

## ORIGINAL SCIENTIFIC PAPER

# Achievement Motivation of Physical Education Teachers

Pavel Smela<sup>1</sup>, Petra Pacesova<sup>1</sup>, Branislav Antala<sup>1</sup>, Iveta Cekanova<sup>1</sup> and Hynek Fucik<sup>1</sup>

<sup>1</sup>Comenius University, Faculty of Physical Education and Sports, Bratislava, Slovakia

## Abstract

This paper identifies the differences in achievement motivation of the physical education teachers, divided by gender, and the results are compared with national standards. The research sample was comprised of 52 physical education teachers (male:  $n=22$ ;  $41.59 \pm 9.95$  years old, female:  $n=30$ ;  $39.33 \pm 10.67$  years old) from Slovakia. A standardized LMI questionnaire consisting of 170 items was used as the research tool. The Shapiro-Wilk test was used to assess the normality of the data. The Mann-Whitney test was used to evaluate the significance of the differences between individual independent samples. The degree of dependence between two groups was expressed by using the  $r$  coefficient. Male physical education teachers have significantly higher ( $p=0.043$ ) achievement motivation compared to female physical education teachers. A comparison of dimensions of achievement motivation of male physical education teachers showed that they achieved significantly higher scores in the dimensions of persistence, fearlessness, and competitiveness. Comparing them with national standards, the achievement motivation of male teachers of physical education corresponds with the 58th percentile (stanine value 5) and of female teachers of physical education with 46th percentile (stanine value 5). The outcomes of this study characterize PE teachers as an elementary component in the teaching process from the aspect of achievement motivation and its dimensions and also indicate the status of PE teachers in society. This study is designated for PE teachers as well as for the general public striving to improve the quality of the teaching process in sports.

**Key words:** motivation profile, physical education teachers, sport, national standards

## Introduction

People have always longed for success, but success is classified based on performance strength. Performance motive is the ratio of the desire for success and the fear of failure. The greater the fear of failure, the worse the performance, provided the same hope for success. Based on this, we distinguish between two types of people: those permanently striving for success and those attempting to avoid failure (Nakonecny, 1996). Motivation represents an inner strength that forces us in a certain direction, and we can anticipate it from indicators in our behaviour, knowledge, and emotional experiences (Goetz & Hall, 2013). Murphy, Nevill, Neville, Biddle and Hardman (2002) treat motivation as an inner strength that arises between people and their acts to propel them mutually.

Achieving performance takes place in several stages: 1) creating a certain need, 2) assessing how much we are able to achieve the given need, 3) assuming that we will achieve the need, and 4) becoming determined to carry out the

given activity. If an individual has a lack of motivation, his/her performance will also be low. In contrast, if motivation is sufficiently high, the performance will also become better. The motivation of employees is also determined by job satisfaction, which is influenced by factors such as salary, a fair remuneration system, social solidarity, work tasks, work environment and the expectations of employees (Armstrong, 2007). Job satisfaction is a critical component determining usefulness in a job.

Paulik studied 1,280 teachers of elementary and secondary schools and higher education institutions in his research (1999), in which he defined the positive and negative characteristics of teachers' job satisfaction. The positive characteristics were good relations among the staff, creativity, the upbringing of students and passing knowledge down to them, working with children and the feeling of a job well done. The negative characteristics included low salaries and lack of appreciation of society, lowered morals of students,



Correspondence:

P. Smela

Comenius University, Faculty of Physical Education and Sports, Nabr. arm. gen. L. Svobodu 9, 81469 Bratislava

E-mail: pavel.smela@uniba.sk

lack of cooperation between the parents and the school, the psychological burden, and insufficient material and technical equipment.

Contemporary teachers face great pressure from students, parents, society as well as from the employer. Therefore, it is alarming that despite the fact that this job is difficult and very important for society, it is not adequately appreciated by our society (Ruckova & Vareckova, 2017). The place of a teacher is also related to his/her social status and role. This has an impact on the interest in becoming a teacher and on the people who do this job. Tomsik (2015) cites social status as the most discouraging factor in choosing to become a teacher – he claims that this factor discourages a high number of students from becoming teachers.

Achievement motivation is understood as a concept that helps to explain the differences in the individual behaviour and actions of people in various areas of life. Individuals with a high level of achievement motivation are energetic and focused, competitive, goal- and success-oriented, have managerial potential and are proactive (Ward, 1997). Schuler, Thornton, Frintrup and Prochaska (2011) describe an onion-like model of achievement motivation in their handbook, based on their analysis of the current knowledge about achievement motivation. This model consists of central features (e.g., expectation of success, self-discipline, endurance), peripheral features (e.g., independence and status-orientation), theoretically-related features (e.g., mode of attribution, beliefs of control, self-confidence), and background features (conscientiousness and neuroticism). Based on this model, performance motivation can be considered to be a complicated variable whose level is determined by a range of factors. One of these factors is sport activity.

Because the physical activities of PE teachers are more significant in comparison with other professions, we think that this is a factor that plays a role in the level of achievement motivation with PE teachers in comparison to other professions or with standards. The level of achievement motivation is positively affected by the frequency and level of sports activity (Smela, Pacesova, Kracek, Kukurova, & Halacova, 2018; Smela, Pacesova, Kracek, & Hajovsky, 2017). Gender is another factor that impacts achievement motivation (Schuler et al., 2011; Meece, Glienke, & Burg, 2006). This study aims to extend the knowledge about achievement motivation of PE teachers, to identify their strong and weak dimensions of achievement motivation, and to identify the differences in achievement motivation of PE teachers divided by gender and results compared with national standards.

## Methods

The research sample was comprised of 52 physical education teachers (male:  $n=22$ ;  $41.59 \pm 9.95$  years old, female:  $n=30$ ;  $39.33 \pm 10.67$  years old) from Slovakia. A standardized LMI questionnaire (Schuler et al., 2011) was used as the research tool. The achievement motivation questionnaire contained 170 items, in which the respondents evaluated their level of consent to each statement on a Likert scale. The questionnaire consisted of seventeen dimensions: Persistence is characterized by stamina and the deployment of strengths that are necessary to manage tasks. Individuals with high scores can entirely focus their attention on the progress of work; characteristics such as persistence, tenacity, firmness, concentration and others are typical for this scale. Domini-

nance is the manifestation of power, influencing others and leading them; individuals accomplishing high levels in this scale are dominant, influential, initiative, and responsible. Engagement represents the willingness to give performance, the extent of effort and amount of work done; according to this scale, individuals are characterised by joy of working, eagerness, involvement, the need to always be doing something and are frequently marked as workaholics. Confidence in success is manifested by achieving set goals in the case of new or difficult tasks, self-confidence, optimism, certainty of victory. Flexibility is related to the manner of coping with new tasks and situations; individuals with high scores are open, willing to accept change, are approachable and can overcome obstacles. Flow deals with the issue of eliminating all disturbing impulses with high concentration; in the flow state, work is considered to be positive; this state is characterised by commitment, contemplativeness, and inertia. Fearlessness: according to this scale, individuals with high scores do not fear failure or negative evaluation. They are fearless, resolute, brave, steadfast, stable and resistant to frustration. They do not feel stress before important tasks; thus, the result of their activities does not have a negative impact. Internality: individuals with high scores explain the results of their behaviour based on internal causes. They are sure that their success depends on their own deployment of strength, they can see the cause in themselves, and they never blame fate. Compensatory efforts: this scale is described as constructively avoiding fear, zeal, fear of failure. Individuals in which this scale dominates have the tendency to invest great effort in avoiding failure. Pride in productivity: the source of motivation is the permanent need to experience positive feelings; it is an emotional state which is a consequence of one's own performance. Individuals with high scores have the need to compare themselves with others; they are addicted to success, on emotional reinforcement and are ambitious. Eagerness to learn: the basis is desire to learn, discover new knowledge, to expand knowledge. Individuals with high scores based on their own will dedicate time and effort to learn in their own field. Preference for difficult tasks: a demanding nature, looking for challenges, difficult tasks requiring a high degree of skill. Tasks are accompanied by an elevated possibility of failure and where obstacles make the work more encouraging are atypical. Independence is a tendency to autonomous behaviour, i.e., responsibility for one own's actions. Individuals with high scores love freedom, independence, self-indulgence. Self-control is the method of organizing and implementing tasks. The scale is described by concentration, discipline, prudence, precision, thoroughness. Individuals in this scale show discipline and concentration in work; they can deprive themselves in order to achieve long-term goals. Status orientation is characterised by the effort to achieve a significant role in a social environment. It is the effort to gain acknowledgment for accomplishments and to obtain a responsible position. Activities are carried out to achieve professional promotion and an important position. Competitiveness: individuals with high scores enjoy competing, comparing themselves with others, they want to be better, faster, they fight for first place. Success and victory empower them to accomplish better performance. Purposefulness/goal setting: the subject is one's relation to the future. There is a clear idea about how a task's solutions should look. Ambitiousness, purposefulness, thoroughness and diligence are crucial.

According to the standards defined in the test manual, the gross scores were converted to stanine values. These stanines comprise a scale containing nine values, the middle value of which is five. According to the manual, stanine values of seven, eight, and nine are considered above-average, while stanine values of one, two, and three are below-average.

The data were processed statistically. The Shapiro-Wilk test was used to assess the normality of the data. The Mann-Whitney test was used to test the significance of the differences between particular independent choices. The significance level was set at  $\alpha \leq 0.05$ ,  $\alpha \leq 0.01$ . The rate of dependence (effect size) between the two groups of features was conveyed by means of the coefficient  $r$  ( $r > 0.90$  - very large effect size;  $r = 0.70$ – $0.90$  - large effect size;  $r = 0.50$ – $0.70$  - medium large effect size;  $r = 0.30$ – $0.50$  - small effect size;  $r < 0.29$  - very small effect size). This study was approved in advance by Ethics Committee of Faculty of Physical Education

and Sport, Comenius University. Each participant voluntarily provided written informed consent before participating.

## Results

The results of achievement motivation in the different dimensions of the research sample broken down according to gender are presented in Table 1. The gross achievement motivation score among male PE teachers was  $777.68 \pm 75.64$  of point and  $735.03 \pm 60.83$  of point among female PE teachers. There is a significant difference between men and women in total score of achievement motivation ( $U = 221.00$ ,  $p = 0.043$ ,  $r = 0.28$ ), in which effect size corresponds with low dependence. Men achieved a statistically significantly higher score of achievement motivation. We can find statistically significant differences even when looking at individual dimensions of achievement motivation among men and women.

**Table 1.** The mathematical-statistical characteristics of the research sample segmented according to gender and differences in particular dimensions of achievement motivation

Dimension of Achievement Motivation	male PE teachers	female PE teachers	Mann-Whitney U test		Effect size
	mean $\pm$ SD	mean $\pm$ SD	U	p	r
Persistence	46.27 $\pm$ 8.36	41.13 $\pm$ 5.35	208.50	0.024	0.31
Dominance	44.91 $\pm$ 5.94	41.53 $\pm$ 5.73	230.00	0.063	0.26
Engagement	42.36 $\pm$ 6.29	40.43 $\pm$ 8.21	298.00	0.553	0.08
Confidence in Success	49.86 $\pm$ 6.66	45.63 $\pm$ 8.04	230.00	0.063	0.25
Flexibility	45.41 $\pm$ 8.30	42.77 $\pm$ 6.51	265.50	0.231	0.16
Flow	46.23 $\pm$ 8.26	44.27 $\pm$ 7.25	278.00	0.345	0.13
Fearlessness	43.95 $\pm$ 10.32	36.77 $\pm$ 6.70	193.00	0.011	0.35
Internality	41.73 $\pm$ 7.02	41.07 $\pm$ 6.86	303.50	0.622	0.07
Compensatory efforts	45.32 $\pm$ 6.36	45.93 $\pm$ 7.79	309.00	0.697	0.05
Pride in productivity	50.91 $\pm$ 6.96	50.33 $\pm$ 6.54	328.50	0.978	0.01
Eagerness to learn	49.05 $\pm$ 6.93	47.40 $\pm$ 6.09	297.50	0.546	0.08
Preference for difficult tasks	45.00 $\pm$ 7.03	41.43 $\pm$ 6.96	252.50	0.150	0.20
Independence	43.77 $\pm$ 6.08	42.40 $\pm$ 6.33	278.00	0.335	0.13
Self-control	41.77 $\pm$ 6.00	45.47 $\pm$ 8.12	273.50	0.294	0.14
Status orientation	47.14 $\pm$ 6.63	44.27 $\pm$ 7.33	285.50	0.408	0.11
Competitiveness	45.68 $\pm$ 5.63	39.07 $\pm$ 7.68	165.50	0.002	0.42
Purpose fullness/Goal setting	48.32 $\pm$ 7.47	45.13 $\pm$ 5.44	257.50	0.177	0.19
Total score	777.68 $\pm$ 75.64	735.03 $\pm$ 60.83	221.00	0.043	0.28

Statistical significance ( $\alpha \leq 0.05$ ) between male and female PE teachers was detected in the dimensions of purposefulness/goal setting ( $U = 208.50$ ,  $p = 0.024$ ,  $r = 0.31$ ) and fearlessness ( $U = 193.00$ ,  $p = 0.011$ ,  $r = 0.35$ ). In both cases, the effect size expressed by the coefficient  $r$  reaches the level of low dependence. Male PE teachers achieved a significantly higher score in purposefulness/goal setting and fearlessness dimensions. When assessing the differences in score between men and women in the competitiveness dimension, we observed statistical significance ( $\alpha \leq 0.01$ ). Men achieved a significantly higher score in this dimension, and the size of effect expressed by coefficient  $r$  shows low dependence ( $U = 165.50$ ,  $p = 0.002$ ,  $r = 0.42$ ).

By converting the results to percentiles, we can compare and evaluate PE teachers in view of national standards. However, we must take into consideration the fact that they overrate average and underrate differences at both ends of the research sample. The monitored sample of men in total score achievement motivation reached the 58th percentile, which means that 42% of male respondents reached a higher total score in achievement motivation in comparison to our group. The total score of our

monitored sample of female PE teachers corresponds to the 46th percentile, i.e., 54% of the female respondents reached a higher total score in achievement motivation in comparison to our group. We also compared the results of our research sample of men and women with the national standards based on stanine values. This method establishes more precisely the strengths and weaknesses of our research sample, and the percentage of respondents in view of our research sample reached the same, higher or lower score in achievement motivation and in individual dimensions. Total score achievement motivation by male PE teachers corresponded with indifferent stanine values number five. In six dimensions of achievement motivation, PE teachers achieved slightly above the average stanine values six, i.e., 40% of respondents in comparison to our group reached the same or higher results in selected dimensions of achievement motivation. It pertains to the following dimensions: persistence, engagement, fearlessness, eagerness to learn, preference for difficult tasks and purposefulness. PE teachers reached slightly under average values (stanine value 4) in the following dimensions: internality and pride in productivity. In terms of flexibility,

flow, competitiveness, confidence in success, compensatory efforts, dominance, independence, self-control, status orientation, male PE teachers reached average, indifferent stanine values (stanine value 5). The total score achievement motivation by female PE teachers also corresponds with indifferent stanine value number 5. Slightly above average values (stanine value 6) were achieved by female PE teachers in terms of eagerness to learn and self-control. Less distinctive (stanine value 4) dimensions of achievement motivation were flexibility, internality, pride in productivity, status orientation and competitiveness, which shows that 60% of the individuals in these dimensions reached higher scores in comparison with the female PE teachers. The female PE teachers achieved just average, indifferent values (stanine value 5) in dimensions such as persistence, dominance, engagement, confidence in success, fearlessness, compensatory efforts, preference for difficult tasks, independence and purposefulness (goal setting).

## Discussion

With regard to the importance of achievement motivation, it is surprising that only a few studies have dealt with this subject. Studies conducted in the field of achievement motivation are mostly oriented on the field of occupational psychology; however, the results from this field of research can broaden the knowledge in the field of sports psychology and education (Smela et al., 2018, Smela et al., 2017).

Since a PE teacher is also a manager who plans, manages and evaluates the teaching process, a high level of managerial competence is required. A significant variable influencing the level of managerial competence is the level of achievement motivation (Georgie & Jones, 2002; Robbins & Decenzo, 2001). Ones, Viswesvaran, and Dilchert (2005) show that the level of achievement motivation is a significant predictor of reaching the required level of work performance. Studies (Green & DeBacker, 2004; Hyde & Kling, 2001) indicate the changing level of achievement motivation among men and women. While in the 1950s the level of achievement motivation was significantly lower with women, this significant difference is becoming smaller, due in part to the greater emancipation of women. Our results show the differences in achievement motivation between men and women resulting from stereotypical roles of genders, in which young men are encouraged to compete, and young women are encouraged to cooperate with the aim to avoid competitive situations (Sutter & Glatle-Rutzler, 2015). Men react more strongly to situations of comparison with others, while women tend to avoid competitive situations (Ruzic, Matesic & Stefanec, 2016; Dohmen & Falk, 2011; Croson & Gneezy, 2009). Our results are consistent with the results of the study by Ruzic et al. (2016), showing that men achieved higher results on facets dealing with competition, fearlessness and independence, while women achieved higher results regarding issues of self-control. In her research, Paskova (2007) found a significantly higher achievement motivation with men in comparison with women, specifically in the following dimensions: confidence in success, competitiveness, eagerness to learn, fearlessness, preference for difficult tasks, independence, engagement, dominance, goal setting, and self-control. Zitniakova-Gurgova (2007), who studied achievement motivation in a sample of 213 university students, also found significantly higher achievement motivation among men in comparison with women. The higher level of achievement motivation among men in

comparison to women was also manifested in the research by Adsul and Kamble (2008).

Based on the analysis of the aforementioned studies and according to Green and DeBacker (2004), men set fewer goals than women do, but their goals are higher. However, other research studies found no significant differences in achievement motivation according to gender (Pandey & Faiz Ahmad, 2007; Pratibha Sood, 2006; Kaushik & Rani, 2005).

When comparing our results of total score of achievement motivation to the results of the study (Martincova, Andrysova, & Trubelikova, 2016), where the research sample was comprised of bachelor's and master's level students of social pedagogy, based on stanine values, we can see achievement motivation scores that are two levels higher among PE teachers. If we compare our results with the results of the study (Sigmund, Kvintova, Hanus, Bartkova, & Hobza, 2014), whose research sample was comprised of employees of middle and top management of companies in the pharmaceutical sector, we can see that the achievement motivation score is markedly lower among PE teachers. While the total score of achievement motivation among business managers in this research reached values above 900 points, the PE teachers are not even close to 800 points. We believe that this situation is influenced by financial remuneration, the social status and position of teachers, and not only PE teachers, in society.

Achievement motivation is a current and much-needed area of research. The results and conclusions of studies concerned with this issue will find their place not only in vocational, social and sports psychology but also in the process of learning and success achievement. Achievement motivation is an essential and necessary characteristic for each individual and influences their level of success. It is socially appreciated and establishes the grounds for experiencing success-associated, pleasant and joyful feelings in terms of the achievement of a goal. According to Ward (1997) people with high achievement motivation are potentially energetic employees with intense concentration on work, are competitive, centre their thoughts on improving achievement, are focused on achievement goals, have significant managerial potential and are proactive.

The outcomes of this study characterize PE teachers as an elementary component in the teaching process in terms of achievement motivation and its dimensions and point out the status of PE teachers in society. The presented findings provide a specific motivation profile of the monitored group and may also be applicable in selecting PE teachers. This study is designated for PE teachers, as well as for the general public in striving to improve the quality of the teaching process in sports.

In compliance with the studies pointing out changes in levels of achievement motivation according to gender (Ruzic et al., 2016), age (Sutter & Glatle-Rutzler, 2015), education (Riepe, 2004), occupation (Schuler et al., 2011) and sports activity (Smela et al., 2018, Smela et al., 2017) it is necessary to continue in researching differences in the facets such as achievement motivation, including the relationship between achievement motivation and specific occupations.

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## Conflict of Interest

The authors declare that there are no conflicts of interest.



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