



## COMPARISON OF SOME PERSONAL QUALITIES OF STUDENTS-SPORTSMEN FROM THE REPRESENTATIVE BASKETBALL AND VOLLEYBALL UNWE TEAMS

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### ABSTRACT

One of the main goals of sport activities, apart from improving the technical and tactical skills, general physical state, and etc., is building up and improving of personal qualities. Especially for students-sportsmen, mastering diverse professions, those qualities will not only support their sports career, but contribute to their future professional realization. A number of scientific researches prove the importance of personal qualities in these areas. Volitional qualities and personal anxiety are one of those defined as professionally significant. In this context, we have observed the level of development of the indicated qualities with male sportsmen, being a part of the representative basketball and volleyball UNWE teams and compared them. It would be needed to note that all students-sportsmen have their sports experience of five or more years. When studying the variability of volitional qualities and personal anxiety, the indicators for both studied contingents, are within the limits, defining them as relatively homogeneous. Exceptions are the volleyball players' volitional qualities, whose results define the group as highly homogeneous. The average values of volitional indicator define students-sportsmen from both teams as personalities with "strong will", who can be relied on. Statistically significant differences when comparing the results were not found in both studied indications.

**Key words:** students-sportsmen, basketball, volleyball, volitional qualities, personal anxiety, comparison

### INTRODUCTION

In the increasingly hectic daily round and strenuous rhythm of the contemporary human beings, qualities as strong will of character and personal anxiety play an extremely important significance. They are defined as important personal characteristics (1). These qualities along with many others are especially important for the future professional realization of students from various universities. As significant, are defined the groups of moral-volitional qualities and communication skills for the economic professions (2). In an investigation with students from the University of Mining and Geology „St. Ivan Rilski“, it has been

indicated that it is expedient to include the methods for psycho-physical influence at the trainings on physical culture and sports. Depending on their content, it is rational to select and include specific exercises and methods for influence that do not change its content, on the contrary - enrich it (3). Interesting is the investigation of the interrelation between the volitional qualities and types of thinking with female and male students from basketball educational groups at the UNWE. No statistically significant correlations with students of both sexes have been established (4). In another investigation of personal characteristics of students exercising table tennis sport on the subject „Physical education“ at the UNWE, statistically reliable are proved to be the differences between the female and male students with personal anxiety and neuroticism – female students are more anxious and neurotic compared to the male students (5). I.

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Stavreva came to the conclusion that in the process of active participation of students in the various sports, too valuable general and special qualities needed for the future profession qualities are built up (6). The same author investigates psychograms prepared intentionally for engineers in Mining industry, establishing the significant for the profession qualities, including in them the volitional qualities and psychic steadiness (7). The available qualities as will and psychic steadiness with sportsmen are decisive for the final result of competitions – individual and team ones. We all witness the comments by the public and expressions such as „he/she prevailed the opponent by the force of will“, „he/she lost nerves in the end of the match“, „he/she remained steady till the end and kept cool“, which is a peculiar assessment of these qualities. Investigation of the level of development of the indices for volitional qualities and personal anxiety with students from educational groups and the representative basketball team at the UNWE characterizes the aggregates as individuals with „strong will“ (8). Until now, an investigation and comparison of the indices between students-sportsmen from the representative volleyball and basketball men teams has not been carried out. Investigations of this type help both for updating the educational programmes at the universities, on the subject „Physical education“, and the direction of the training methods of the representative university teams and introduction of new methods and means for preparation and holding of official matches.

### AIM, TASKS AND METHODS

**The aim** is to establish and compare the level of development of both significant for the profession qualities with students-sportsmen, practicing basketball and volleyball in the representative team.

**The tasks** we have set forth are the following:

1. To establish the average levels of volitional qualities and personal anxiety with students-sportsmen of both representative teams;
2. To compare the results of the investigated qualities with students of both teams and to establish the differences between them;
3. To make conclusions and recommendations for future work with the representative basketball and volleyball teams, coming out of the results achieved.

**Methods** – the investigation has been carried out in the beginning of the educational year

2019/2020. Contingent of the investigation have been 15 students-sportsmen from the representative basketball team of the UNWE and 14 students from volleyball one. The force of the will has been investigated by the test method of Yusupov, Fetiskin, Kozlov and Manuylov (9). The state of the personal anxiety has been assessed by us, applying the test method „Scale for reactive and personal anxiety“ (SRPA) of Ch. D. Spilberger and her adapted Russian variant of Y. L. Hanin, modification of V. Yanev (10).

Results from the investigation have been subjected to mathematical-statistical processing, applying the following:

- Variation analysis – for defining the average levels and variability of the investigated indices with each of the investigated aggregates;
- Comparative t-criterion of Student – for proving the significance of differences between the average levels of the investigated indications at level of reliability  $P(t) \geq 95\%$ .

### ANALYSIS OF THE RESULTS

In the sport science, it is generally accepted to interpret the scattering of the indication in several levels - the excerpt is homogeneous, when the value of coefficient of variation (V) is of value up to 10%. With indices of the coefficient of variation between 10 and 30%, the excerpt is comparatively homogeneous. When the index V is over 30%, the scattering of the indication is big the excerpt is non-homogeneous (11).

After subjecting the results from the carried out tests to statistical processing, we have received the average levels and variability of the investigated indices we are interested in for both contingents. On **Table 1**, all results of the variation analysis are shown.

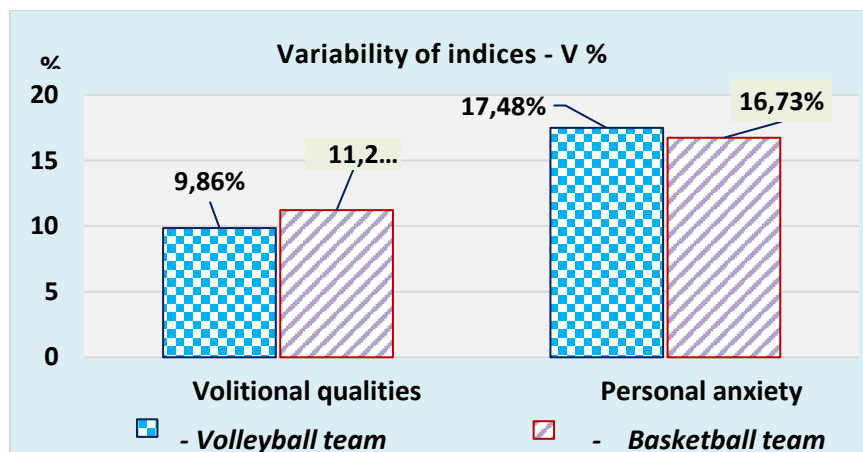
With the first index (volitional qualities) the spread of the results (R) of volleyball and basketball players is absolutely equal (8). With the average results of both contingents there is a difference of only 0,2 points, while the level of development of the quality determines both groups of sportsmen, as individuals with strong will. The coefficient of variation for the volitional qualities with students-sportsmen from volleyball team is  $V=9,86\%$ , and that of the representative basketball team is  $11,22\%$ . Despite of the difference of only 1,36%, the values got for V determine the volleyball group as homogeneous, and that of basketball one as comparatively homogeneous.

**Table 1.** Average values and coefficients of variability of the investigated indices with students-sportsmen from the representative volleyball and basketball teams

Team/Sport	Investigated indices	n	X min	X max	R	$\bar{X}$	S	V%	As	Ex
Team-volleyball	Volitional qualities	14	18	26	8	22,4	2,2	<b>9,86</b>	-0,179	-0,182
Team-basketball		15	18	26	8	22,6	2,5	<b>11,22</b>	-1,066	0,632
Team-volleyball	Personal anxiety	14	23	50	27	40,2	7,0	<b>17,48</b>	-0,814	1,786
Team-basketball		15	29	54	25	40,0	6,7	<b>16,73</b>	0,208	1,626

With the index for personal anxiety, the spread of the result of volleyball team is 27 p., and R for basketball team is 25 p. The values got for the coefficients of variation are respectively

V=17,48% for the volleyball team and V=16,73% for the basketball one. These determine both teams as comparatively homogeneous groups (**Figure 1**).



**Figure 1.** Coefficients of variation with both investigated indices of students-sportsmen from the representative volleyball and basketball teams of the UNWE

The values got after the variation analysis have been compared by t-criterion of Student. On **Table 2**, the average values, standard

deviations and differences in the indices between the two investigated aggregates have been indicated.

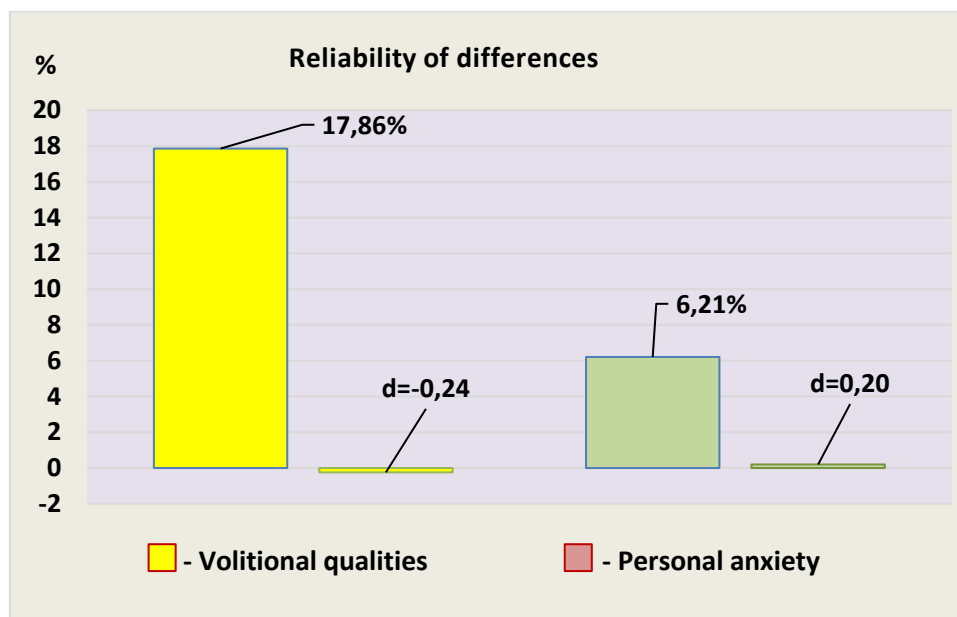
**Table 2.** Reliability of the differences with the investigated indices of students-sportsmen from the representative volleyball and basketball teams of the UNWE

Investigated indices	n	Volleyball team		n	Basketball team		Difference	Statistical significance	
		$\bar{X}$	S1		$\bar{X}$	S2		d	t
Volitional qualities	14	22,40	2,21	15	22,64	2,54	-0,24	0,228	<b>17,86</b>
Personal anxiety	14	40,20	7,00	15	40,00	6,69	0,20	0,079	<b>6,21</b>

As regards the volitional qualities, the average result of volleyball team is 22,40 p., and that of basketball team – 22,64 p. The difference is insignificant ( $d=-0,24$ ). The slight difference in the results, with superiority of 0,24 p. in favour of the students from the representative basketball team, shows fully natural result – reliability of the difference has not been established ( $P(t)=17,86\%$ ).

The average results of the second investigated index – the personal anxiety are respectively 40,20 p. for the boys from the volleyball team

and 40 p. for the students from basketball team (**Table 2**). Difference, as with the first index too, practically does not exist ( $d=0,20$ ). The result got for  $P(t)=6,21\%$  (Figure 2) practically confirms the equal results for personal anxiety. Taking into consideration that the boys from both teams have minimum 5 year-length of experience in sport teams, the participation in training and competitive process to a great extent, helps building and perfection of the investigated qualities.



**Figure 2.** Comparison of the results got of students-sportsmen from the representative volleyball and basketball teams of the UNWE

## CONCLUSIONS

1. The average levels of development of the indices for volitional qualities and personal anxiety with students-sportsmen from the representative volleyball and basketball teams at the UNWE, determine the members of both teams as individuals with „strong will“;
2. The values of coefficients of variation define the volleyball team as highly homogeneous group as regards the will and comparatively homogeneous group on the index for personal anxiety. The indices of basketball team determine it as comparatively homogeneous group with both investigated indications;
3. At comparing the results got of both teams, statistical reliable differences have not been established with both investigated indications. It is recommended for each one training course of both teams to provoke situations that would perfect the personal anxiety of the competitors.

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