and males in any types of motivation to study and work and amotivation.

INTRODUCTION

Postgraduate studies in Poland are a form of education offered by universities which realize the principles of the Lifelong Learning programme. In accordance with the regulations in force, a university may launch postgraduate studies in the education area in which at least one degree course is offered. When it comes to postgraduate studies connected with physical education, it is the area of medical, health or physical culture sciences, where physical culture the area in focus.

The development of the postgraduate studies educational offer enables the universities to level the effects of the decreasing number of candidates and thus to organize the missing, mandatory didactic hours as well as to ensure the employment of academic workers on academic and didactic positions. This possibility is particularly important for small universities with relatively small budgets, such as universities of physical education. A wide range of offered postgraduate studies provides an opportunity to complete or change the

education profile for adult members of the society who either wish to be more flexible and adjusted to the job market or who undertake new challenges for social or personal reasons. The survival of higher education in a demographically and economically dynamic environment is dependent on the conformity of the educational offer with the consumer market, i.e. its' individualisation and adjustment to the needs and expectations of the students, trainees and postgraduates.

Motivation lies at the basis of the decision related with the continuation of learning, the field of study as well as any other human activity. Motivational factors, while being one of the determinants of success during studies, determine their course as well as the future professional career [3]. The importance of motivation in relation to human activity has also been recognised by physical culture theorists. The criterion to divide sport into passive, instrumental and autotelic, named the motivational criterion [8], may be used for any other physical activity. The analysis of motivation, being the subject of this research, is based on the original form of the self-determination theory by Edward Deci and Richard Ryan. According to its' assumptions, human behaviour is connected with the realization of the innate needs for autonomy, competence and relationship. These needs form the foundation of motivation [4, 5, 13]. Motivation may evolve in stages and form a continuum from amotivation through extrinsic motivation (controlled), to intrinsic motivation (autonomic) due to the transformation in the process of internalisation. The evolving theory of self-determination allows us still improve our understanding of the processes taking place in the human psyche during a variety of activities (education, sport-related or recreational physical activity, etc.) and improve its' conditions [6, 14]. Amotivation is a state in which one does not feel the need to undertake an activity, does not feel competent to perform it or believes that with the particular activity he or she will not achieve his or her desired goal. He or she does not see the relationship between the activity and its' effect and therefore believes that the behaviour as well as the activity is caused by factors beyond his or her control [4, 12].

The researched extrinsic motivation is divided into (from its highest to its lowest level) external regulations, with which the unit complies (rewards and punishments), external motivation, accepted by the unit (introjection, internalisation) and motivation of an external origin, which the unit considers his or her own (identification) and which is closest to intrinsic motivation. A student of postgraduate studies who intends to finish the course, as he or she will maintain his or her current job position or will receive a raise, is regulated externally and motivated by the willingness to avoid punishment (employment loss) or the expectation of a reward (salary raise). If he or she believes that finishing the postgraduate studies is a good employee's duty, it is considered an introjected external regulation. If he or she believes that the studies are important to him or her, we face an identification of an external regulation – the stage closest to intrinsic motivation.

Intrinsic motivation (autonomic) includes intrinsic motivation *to know*, connected with the needs of exploration, curiosity and learning, intrinsic motivation *toward accomplishments*, connected with the need of competence and intrinsic motivation *to experience stimulation*, focused on experiences, passion and pleasure.

THE AIM OF THE WORK

The aim of the work was to diagnose and compare the motivation to work and motivation to study of the students of postgraduate studies at The Jerzy Kukuczka Academy of Physical Education in Katowice. The following research questions were formulated:

1. Which of the motivation levels dominates among the surveyed?
2. Does motivation to work and motivation to study of the surveyed differ greatly?
3. Are there any major differences in motivation depending on the sex of the surveyed?

THE MATERIAL AND THE METHODOLOGY

The research was conducted at The Jerzy Kukuczka Academy of Physical Education in Katowice during the winter semester of the 2014/2015 academic year among the students of following postgraduate studies: Personal Trainer, Fitness and Strength Training, Nutrition and Supplementation of Physically Active People, Dance and Artistic Forms of Motion Activity, Postgraduate Studies of Physical Education, Motor Preparation in Team Games, Corrective-Compensatory Gymnastics and Sport and Tourism Manager. The questionnaire method was used. Participation in the questionnaire was voluntary and anonymous. The selection of sample was purposeful. A total of 101 questionnaires was collected, 55 of which remained, after the rejection of the ones missing data for analysis, completed by working students (32 women and 23 men). This constituted 26% of the population numbering 214 students of the aforementioned postgraduate studies at AWF Katowice during the considered time. Most of the surveyed declared that their professional experience is below 5 years (44%) and above 5 to 10 years (33%) (figure 1).

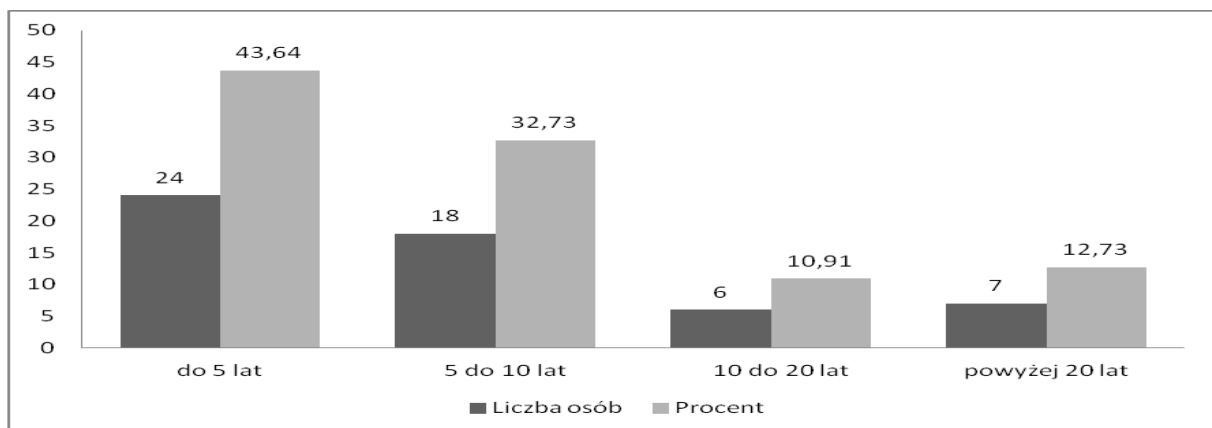


Figure 1. Professional Experience [Source: own research]

In order to diagnose the motivation, two questionnaires developed by Canadian scientists from Université du Quebec à Montreal on the basis of the self-determination theory were used. The questionnaires examine the structure of intrinsic motivation, extrinsic motivation and amotivation. In case of the motivation to study, utilised was the *Motywy podejmowania studiów* questionnaire by *The Academic Motivation Scale*, created by Robert Vallerand, Luc Pelletier, Marc Blais, Nathalie Brière, Caroline Sénécal, Évelyne Vallières [12] and translated from English in accordance with the forward and back translation procedure. In order to analyse motivation to work, used was the *Postawy wobec pracy* questionnaire by *Echelle de motivation au travail*, created by Marc Blais, Nathalie Brière, Lise Lachance i Robert Vallerand [2] translated for research purposes from French in accordance with the forward and back translation procedure.

The questionnaire *Motywy podejmowania studiów* contains 28, whereas questionnaire *Postawy wobec pracy* contains 31 points graded from 1 to 7 in the Likert scale (1 – definitely no, 2 – no, 3 – rather no, 4 – I don't know, 5 – yes, 7 – definitely yes). The surveyed completed both questionnaires and referred to the subsequent points assessing to what extent the expressions are consistent with one of the reasons for which they study at postgraduate level as well as why they work. The number of points assessed indicated the gradation of the respondent's accordance with the expression – a bigger amount of points reflected better accordance.

The points examining the motivation in both questionnaires are divided using a key, four points in each group per six motivation-examining levels (tab. 1, tab. 2).

Table. 1. Reasons for undertaking studies questionnaire

Scales	Subscales and exemplary items on the questionnaire
	Amotivation <i>I once had good reasons to start postgraduate studies, but now I wonder if still should continue studies.</i>
Extrinsic motivation	External regulations: <i>In order to earn more in the future.</i> Introjected regulations: <i>In order to prove to myself that I am an intelligent person.</i> Identified regulations: <i>Because I believe that a few extra years of education will improve my competences as an employee.</i>
Intrinsic motivation	Intrinsic motivation to know: <i>Because I experience pleasure and satisfaction when learning new things.</i> Intrinsic motivation toward accomplishments: <i>For the pleasure I experience when excelling myself during studies.</i> Intrinsic motivation to experience stimulation: <i>For the strong feelings I experience when I communicate my views to others.</i>

[Source: own research]

Table. 2. Attitudes towards work questionnaire

Scales	Subscales and exemplary items on the questionnaire
	Intrinsic amotivation <i>I don't know, I lack the abilities important to perform my work well</i> Extrinsic amotivation <i>I don't know, the requirements seem to high.</i>
Extrinsic motivation	External regulations: <i>Because in this way I earn money.</i> Introjected regulation: <i>Because I am persistently heading for success and its achievement is important to me.</i> Identified regulation: <i>Because this work allows me to achieve important goals without the detriment on the other areas of my life.</i>
Intrinsic motivation	Intrinsic motivation to know: <i>Because various events in my work stimulate my curiosity to learn more.</i> Intrinsic motivation toward accomplishments: <i>For the satisfaction I get when I solve a difficult problem.</i> Intrinsic motivation to experience stimulation: <i>Because I enjoy this job.</i>

[Source: own research]

Three levels are related with extrinsic motivation: extrinsic motivation – external regulations, extrinsic motivation – introjected regulation and extrinsic motivation – identified regulation. Three levels are also connected with intrinsic motivation: intrinsic motivation to know, intrinsic motivation toward accomplishments and intrinsic motivation to experience stimulation. The questionnaires differ in terms of the number of points concerning amotivation. The *Motywy podejmowania studiów* questionnaire contains four such points, whereas in the *Postawy wobec pracy* questionnaire, amotivation is divided into extrinsic and intrinsic with, respectively, four and three such points.

The statistical analysis has been performed using the *STATISTICA* software. The determination of the internally consistent reliability was performed using the Cronbach's alpha formula (table 3). The lowest obtained value of the α coefficient concerns amotivation for which $\alpha = 0,66$ (*Motywy podejmowania studiów* questionnaire) and $\alpha = 0,81$ (*Postawy wobec pracy* questionnaire). The amotivation subscale in the *Motywy podejmowania studiów* questionnaire consists of only four points, whereas the other subscales contain at least seven (amotivation in the *Postawy wobec pracy* questionnaire) or twelve points (intrinsic motivation and extrinsic motivation in both questionnaires). The lower the amount of positions in the summary scale the smaller the reliability [11], this in turn resulted in the lowest value of α for the four-point subscale of amotivation. In all other cases, $\alpha > 0,89$ was obtained. The outcome of the analysis gives evidence of a high internally consistent reliability of the research tools.

Table 3. Value of Cronbach's α

Questionnaire	Overall	Motivation		Amotivation
		intrinsic	extrinsic	
Motivation to study	0,92	0,93		0,66
		0,89	0,90	
Motivation to work	0,89	0,95		0,81
		0,95	0,89	

[Source: own research]

Descriptive statistics have been calculated for the whole sample of 55 surveyed people. Arithmetic means (\bar{X}), standard deviations (*SD*), modes (*Mo*) and medians (*Me*) were calculated for each of the particular levels of motivation to work and motivation to study. In order to validate the hypotheses, utilized was the non-parametric Mann-Whitney U test (significance of motivation differences in women and men) and Wilcoxon signed-rank test (significance of differences for motivation to study and to work) as taking into consideration the difference sign as well as their size and order. The assumed significance level is $\alpha < 0,05$.

RESULTS

The highest mean in the seven-point scale was obtained by the intrinsic motivation to know related to the motivation to study, with the fourth mode in order, in terms of the amount (tab. 4). It is followed by also, an intrinsic motivation to know, yet concerning motivation to work. Third was the intrinsic motivation towards accomplishments related to the motivation to work and fourth – with the mean value slightly lower – the extrinsic identified motivation to study. The lowest values were obtained by amotivations: extrinsic and intrinsic amotivation to work and amotivation to study, which is on the last place with the lowest mean equal to 1,00 and the highest mode in terms of its amount.

Table 4. Descriptive Statistics for motivation levels ($n = 55$)

Type, level, orientation of motivation		\bar{x}	Me	Mo	Amount of Mo	SD	
MOTIVATION TO STUDY	Intrinsic To know	5,82	6,00	6,50	11	0,87	
	Intrinsic Toward accomplishments	4,49	4,50	4,50	8	1,28	
	Intrinsic To experience stimulation	4,41	4,25	Multiple	6	1,34	
	Extrinsic Identified	5,236	5,50	5,75	9	1,13	
	Extrinsic Regulated	4,74	5,00	5,00	9	1,26	
	Extrinsic Introjected	3,80	3,50	4,00	6	1,56	
Amotivation		1,57	1,25	1,00	22	0,69	
MOTIVATION TO WORK	Intrinsic To know	5,30	5,50	Multiple.	9	1,13	
	Intrinsic Toward accomplishments	5,241	5,50	6,00	10	1,29	
	Intrinsic To experience stimulation	5,19	5,25	6,25	7	1,27	
	Extrinsic Identified	4,98	5,25	Multiple.	7	1,33	
	Extrinsic Regulated	4,93	5,00	6,00	8	1,17	
	Extrinsic Introjected	4,84	5,00	Multiple.	7	1,25	
	Intrinsic Amotivation		2,19	2,00	1,00	15	1,12
	Extrinsic Amotivation		1,90	1,67	1,00	13	0,89

[Source: own research]

In order to compare the particular levels of motivation to work with the same levels of motivation to study, the Wilcoxon signed-rank test was conducted with the assumed level of significance set to $\alpha < 0,05$ (tab. 5). Two significant differences were observed in all levels of intrinsic motivation, extrinsic identified motivation and amotivation.

Table 5. Results of the Wilcoxon's significance test for differences in motivation to work and motivation to study

Type and orientation of motivation	n	Z	p	\bar{x} <i>study</i>	\bar{x} <i>work</i>
Intrinsic					
To know	46	2,67	0,01*	5,82	5,30
Toward accomplishments	54	3,84	0,00*	4,49	5,24
To experience stimulation	53	3,52	0,00*	4,41	5,19
Extrinsic					
Externally Regulated	50	0,60	0,55	4,74	4,93
Introjected	54	3,75	0,00*	3,80	4,84
Identified	46	0,78	0,44	5,24	4,98
Amotivation					
intrinsic	46	2,55	0,01*	1,57	1,90
extrinsic	43	3,98	0,00*		2,19

*Statistically significant differences $p < 0,05$; [Source: own research]

No significant differences between the motivation to work and motivation to study were found in terms of two levels of extrinsic motivation: external regulations and extrinsic identified motivation.

In order to show the differences between women ($n=32$) and men ($n=23$), the Mann-Whitney U test was performed with the assumed significance difference set to $\alpha < 0,05$. No statistically relevant differences between women and men were observed on any of the motivation and amotivation levels (tab. 6).

Tabela 6. Results of the Mann-Whitney U significance test for differences in motivation of women and men

Type, level, orientation of motivation			U	Z	p
MOTIVATION TO STUDY	Intrinsic	To know	341,00	-0,45	0,65
		Toward accomplishments	354,00	0,23	0,82
		To experience stimulation	344,50	0,39	0,69
	Extrinsic	Regulated	364,50	0,05	0,96
		Introjected	356,50	-0,19	0,85
		Identified	350,00	-0,30	0,77
	Amotivation		344,00	-0,40	0,69
MOTIVATION TO WORK	Intrinsic	To know	363,50	0,07	0,95
		Toward accomplishments	351,50	-0,27	0,78
		To experience stimulation	296,00	-1,22	0,22
	Extrinsic	Regulated	295,00	1,24	0,22
		Introjected	341,00	-0,45	0,65
		Identified	366,50	0,02	0,99
	Amotivation	intrinsic	334,00	-0,57	0,57
extrinsic		336,50	-0,53	0,60	

[Source: own research]

DISCUSSION

One of the aims of Lifelong Learning Programme held by the European Commission was promoting creativity, competitiveness, entrepreneurship as well as the enhancement of employment opportunities in dynamically changeable job market. For harmonious functioning of the society, the flexibility of the working age people is necessary, as it is related to their mobility and qualifications complementing in order to conform to the new professions and vacancies. Universities are opening up for the social requirements in that area, including multi-profile post-graduate studies as well as further education courses. Post-graduate studies in physical culture reach a distinctive market segment and people who appreciate the value of physical culture and greatly harmonious psychosomatic development. Accordingly to the cultural approach to the physical education theory, a person taking care of his or her body becomes both the subject and the object of his or her own actions [7], and every single action is initiated by the motivation which expresses the readiness to its commencement.

Post-graduate students whose motivation was a subject of this research made their decision to continue the education by getting into the University. They are characterized by the high level of intrinsic motivation to know towards both work and studies, yet the intrinsic motivation to study connected with knowledge broadening is significantly higher. They are

also characterized by the intrinsic motivation towards accomplishments related with work; it was placed as the next but two.

In the *Echelle de motivation au travail* questionnaire validation during the research of work motivation conducted by Blais and co-workers in Canada among public and private sector employees, the intrinsic work-related motivation towards accomplishments took the first place just before the external regulations and the intrinsic motivation to know, which was placed as the third [2]. Vallarand and co-workers validated the *The Academic Motivation Scale* questionnaire, after it was translated from French to English, by testing 745 students of universities in Ontario province and obtained the highest mean for the extrinsic identified motivation in women and external identified regulations in men [12]. The highest mean for the extrinsic motivations was received by Hegarty while testing the motivation of 240 business and educational courses students [9]. Similarly Ardeńska and Tomik received the highest mean for external regulations as well as external identified motivations by testing 587 full-time students of the Academy of Physical Education in Katowice [1]. The highest level of intrinsic motivation to know amongst the post-graduate students of The Academy of Physical Education in Katowice seem to distinguish that group as a group of people actively exploring, curious and appreciating the value of learning.

There were no significant differences received between women and men in the mentioned research. Vallarand and co-workers obtained significant differences in motivation of women and men in all levels of the intrinsic motivation, introjected motivation and identified motivation for 745 cases in the sample [12]. Wilkessmanna and co-workers [16] observed lower extrinsic motivation in women, when testing 3687 students from three universities in Germany. Significant differences in intrinsic motivation in women and men were also obtained by Walczak and Tomczak [15] testing 210 high school students in Poznań. Horyna i Bonds-Raacke [10], while studying the motivation of 283 students of psychology courses, have obtained significant differences of external regulations, extrinsic identified motivation and amotivation in women, as well as in men. Similarly significant differences on every level of extrinsic motivation and amotivation in women and men have been obtained by Ardeńska i Tomik with 587 people [1]. The lack of important differences in the motivation of women and men in the research of the postgraduates may be the result of a small sample size.

CONCLUSIONS

To sum up, the intrinsic motivation to known related to studies is dominant among the postgraduates of physical culture courses. The second is, also intrinsic motivation to know, but related to work. Nevertheless, it is crucial to emphasise that the intrinsic motivation to know towards studies is significantly higher.

Motivation towards work and motivation towards studies is significantly different on every level of intrinsic motivation, as well as on the level of amotivation and external introjected motivation.

There were no visible differences in motivation to work and motivation to study in men and women at different levels of motivation and amotivation.

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