

Peculiarities of the influence of psychological characteristics of boys and girls of different age groups on the formation of the need for achieving success

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In the article aspects of the gender approach in physical education of schoolchildren are considered.

Purpose: *studying the influence of the psychological characteristics of the personality of schoolchildren of different age groups on the formation of the need to achievements.*

Material & Methods: *the study was conducted with a contingent of schoolchildren of grades 3–11. The total number of respondents was 628 people (young men – 282, girls – 346), of which 126 respondents (97 boys and 29 girls) are engaged in a certain sport. Standardized testing using S. Bem's method "Masculinity – Femininity" was used, a test and a questionnaire by Yu. M. Orlov "Need for Achievements", methods of mathematical statistics.*

Results: *level of the need to achieve the success of schoolchildren of different age groups was studied, the gender type of the respondents' personality was determined. The relationship between the level of the need to achieve the success of schoolchildren and the features of their psychological sex was determined.*

Conclusion: *differences in the levels of the need to achieve success for boys and girls of different age groups, who are engaged and do not go in for sports, are revealed. It is shown that it is necessary to consider the gender approach in education not from the point of view of a gender policy providing equal rights for men and women, but from the point of view of studying their psychosocial characteristics for creating adequate organizational and methodological conditions in the process of physical education.*

Keywords: *schoolchildren, boys, girls, physical education, gender differences, masculinity, femininity, androgyny, the need to achieve.*

Introduction

The active social transformation that is happening now in Ukraine fundamentally changes the established ways of life, moral and ethical standards and ideological constructions that define. This process is characterized by significant changes in various areas of the economy, culture, science and education. Especially significant transformations are traced in the education system in general and in physical education, in particular, in which the ideas of humanization are actively manifested [1; 6; 10].

In recent years, domestic scholars have made a significant breakthrough in the field of theoretical understanding of gender issues. A large fund of scientific knowledge has already been accumulated in philosophy, history, sociology, psychology, law, linguistics, etc. When considering the problems of physical education of youth through the prism of gender, Ukrainian and foreign scholars note the interconnections of gender and personal-oriented approaches as the basis of humanization of the educational and educational process [1]. It should be noted that gender issues in the field of physical culture and sports are not very common today: there are almost no references to it in new programs and textbooks for secondary and higher professional education, rarely there are special courses in schools and universities.

The issue of gender can no longer be ignored without risk-

ing the appearance of an insufficiently professional teacher, administrator or scientist. Their inclusion in the content of the humanities meets the requirements of the modern level of education [13]. Despite the fact that gender concerns a new field of scientific knowledge and very slowly covers the academic environment, there is a sufficient amount of scientific and pedagogical literature, which, due to its importance, can be used as a foundation for modern research in the field of the problem that is being studied. Thus, in carrying out an analysis of scientific and pedagogical literature, in our scientific research we rely on achievements in the field of physical education, pedagogy and psychology in the context of organizing the education and upbringing of children, adolescents and youth in the process of their gender socialization, as well as modern gender theories, revealing a whole range of problems related to the implementation of gender equality in society in general and in the youth environment, in particular. The fact that men are different from women not only physiologically, but also in a number of psychological features of character, is known at the level of ordinary consciousness for quite a long time [3]. Specialists of physical culture and sports science have been engaged in the study of the needs, motives and interests in the sphere of physical culture of different groups of people for several decades [7–10]. However, in the context of our study, these concepts should be considered as components of the system of value orientations of a person, determining the formation of physical culture of a person and society. The needs

in the structure of value orientations are central. The category of "need" is used to draw a parallel between recognized and actual values. According to L. Rubinstein, a person needs something is outside her [14]. Human needs can not satisfy all material and spiritual values, accordingly, the person is oriented to those of which are subjectively significant [12]. Valuable orientations related to needs determine the nature of the behavior and the direction of the activity of schoolchildren, stimulate their general and cognitive activity [15].

The analysis of real practice showed that for today there is no productive experience of the implementation of the gender approach in physical education of schoolchildren and there is a number of spontaneous development of gender research beyond targeted directed pedagogical impact [7–9; 17; 19]. This requires the search for scientifically based theoretical provisions on the possibility of influencing this process during the educational and educational activities, conditioning the relevance of the theme of research we have chosen. Also, in accessible literature, we did not find scientific papers that studied the influence of the psychological characteristics of boys and girls on the formation of the need for achievement in age and gender, and substantiates the relevance of our scientific research.

Relationship of research with scientific programs, plans, themes. The scientific work is carried out within the framework of the topic approved by the Ministry of Education and Science of Ukraine: code 1.2 Ф. "Historical and organizational and methodological foundations of the formation of a gender approach in the education of children, adolescents and young people", state registration number 0117U002386.

Purpose of the study: studying the influence of the psychological characteristics of the personality of schoolchildren of different age groups on the formation of the need to achievements.

Material and Methods of the research

The study was carried out with a contingent of schoolchildren of grades 3–11 with a representativeness of the sample. The total number of respondents was 628 people (boys – 282; girls – 346), of which 126 respondents (97 boys and 29 girls) are engaged in a certain sport (swimming, basketball, volleyball, athletic gymnastics, wrestling, taekwondo). The rest of the students attend only physical education classes. The results of the studied stratified according to the age periods of the physiological development of children and biological sex. The reliability of the differences between the individual results is calculated at the level of reliability $p < 0,05$ to $p < 0,1$, which indicates the possibility of their account in the development of practical recommendations for teachers of physical culture, as well as for further interpretations.

Research methods – analysis of scientific and methodological literature, test questionnaire by Yu. M. Orlov "The Need for Achievements", questionnaire S. Bem (BSR), methods of mathematical statistics.

Results of the research

The motivation for sporting activities is based on biological and social factors, as well as on the factors determined by man's needs. In order to better understand the causes that

stimulate the activity of schoolchildren in the field of physical culture and sports, we analyzed not only the motives, target settings that are satisfied in the field of physical culture and sports, but the level of the need for achievement of the success of boys and girls.

The need for achievement is characterized by a common desire for a constant search for ways to improve both qualitative and quantitative indicators [20]. Thus, it can be assumed that those pupils who have a stronger need for achievement.

According to the results of the test, it was established that the level of need to achieve with age becomes higher in boys than in girls (Table 1). But in girls it decreases with age. It was determined that the greatest number of girls who have a high level of need for success, falls on the 6th and 8th grades (29,6% and 27,7% respectively), the young men – on the 10th and 11th grades (25,0% and 26,8% respectively). Girls with a low level of achievement need more than boys, except for those who study in the 3rd grade (31,0%) and the young men of the 8th (30,9%). Studying the age characteristics of the need for achievements of schoolchildren, it is revealed that with the age of girls with a low level of needs in the achievement becomes more, young men – less.

Table 1
Level of need for success of schoolchildren of 3–11 grades

Grade	Sex	High		Average		Low	
		n	%	n	%	n	%
3	b	6	20,69	14	48,28	9	31,03
	g	2	8,00	20	80,00	3	12,00
5	b	2	9,52	18	85,71	1	4,76
	g	11	20,75	38	71,70	4	7,55
6	b	15	30,00	31	62,00	4	8,00
	g	16	29,63	38	70,37	0	0,00
7	b	2	5,88	27	79,41	5	14,71
	g	0	0,00	32	82,05	7	17,95
8	b	8	14,55	30	54,55	17	30,91
	g	15	27,78	33	61,11	5	9,26
9	b	20	22,22	60	66,67	10	11,11
	g	10	18,18	39	70,91	6	10,91
10	b	3	25,00	9	75,00	0	0,00
	g	2	13,33	10	66,67	3	20,00
11	b	11	26,83	27	65,85	3	7,32
	g	14	21,54	42	64,62	9	13,85

Comparing the level of the need for the success of respondents who are engaged in and not engaged in sports, it is determined that among the female athletes there were not those who have a high level of need for success (Table 2). The study found that all of them have an average level of need for achievement. Also, we have found that the majority of girls who do not go in for sports have a low level of need for achievement. It is worth noting that young men with low level of needs in achievements are also not engaged in sports in their majority.

Studying the level of need in achieving success for schoolchil-

Table 2
Level of need to achieve (respondents involved in sports), %

Grade	Sex	High	Average	Low
8-9	b	22,58	67,74	9,68
	g	0,00	100,00	0,00
10-11	b	37,50	57,50	5,00
	g	0,00	100,00	0,00

dren of different age groups, in the first stage of our research, we only stratify by sex. But, in our opinion, the formation of motivation for physical activity and the values of physical culture can also depend on the gender characteristics of boys and girls. And physical culture, of course, can be one of the means of gender socialization of schoolchildren. Therefore, the data obtained require separate, additional research on the impact of the psychological gender on the level of need for success, which can significantly affect the formation of the motivational priorities of schoolchildren in physical education and sports.

The next step in our study was to determine the gender type of personality of the respondents. To address this issue, standardized testing was conducted according to Sandra Bem's "Masculinity – Femininity" method. The questionnaire she proposed (BSR) is one of the most widely used tools in science for measuring how a person evaluates himself in terms of gender [2]. Sandra Bem examines masculinity and femininity not as an alternative, but as independent qualities. Masculine type is characterized by the most distinct qualities of such personality qualities as irreplaceability, persistence, property, propensity to protect their own views, tendency to risk, analytical composition of thinking, self-confidence, self-sufficiency. The feminine personality type is more intrinsic to such qualities as shyness, tenderness, remoteness, compassion, ability to comfort, cordiality, softness, gullibility and love for children. The masculine and feminine qualities and character traits, which are manifested in the combination of traditionally male and female characteristics in one person, are

equally inherent in the androgynous personality type [2].

Applying the technique of S. Bem, it was found that there are a small number of "pure" psychological types that determine masculinity and femininity. The overwhelming majority of boys and girls, regardless of age, have IS androgynous personality type. Among 332 young men, 93,7% have an IS indicator of the androgynous type. Only 5,2% of boys have a gender identity of the masculine type and 1% are characteristics of the feminine type. Among the 360 girls – 71,8% are related to the androgynous personality types, 28,2% – to feminine, 1,1% of girls have masculine characteristics. Considering the general data that was obtained when determining the main IS index of respondents, but the fact that the overwhelming majority of schoolchildren was attributed to androgynous personality types, for more detailed information, we first conducted a cluster analysis of the IS Masculinity – feminine test. According to its results, three clusters were obtained which fully reflect all the values of the IS parameter under study. Thus, all respondents, androgynous ($-1 < IS < 1$) psychotype, entered the first cluster. Their number was 51,02% of the total number of respondents. The second cluster included respondents with masculine psychotype ($IS < -1$) and respondents with androgynous with signs of masculine psychotype ($-1 < IS < -0,46$). Their number amounted to 15,72% of all respondents. By the third cluster, the respondents included feminine and androgynous psychotypes with feminine signs ($0,58 < IS < 1,86$). Their number was 33,26% of respondents. We considered the groups of respondents with different levels of need for achievement relative to falling into the corresponding cluster (Table 3–8). According to the results of the study, the following differences and peculiarities of the relationship between the general level of the need to reach schoolchildren of different age groups and their belonging to the psychological gender. Among schoolchildren of 5–7 grades, more boys than girls have a higher level of need to achieve. Most of them are representatives of the masculine psychotype. In children of this age the average level of the need to achieve prevails. For the most part – these are representatives of the androgynous psychotype. Girls 11–13 years old with a high level of need to achieve most have feminine qualities of character (Table 3, 4).

Table 3
Level of need to achieve success of respondents according to the psychological type (boys, 11–13 years, n=105)

Level classification	n	%	IS androgynous type		IS masculine type		IS feminine type	
			n	%	n	%	n	%
– high	20	18,10	13	19,12	4	22,22	3	15,79
– average	68	64,76	44	64,70	10	55,56	14	73,68
– low	17	17,14	11	16,18	4	22,22	2	10,53
	105	100	68	100	18	100	19	100

Table 4
Level of need to achieve success of respondents according to the psychological type (girls, 11–13 years, n=146)

Level classification	n	%	IS androgynous type		IS masculine type		IS feminine type	
			n	%	n	%	n	%
– high	23	15,75	4	7,69	2	50,00	17	18,89
– average	110	75,34	44	84,62	2	50,00	64	71,11
– low	13	8,91	4	7,69	0	0,00	9	10,00
	146	100	52	100	4	100	90	100

Table 5
Level of need to achieve success of respondents according to the psychological type (boys, 14–15 years, n=145)

Level classification	n	%	IS androgynous type		IS masculine type		IS feminine type	
			n	%	n	%	n	%
– high	28	20,00	13	15,48	10	23,81	5	26,32
– average	94	64,14	58	69,04	27	64,29	9	47,36
– low	23	15,86	13	15,48	5	11,90	5	26,32
	145	100	84	100	42	100	19	100

Table 6
Level of need to achieve success of respondents according to the psychological type (girls, 14–15 years, n=109)

Level classification	n	%	IS androgynous type		IS masculine type		IS feminine type	
			n	%	n	%	n	%
– high	24	21,10	10	18,18	6	28,57	8	24,24
– average	73	67,89	43	78,18	11	52,38	19	57,58
– low	12	11,01	2	3,64	4	19,05	6	18,18
	109	100	55	100	21	100	33	100

For boys of 14–15 years, the number of respondents with masculine type increases from 17% to 28%. The average level of need for achievement are boys with masculine and androgynous qualities of character. The high level of need for achievement in most is inherent in masculine youths (Table 5). In girls of 14–15 years, the number of those who belong to the masculine type increases from 3% to 19% and the number of feminine type schoolgirls is halved: from 61% to 30,3%. In girls of this age, the average level of need for achievement prevails. Most of them have IS with androgynous type. A high level of need for achievement is also to a large extent schoolchildren with androgynous traits of character, and a low level – with feminine ones (Table 6).

In high school students, the picture changes somewhat: the number of boys and girls with a high level of need for achievement increases. Boys – attributed to the masculine psycho, girls – to feminine. Among girls of the senior classes the middle and high levels of need for achievements prevail. Most of them have IS of androgynous and feminine type (Table 7, 8).

Conclusions / Discussion

Analysis of various scientific positions indicates that recently it has been customary in science to clearly distinguish between constitutional and sociocultural aspects in distinguishing between male and female, linking them with the concept of gender. On the distinction between the concepts of "gender" and "gender", it is worth noting that the first concept is the biological difference between a man and a woman, while gender is a social [5]. Gender is different from sex, because it represents the characteristics of the personality behavior, components, and is not a homogeneous entity. Recognition for femininity and masculinity, as personal characteristics of independence and the possibility of combination in one person, allowed to move away from the biological opposition of male and female and go to sex-role types [19]. Let us turn to the results of authoritative scientific research on this issue. According to the observations of E. P. Ilyina, the need for physical activity in men is higher than in girls. Moreover, in physical education classes, highlighting students in grades 1–11 with high, medium and low levels of physical activity,

he found highly active among young people, and low active among young women [5]. As illustrated by the data of I. V. Groshev, the positive attitude of schoolchildren to pursuing sports with age is somewhat reduced, but not very significant, which gives the right to affirm a steady interest in sports during the whole period of study [4]. Most psychologists studying the genesis of psychological sex, state role preferences already in the second year of life. Without a doubt, with age, these preferences develop significantly and deepen in the representatives of both sexes. In support of this, we refer to the conclusions of I. G. Kelishev, who, studying the interest of secondary school students in physical education lessons, individual exercises and various sports, reveals a number of trends. In particular, he points to the dependence of a positive attitude to the lessons of physical culture on age: it decreases markedly among senior pupils. This is especially pronounced in women. [4]. Studying the motive of achievement in men and women, D. Spence and R. Helm-rach focused on three areas – improvement, competition and achievement of results. In the analysis of the student sample, they found that women are dominated by the motivation for achieving the result, and for men – improvement and competition. In other groups of subjects (athletes, businessmen, psychologists), the differences between men and women in the motivation to achieve results and improvement were lower, but in terms of competition, they remained statistically significant. Scientists also noticed that in men the motive of competition is significantly higher than that of women [4]. Exploring the psychosocial adaptation of the personality of a teenage girl, A. Miliakov notes that the need for achievement is one of the basic needs for a complex of fundamental human needs: self-development – self-affirmation – self-esteem, the effective development of which determines the level of psychosocial adaptation. The scientist emphasizes that the need for achievement is manifested as a desire to compete with oneself in achieving more significant results, as a general desire from improvement in all areas of activity to experiencing success in any activity that is significant to a person [11]. So, as a result of a theoretical analysis of the sociological and psychological-pedagogical literature, according to the results of a scientific experiment, it was proved

Table 7
Level of need to achieve success of respondents according to the psychological type (boys, 16–17 years, n=53)

Level classification	n	%	IS androgynous type		IS masculine type		IS feminine type	
			n	%	n	%	n	%
– high	14	26,42	4	12,90	7	43,75	3	50,00
– average	36	67,92	26	83,87	7	43,75	3	50,00
– low	3	5,66	1	3,23	2	12,50	0	0,00
	53	100	31	100	16	100	6	100

Table 8
Level of need to achieve success of respondents according to the psychological type (girls, 16–17 years, n=80)

Level classification	n	%	IS androgynous type		IS masculine type		IS feminine type	
			n	%	n	%	n	%
– high	16	20,00	5	15,15	1	100,00	10	21,74
– average	52	65,00	25	75,76	0	0,00	27	58,70
– low	12	15,00	3	9,09	0	0,00	9	19,56
	80	100	33	100	1	100	46	100

that in the age aspect there are quite significant differences between the levels of the need to achieve success for boys and girls. This indicates age-related changes in targets and needs, thanks to which schoolchildren achieve their life goals. For the first time, a cluster analysis of the IS parameter of the test by S. Bem "Masculinity – Femininity" was conducted and differences in the level of need in the achievements of schoolchildren of different age groups were established. According to the results of the study, the features of the relationship between the general level of the need to reach schoolchildren of different age groups and their belonging to the psychological sex were revealed. Also, a comparative analysis was made of the level of need for success among schoolchildren who are engaged in and are not engaged in grade.

Thus, summing up the above, it should be noted that the study of gender differences and differences in the field of physical culture and sports is the basis for systematization of data on

the gender approach in education, the definition of the limiting and stimulating factors that influence the formation of the individual physical culture of persons with different psychological symptoms sex. The obtained results give us the right to assert that in order to formulate a certain strategy for attracting young people to systematic physical education, studying the needs, interests, motives, value orientations in the field of physical culture, their relation to motor activity, one can not focus only on one of the indicators of biological or psychosocial systems, it is necessary to take into account not only the physiological, but also the morpho-functional features of schoolchildren, but also the entire complex of biosocial personality traits, a gender approach to the process of school physical education.

Our further research will focus on the identification of gender specifics in the formation of value orientations of young people in the field of physical culture and sports.

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References

- Aheieva, V.P., Kobelianska, L.S. & Skoryk, M.M. (red.) (2004), *Osnovy teorii henderu* [Fundamentals of the Theory of Gender], K. I. S., Kyiv. (in Ukr.)
- Bem, S. (2004), *Linzy genera: Transformatsiya vzglyada na problemu pervenstva polov* [Lenses of gender: Transformation of the view on the problem of the primacy of the sexes], Moscow. (in Russ.)
- Bern, Sh. (2001), *Gendernaya psikhologiya* [Gender psychology], proym-YeVROZNAK, SPb. (in Russ.)
- Groshev, I.V. (2003), "Sexual Characteristics of Personality as the Basis of Individual Psychological Differences", *Sotsialnaya psikhologiya XXI stoletiya. In 2 volumes*, T. 1, Kozlova, V.V. (red.), Yaroslavl, pp. 189-191. (in Russ.)
- Ilin, Ye.P. (2007), *Differentsialnaya psikhologiya muzhchiny i zhenshchiny* [Differential psychology of man and woman], Piter, SPb. (in Russ.)
- Karavaeva, Ye.L., Sakhaev, B.T. & Bozteeva, S.Zh. (2007), "Psychological and pedagogical support of gender development of youth", *Teoriya i metodika fizicheskoy kultury*, No. 2, pp. 101-106. (in Russ.)
- Krutsevich, T.Yu. & Marchenko, O.Yu. (2016), "Problems of gender campaign in physical education", *Materials of the International Scientific Congress "Sport. Olympism. Health" (Kishenev, October 5-8, 2016)*, State University of Physical Culture and Sports, Kishenev, Tom 1, pp. 233-240. (in Russ.)
- Krutsevych, T.Yu., Marchenko, O.Yu. & Zakharchenko, M.O. (2017), "Taking into account the gender approach in the process of physical education classes for student youth", *International scientific and practical conference "Physical culture and sport: experience and perspectives"*, Yu. Fedkovych Chernivtsi National University, March (43.1), *Molodyi vchenyi*, No. 3.1, pp.180-183 (in Ukr.)
- Krutsevych, T.Yu. & Panhelova, N. (2017), "Physical education as a social phenomenon", *Teoriia i metodyka fizychnoho vykhovannia*, Olimp.

I-ra, Kyiv, T. 1, pp. 40-58. (in Ukr.)

10. Marchenko, O.Yu. (2014), "Peculiarities of gender identity among schoolchildren of all ages", *Pedahohika, psykhohohiia ta medyko-biolo-hichni problemy fizychnoho vykhovannia i sportu*, No. 1, pp. 37-41. (in Ukr.)
11. Milyakova, Ye. (2016), *Psikhosotsialnaya adaptatsiya lichnosti devochki-podrostka v sisteme adekvatnogo potrebnostno – motivatsion-nogo soderzhaniya fizicheskoy kultury: dissertatsiya* [Psychosocial adaptation of the teenage girl's personality in the system of adequate demand-motivational content of physical culture: thesis], Kishinev State Institute of Physical Culture, Kishinev, 268 p. (in Russ.)
12. Orlov, Yu.M. (1976), "The Needs and Motives of the Academic Activity of Students at a Medical School", *Problemi optimizatsii uchebnogo protsessa*, MMI them I.M. Sechenov, Moscow. (in Russ.)
13. Rodomanova, S.S. (2007), *Sotsialno-pedagogicheskie problemy gendernykh otnosheniy v sporte: dissertatsiya* [Socio-pedagogical problems of gender relations in sport: the thesis], St. Petersburg State University of Physical Culture, Sankt-Peterburg, 243 p. (in Russ.)
14. Rubinshteyn, S.L. (2002), *Osnovy obshchey psikhologii* [Foundations of General Psychologists], Piter, Sankt-Peterburg. (in Russ.)
15. Yakimovich, V.S. & Kondrashov, A.A. (2003), "The Purpose of Physical Education is a Man of Culture", *Teoriya i praktika fizicheskoy kultury*, No. 2, pp. 6-9. (in Russ.)
16. Antala, B. (2012), "The impact of coeducational physical education to the class climate at secondary schools", *Olimpik Sports and Sport for All. Sport, Street, Adaptatio: proceeding book of XVI International Scientific Congress and VI International Scientific Congress (17-19 May 2012)*, extra issue of Sport and science, Staff, P., Gashev, D., Dasheva, S. (ed.), Videnova, National Sport Academi "Vassil Leski", Sofia, pp. 167-169.
17. Abraham, W.T., Gramer, R.E., Fernandes, A.M. & Mahler, E. (2001-2002), "Infidelity, race and gender. An evolutionary on asymmetries in subjective distress to violations – of – trust", *Current Psychology*, Vol. 20, No. 4, pp. 337-348.
18. Malai, L.Yu., Ramashov, N.R., Nazarova, A.M. & Barbanova, N.V. (2013), "Optimization of Physical Culture and Sport Faculty's Students of Y.A. Buketov Karaganda State University", *Olimpik Sports and Sport for All: proceeding of 17th International Scientific Congress (Beijing, China, 2nd-6th, June, 2013)*, International Association of Universities of Physical Education and Sport, Beijing, pp. 170-171.
19. Krutsevych, T.Yu. & Marchenko, O.Yu. (2018), "Age Differenced of Self-esteem of Physical Self at School. Gender Aspects", *Physical education, sports and health culture in modern society*, No. 3, pp. 112-116
20. The first elite blog "There is Nothing Impossible" (2018), "The need for achievements and its impact on success", available at: <https://berichnow.ru/uspeh-2/potrebnost-v-dostizheniyah-i-ee-vliyanie-na-uspeh> (accessed by 30.06.2018) (in Russ.)

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