

## Gender peculiarities of personality's qualities development in football

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### Abstract:

*Purpose:* to determine the personal characteristics of qualified athletes in football, depending on their gender. *Participants:* 39 qualified athletes (16 male of the high league football team, 23 female of the Ukrainian National team). *Methods:* theoretical analysis of scientific and methodological literature, materials of the Internet, methods of psychological diagnostics: the autonomic coefficient by K. Shiposh, individual-psychological traits of personality by V. Boyko, attentional ability by dot cancellation test, properties of nervous activity by J. Strelau, type of thought and its creativity, motivation for avoiding failure and achieving success by Th. Ehlers, self-assessment by S. Budassi, methods of mathematical statistics. *Results:* the creative application of types of thought formed in the skilled players of both sexes – schematic type of thinking equals ( $\bar{x} \pm S$ ) 8.9  $\pm$  1.6 scores for female and 7.8  $\pm$  1.9 scores for male,  $p > 0.05$ ; the differences have been determined with the "Nervous system – inhibition" indicator,  $p < 0.01$ ; the index of extraversion – Me (25%, 75%) = 17 (11, 18) scores for female; 16 (15, 17) scores for male and neuroticism – 13 (12, 19) scores for female; 9 (8, 12) scores for male; the athlete's self-assessment did not reach the level of the lower boundary of the norm ( $\bar{x} \pm S$ ) – 0.56  $\pm$  0.14 scores for female, 0.55  $\pm$  0.22 scores for male,  $p > 0.05$ . *Conclusions:* The gender differences in the personality traits of qualified football players are identified, which are negligible and more likely determined by inborn gender peculiarities. We established also the predominance of neurodynamic properties of inhibition of male comparing to female,  $p < 0.01$ .

**Keywords:** gender characteristics, gender roles and stereotypes, female's sports, personal qualities, athletes.

### Introduction

For the past decades, persistent interest in the topic of female's sport, the peculiarities of the female's training process, the specifics and differences between the training of them and male athletes, etc., has been maintained. Therefore, the issue of increasing the female's efficiency in sports and the impact on the personal qualities needed for this in today's sport science is relevant.

Sports opportunities have led to a significant change in the nature of gender relations in almost every society, even in those of them where views on the role and status of female in society remain rather conservative to date (Demina, 2018; Melnikova, 1999; Myagkova, 2001; Imas, et al., 2018). However, the historical perspective of the female's participation in the Olympic Games shows that female athletes are rapidly expanding their capabilities. According to statistics, already in 2016, 134 female competitions were present in the 306 events of the Olympiad Games, representing 43.79% of their total (Bulatova, 2018). Analyzing the data presented in the article, we rather have to talk about gender inequality in relation to male athletes, for example Bulatova notes that "... today there are two types of sports in which competitions are held only among female – those are synchronized swimming and artistic gymnastics" (Bulatova, 2018, 329). The end of the eighties of the last century was characterized by the beginning of a large number of researches in various fields of science related to gender issues, which concerned differences between male and female. It clearly stated the need for distinction in the study of issues of gender equality and uniformity, as the first should be the subject of studying politics and morality, and the second – science (Shakhlina, 2001). In 1994, in the city of Brighton, England, during a conference "Female and Sport", a declaration was adopted emphasizing the urgent need for a comprehensive study of such a complex problem as female's sports (Shakhlina, 2001). Although the problem can now be marked by the increase in the number of publications, the increase in the composition of the authors, the diversity of the considered issues, the research in sports science of the gender characteristics of the athlete's personality and the specifics of the formation of the qualities necessary for a successful specialization in a particular sport are still poorly understood.

It is especially important for qualitative management of training under such conditions to take into account not only anatomical, somatic, physiological, biochemical, aging, etc. difference but also the difference between male and female psychology (Rodionov, et al., 2017).

It should be noted that today a lot of research has been carried out, in which the leading features of the personality of male athletes, which contribute to their improvement in a particular sport (Voronova et al., 2006, 2014; Ilyin, 2002; Korobeinikov, et al., 2015; Rodionov, et al., 2013; Weinberg, et al., 2014; Shynkaruk, et al., 2019), are determined. Such data is much less in relation to the female sport (Poklad, 2014).

Since female athletes are distinguished by the early start of a sports career, but rather by the achievement of the highest results and faster completion than male, it is relevant to study the personality peculiarities of female in sport in order to form and improve the most essential personal qualities and characteristics, from which the effectiveness depends on their improvement professional skill and the earliest achievement of its peak (Rodionov, et al., 2017).

Available research on this subject cannot be considered sufficient, but the direction of recent publications suggests that it is beginning to be interested in an increasing number of specialists in sports science and sports psychology (Gribkova, 1986; Damadayeva, 2013; Rodionov, et al., 2017; Weinberg, et al., 2014), as it is stated that female's training is needed using a much larger arsenal of methods and technologies during the training process than male athletes (Rodionov, et al., 2013).

As the analysis of available scientific data showed the research does not almost touch on the problem of psychological personal qualities that are gender relevant for effective specialization in sport and formed in the process of training a particular sport.

The purpose of the study is to determine the personal characteristics of qualified athletes in football, depending on their gender.

### Material & methods

Participants: 39 qualified athletes (16 male of the high league football team, 23 female of the Ukrainian National team). We used the following methods of research: theoretical analysis of scientific and methodological literature, materials of the Internet, methods of psychological diagnostics, which have been tested during long-term scientific and methodological support of athletes of Ukrainian football teams, and also tested mathematically on their correlation with the parameters of pedagogical control of activity in football, namely, the autonomic coefficient by K. Shiposh, individual-psychological traits of personality by V. Boyko, attentional ability by dot cancellation test, properties of nervous activity by J. Strelau, type of thought and its creativity, motivation for avoiding failure and achieving success by Th. Ehlers, self-assessment by S. Budassi, methods of mathematical statistics.

Experimental data were processed by descriptive, parametric and nonparametric statistics. We used the Pearson  $\chi^2$ -test to assess whether the data are accurately modeled by a normal distribution (Antomonov, 2018; Byshevets N. et al., 2019). We calculated arithmetic mean ( $\bar{x}$ ), standard deviation (S) for normally distributed data and also the median (Me), the lower (25%) and upper (75%) quartiles for those data which were not normally distributed. So the statistical significance of the gender characteristics between male and female was determined by means of t-test for independent samples and a nonparametric criterion for two independent samples – the Mann-Whitney test at the level of  $p = 0.05$ . The data have been processed by Statistica Software ([www.statsoft.com](http://www.statsoft.com)).

### Results

The obtained statistical data (Table 1) did not reveal gender differences in the prevailing type of thinking in athletes – the schematic and visual type of thinking prevails in male and female (Figure 1), which is explained by the significance and increase of the attention of team tactical preparation (after the necessary assimilation the basics of individual and group tactical training) at the stage of maintaining the achievements of skilled football players. The established data is also confirmed by the level of creativity (by Mann-Whitney's criterion) – the creative application of types of thought formed in the skilled players of both sexes – schematic type of thought equals ( $\bar{x} \pm S$ )  $8.9 \pm 1.6$  scores for female and  $7.8 \pm 1.9$  scores for male,  $p > 0.05$ .

Table 1. The results of the comparison of the personality psychological indicators that are significant for the activity effectiveness of qualified footballers (female, male), score

Psychological indicator	female (n = 23)		male (n = 16)		t	p
	$\bar{x}$	S	$\bar{x}$	S		
Practical type of thought	6.7	2.3	5.9	1.8	1.10	0.28
Schematic type of thought	8.9	1.6	7.8	1.9	1.78	0.08
Sign type of thought	7.1	2.4	6.8	1.7	0.48	0.64
Visual thinking	8.6	2.0	7.5	2.5	1.45	0.16
Effectiveness of attention	692.4	95.8	627.4	223.4	1.25	0.22
Nervous system – excitement	64.6	8.0	69.0	4.6	-1.70	0.10

Nervous system – inhibition	61.4*	11.9	73.7*	10.5	2.92	0.01
Nervous system – mobility	63.0	7.8	64.4	6.4	-0.52	0.61
Motivation for success	21.8	2.3	20.6	4.0	1.17	0.25
Motivation for failure	13.4	4.4	15.4	4.4	-1.16	0.25
Self-assessment	0.56	0.14	0.55	0.22	0.13	0.90

Note: \* – the difference between female and male in “Nervous system – inhibition” indicator is significant statistically at level  $p < 0.01$

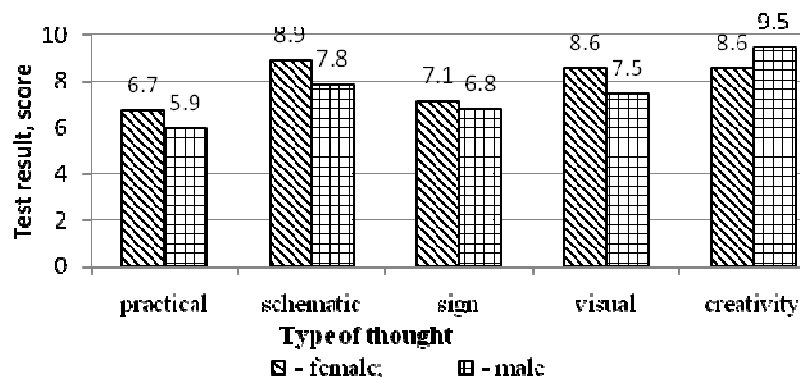


Fig. 1. Football team skilled athlete’s types of thought

Indicators of the test of personality’s individual psychological traits give reason to confirm about the high degree of severity of excitation and inhibition processes of athletes of both sexes with predominance of neurodynamic properties of inhibition of female ( $p < 0.01$ ), and excitation of female ( $p > 0.05$ ) (Table 1). These indicators are also supported by certain psychological properties of the temperament of extroversion-introversion and neuroticism, with the comparison of which (according to Mann-Whitney criterion), differences have been determined for the qualified players of both sexes: with the index of extraversion –  $Me (25\%, 75\%) = 17 (11, 18)$  scores for female; 16 (15, 17) scores for male and neuroticism – 13 (12, 19) scores for female; 9 (8, 12) scores for male.

Research results showed that the indicator of work-performance effectiveness on attention was greater for female’s football players ( $\bar{x} \pm S$ ) –  $692.4 \pm 95.8$  scores then for male –  $627.4 \pm 223.4$  scores,  $p > 0.05$ , which indicated a greater number of different details that female hold in their field of attention during competitive activities, and a faster ability to switch attention from one meaningful object to another was established. But male, according to the obtained indicator of work accuracy, which needs attention, can more precisely isolate those main details of the competitive situation, which are significant in each of its separate segments (Fig. 2).

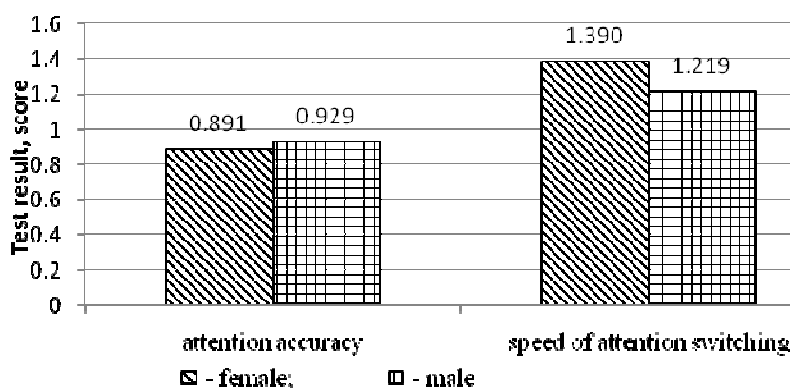


Fig. 2. Gender peculiarities of the indicators of work accuracy on the attention and speed of attention switching in the visual-motor system for qualified football players

We have obtained the results indicating to an important problem which affected directly the activity effectiveness of athletes of both sexes, was the athlete’s self-assessment did not reach the level of the lower boundary of the norm ( $\bar{x} \pm S$ ) –  $0.56 \pm 0.14$  scores for female,  $0.55 \pm 0.22$  scores for male. This may cause the appearance of internally personal complexes at the absence of achievements growth (Fig. 3).

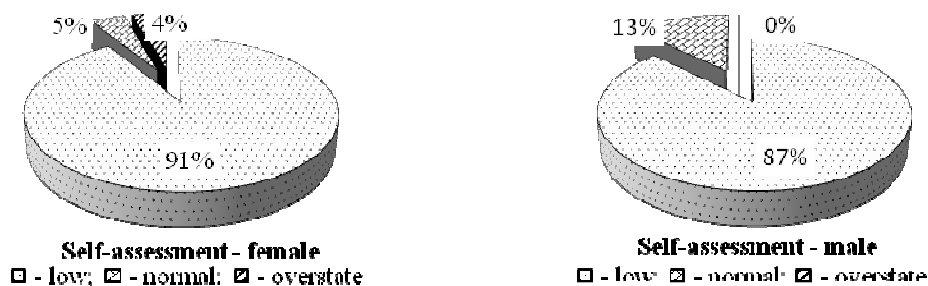


Fig. 3. Gender peculiarities of qualified footballer's self-assessment

The training and competitive activities of skilled football players are characterized by constant physical and mental stress, which often results in mental strain, under the conditions of failures and blunders. This might not dramatically affect the athlete's performance at first, but affect the deep structures of his personality. Such situations may arise either under the influence of failure in training or competitive activities, or to be formed as a result of the actions of internally personal complexes that the athlete can comprehend and neutralize only with the help of a sports psychologist (Voronova, et al., 2013, 2014; Kostyukevych, et al., 2019). That is why one must constantly keep under control one of the very informative indicators of psychological research – the autonomic coefficient by K. Shiposh, which determines the peculiarities of the athlete's actual psychophysiological state (Shiposh, 1980). This method allows you to detect changes in the footballer's current state just as other methods of psycho-diagnostic are not effective. Confirmation of the presence of various personal problems for football players (female and male) is precisely the indicators of autonomic coefficient (Figure 4).

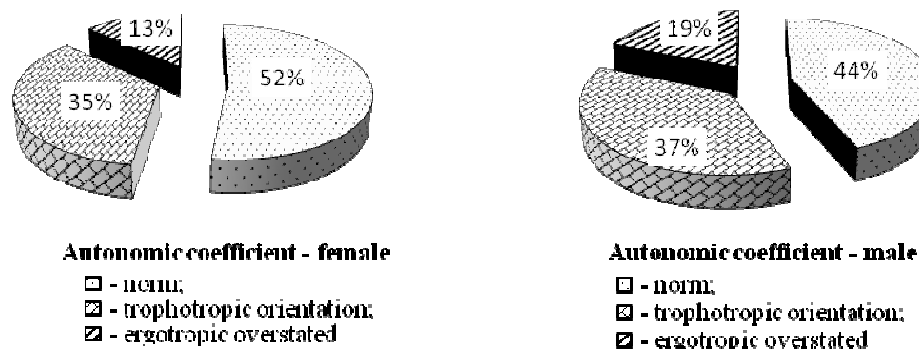


Fig.4. Gender peculiarities of skilled player's autonomic coefficient (by K. Shiposh)

### Discussion

The difference in gender roles has resulted in the content of gender traits stereotypes that male and female have been giving for ages and who have shaped public opinion on the professional capabilities and status levels of a man / woman in society (Bendas, 2006; Bern, 2001; Ageeva, et al., 2004). Existing gender stereotypes can negatively affect the personality's development both the man and the woman by inhibiting those who are not in accordance with the established and imposed particular society (Burn, 2001; Tkalych, 2011) and are not always justified, since woman can be also voluntary, persistent, responsible, reasonable, practical, etc. (Kon, 1986; Piz, et al., 2000; Shapar, 2009). Although in the literature there is a clear characterization of the psychological types of male and female (Ilyin, 2002; Schekin, 1993; Fedorchuk S., 2018, 2019), it is also noted that male and female are free from specific sexual typology, have wider opportunities for development of behavioral reactions and more successful in psychological capabilities (LaFrance, et al., 1980; Locksley, et al., 1979; Loit, 1978, Shynkaruk, et al., 2019).

Given the fact that the personality's individual-typological properties are congenital, we can say that the natural selection of athletes takes place in the process of sports activity and further improving precisely with such data, which allow to effectively specialize in football. These data are confirmed with the research of other scholars (Bendas, 2006; Rodionov, et al., 2017; Weinberg, et al., 2014) about the leading role of the emotional sphere of female and the presence of a significantly elevated level of emotional excitement in comparison with male athletes.

Although it is noted that previous studies did not allow us to determine the motive for female's success in comparison with male (Weinberg, et al., 2014), we investigated the development of this motive expression and the motive for avoiding the failure for highly skilled male and female athletes.

Among the available scientific literature, we find a more expressed motivation to succeed for male than female (Horney, 1993). However, this information is not supported by our data, which shows that the motivation to succeed is slightly higher for qualified female football players – Me (25%, 75%) = 22 (20, 23) scores; for male – 20 (19, 23) scores, while motivation to avoid failure prevails for male athletes – 15 (12, 18) scores, for female – 13 (11, 16) scores,  $p > 0.05$ .

Taking into account the data obtained, it can be concluded that 48% of female footballers and 56% of male footballers have violations of athlete's actual psycho-physiological state for various reasons (the determination of those requires additional work with athletes) – from difficulties in the load enduring, the need to use volitional efforts to carry out the planned training tasks (13% of female, 19% of male) to the urgent need to restore the systems of the athlete's organism, focus on self-preservation, decrease active training, the need for recreation, the accumulation of energy reserves, the strengthening of anabolic, assimilation processes (35% of female, 37% of male) (Voronova, 2013).

Our research results about the indicator of work-performance effectiveness on attention that showed one was greater for female's football players ( $\bar{x} \pm S$ ) – 692.4 ± 95.8 scores then for male – 627.4 ± 223.4 scores,  $p > 0.05$ , which was consistent with the data of other scientific studies (Damadayeva, 2013; Melnikova, 1999).

The opinion of the negative side of gender stereotypes is confirmed (Kletsina, 2009), just as the difference between male and female is often exaggerated and is only real in words, which can hinder the development of those personality's qualities that are absolutely necessary for development and successful professional specialization. This applies to sports activities in particular.

### Conclusions

The gender differences in the personality traits of qualified football players are identified, which are negligible and more likely determined by inborn gender peculiarities, in our opinion: the prevalence of neurodynamic inhibition property among male – ( $\bar{x} \pm S$ ) 73.7 ± 10.5 scores, and excitation among female – 64.6 ± 8.0 scores,  $p < 0.01$ ; the index of extraversion – Me (25%, 75%) = 17 (11, 18) scores for female; 16 (15, 17) scores for male and neuroticism – 13 (12, 19) scores for female; 9 (8, 12) scores for male; work-performance on attention indicator was better for female's football players ( $\bar{x} \pm S$ ) – 692.4 ± 95.8 scores then for male – 627.4 ± 223.4 scores,  $p > 0.05$ .

The higher level of female's successful motivation Me (25%, 75%) = 22 (20, 23) scores; for male – 20 (19, 23) scores, while the level of motivation aimed to avoid failure for male athletes – 15 (12, 18) scores, for female – 13 (11, 16) scores,  $p > 0.05$ .

Sporting activity in football dictates its requirements for the presence, the necessary level of formation and degree of expressiveness of a certain professionally significant personal qualities of qualified male / female athlete, which requires a certain level of personality's readiness of skilled male / female football players at the stage of preservation of sports achievements.

The results and conclusions presented in this article do not exhaust the whole essence of the problem and point to many interesting directions for further research.

**Conflict of interest:** Authors state no conflict of interest.

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