

# Psychological Skills of Highly Qualified Football Players, Determining the Effectiveness of Their Playing Activities

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## Abstract

The paper presents research findings of the psychological skills of highly qualified football players. These skills are essential for effective football players. Based on the analysis of the results, obtained by using the author's methodology, method of expert assessment and statistical methods, the psychological skills that are related to the game efficiency of the players have been established.

**Keywords:** football; psychological skills; psychological skills measurement; method of expert assessment; football player's efficiency.

Among many other factors, psychological skills are an important part of being an effective athlete (Simonenkova, 2015). Research in psychological skills has always attracted both psychology practitioners and psychology researchers. However, this research issue implies an antagonism between psychology and pedagogy experts in defining the concept of psychological skills and assessing relationships between *skill* and *ability*. Traditionally, sports psychology in the same way as psychology defines *skill* as a sub-item of *ability* (Weinberg and Gould, 2001). Pedagogy experts, in their turn, describe *skill* as a higher level of mastering a psychological skill, activity or ability.

Furthermore, the relationships between skill, ability and individual psychological features, and also efficiency in sports activities and its objective conditions have not been adequately investigated, especially in the context of team sports and football in particular (Simonenkova, 2015).

The system approach to a person's individuality and person's possession of certain psychological skills, associated with every level of individuality, implies the importance of the system-forming, transitive function of activity. In this case, activity (so much professional activity) can establish new connections between individuality features at different levels based on object-subject relations (Merlin, 1986; Merlin, 1978; Vyatkin, 1981), so the sports activity objective conditions can provide for developing new features - psychological skills (abilities) in a subject.

In the real life, coaches-selectionists and agents draft players for their clubs by evaluating a footballer's professional and special psychological skills (Beswick, 2001; Nesti, 2010).

The psychological skills of athletes at different qualification levels is a rather popular research issue with sports psychologists around the world. There exist a wide range of tests and scales assessing either a particular psychological skill or a whole spectrum of skills (Simonenkova, 2015).

Despite a great variety of accessible methods and diagnostic tools developed by Soviet and Russian sport psychology experts (Vyatkin, 1981; V.F.Sopov, 2004 and many others), currently the field suffers from the deficit in diagnostic tests of psychological skill assessment caused by the lack of reliable and valid methods to measure skill levels or to diagnose psychological skills (Simonenkova, 2015). In addition, psychological skills have never been classified according to their importance to player efficiency.

The present research aims to expand the use of relevant diagnostic tools in sports psychology.

It is the first attempt to develop a test on psychological skill assessment in sports activity, football in particular. To obtain reliable results, the research sample included only professional athletes.

The obtained results laid the foundation for developing an original method – a new diagnostic tool to determine psychological skill levels, which would purposefully foster psychological skill development and, thus, increase football players' efficiency.

The purpose of the research is to investigate the psychological skills of highly qualified football players essential for player efficiency. To use the obtained results in developing a psycho-diagnostic test on psychological skill assessment to facilitate pedagogical and managerial decision making.

The research objectives include:

1. To analyze the current situation of psychological skills in sport.
2. To investigate relationships between the psychological skills of highly qualified football players and the players' efficiency.
3. To develop a test for investigating football players' psychological skills.
4. To determine the most essential football players' psychological skills.

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## Methods

The research population was football players from six Latvian Higher League teams. The empirical research sample included 90 male football players 18-35 years of age.

The following research methods have been used:

1. Analysis of theoretical sources on psychological skills in sports activity. Expert interviews with the Latvian Football Federation representatives, Latvian Higher League coaches and experienced football players.
2. Development of an expert questionnaire to determine most common psychological skills essential for a football player's efficiency.
3. Preparation of statistically valid data to construct a test for investigating psychological skills of highly qualified football players.
4. Statistical methods of processing and interpretation of the obtained data using SPSS Statistics 17.0.

The analysis of theoretical sources on psychological skills in sports activity (Simonenkova, 2015) and expert interviews with the Latvian Football Federation representatives, Latvian Higher League coaches and experienced football players have enabled the researchers to identify 11 most essential psychological skills. The following skills were selected: self-motivation, decision making, goal setting, communication, emotion control, relaxation, imagery, self-talking, concentration, activation and automaticity have been identified as essential for being effective (successful) in football game (Beswick, 2001; Nesti, 2010; Voronova, 2001).

A questionnaire including 91 statements has been worked out to measure the intensity of these skills in football players. The research participants included only the respondents (football players, coaches and experts) who were informed about the research purposes and granted their voluntary informed consent, and who also confirmed that they can understand and speak Russian fluently. The Latvian Higher League football players filled in the questionnaire ranking each item according to a 1-5 rating scale (never – rarely – sometimes – often – always) in the presence of the researcher.

Cronbach's alpha has been used to measure reliability of the obtained data.

## Results and discussion

As shown in Table 1, the value of Cronbach's alpha in the Self-motivation, Goal setting, Self-talking and Activation scales for the total sample of 90 respondents, falls below 0.6 ( $\alpha < 0.6$ ), indicating a poor reliability of these scale score measures.

The other seven scales – Communication, Decision making, Emotion control, Relaxation, Imagery, Automaticity and Concentration – have demonstrated an acceptable reliability of Cronbach's alpha values (Anastazi and Urbina, 2007) and have been used in further psychometric analysis.

**Table 1**  
*The sample value of Cronbach's alpha*

No	Scales	Cronbach's alpha
1	Self-motivation	0.509
2	Decision making	0.791
3	Communication	0.688
4	Goal setting	0.589
5	Emotion control	0.753
6	Relaxation	0.662
7	Imagery	0.632
8	Self-talking	0.306
9	Concentration	0.831
10	Activation	0.526
11	Automaticity	0.704

Then, the Kolmogorov-Smirnov Z was calculated to determine whether the empirical distribution deviates from the normal distribution.

All the scales, with the only exception of the Goal-setting scale, have shown a two-tailed significance level of the Kolmogorov-Smirnov Z above 0.05 (see Table 2). This confirms the correspondence between the empirical distribution and the normal distribution. Consequently, the representability of research results has been demonstrated.

**Table 2**  
*The Kolmogorov-Smirnov Z statistics of the PST*

No	Scales	Kolmogorov-Smirnov Z	Two-tailed significance
1	Self-motivation	1.264	0.082
2	Decision making	0.898	0.395
3	Communication	0.963	0.312
4	Goal setting	1.401	0.039

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No	Scales	Kolmogorov-Smirnov Z	Two-tailed significance
5	Emotion control	0.765	0.601
6	Relaxation	0.963	0.312
7	Imagery	1.222	0.101
8	Self-talking	1.316	0.063
9	Concentration	0.791	0.559
10	Activation	1.134	0.153
11	Automaticity	0.903	0.388

To measure a football player's efficiency, the method of expert assessment was applied; the method is widely used in psychology, sports psychology and sport studies (Mikonkov and Nikolaev, 2003; Simonenkova, 2015). The research participants also included nine experts (six chief coaches from Higher League teams, two members of the Latvian Football Federation Coaching Council and one sports journalist, specializing in football). Through the individual and group discussions with the Latvian Football Federation experts, assessment criteria were established, which enabled the researchers to evaluate a football player's efficiency during a regular season. At the end of the play season, the efficiency of each footballer-participant was confidentially rated by each expert, using the 5-point rating scale. Thus, each footballer-participant has been rated according to four expert assessments (by the chief coach of a player's team, by two independent experts with a 30-year experience in football and a sports journalist). Based on the psychometric principles, the correlation coefficient of the Psychological Skill Test

(PST) scale scores and the scores of summative expert assessment of the football players was calculated.

The diagnostic accuracy of the method of expert assessment is supported by the statistic consistency among expert assessments using Spearman's rank correlation coefficient (Anastazi and Urbina, 2007; Bodalev and Stolin, 2000; Gessmann and Sheronov, 2013).

Given the fact that the empirical distribution of the PST scores on the seven scales and the scale of summative expert assessment scores correspond to the normal distribution, the parametric statistical method of Pearson's correlation coefficient ( $r$ ) has been used to determine the correlation between psychological skills and player efficiency.

The estimated values of Pearson's correlation coefficients and their two-tailed significance ( $r < 0.05$ ) make it possible to conclude that the PST scale scores on Decision making, Communication, Emotion control, Concentration and Automaticity, and the expert assessment scores have a statistically significant correlation (see Table 3).

**Table 3**  
*Correlation between the PST and the expert assessment scores*

		Expert assessment	
	PST scales	Pearson's correlation coefficient	Two-tailed significance
1	Decision making	0.219	0.038
2	Communication	0.349	0.001
3	Emotion control	0.334	0.001
4	Relaxation	0.159	0.133
5	Imagery	0.152	0.153
6	Concentration	0.343	0.001
7	Automaticity	0.343	0.001

The research has made it possible to identify five psychological skills - decision making, communication, emotion control, attention concentration and automaticity, as

having a statistically significant correlation with game efficiency of highly qualified football players (see Table 4).

**Table 4**  
Descriptive statistics

Psychological skills	Standard deviation SD	Mean M	Pearson's correlation coefficient R
Decision making	40.23	32.28	0.22
Communication	3.27	28.70	0.35
Emotion control	4.20	21.50	0.33
Concentration	6.34	51.91	0.34
Automaticity	4.22	28.52	0.34

The research results have been used when constructing a psycho-diagnostic test on psychological skill assessment – Footballer Psychological Skills Test (FPST). In accordance with the psychometric assessment procedures, the newly developed diagnostic tool includes evaluative questions on the identified five psychological skills.

**Conclusion**

Based on the research results the following conclusions have been made:

1. The psychological skills of highly qualified football players determine their game efficiency.

2. Decision making, communication, emotion control, attention concentration and automaticity skills have a strong statistically significant correlation with game efficiency of highly qualified football players.
3. Decision making, communication, emotion control, concentration and automaticity skills constitute an important part of essential professional qualities of football players.
4. The research results have formed the scientific foundations for the Football Psychological Skills Test (FPST).

**Психологические навыки футболистов высокой квалификации, определяющие эффективность их игровой деятельности**

**Резюме**

В статье представлены результаты исследования психологических навыков футболистов высокой квалификации. Целью данного исследования было выделить из одиннадцати наиболее важных психологических навыков спортсменов те, которые прежде всего взаимосвязанные с эффективностью игровой деятельности в футболе. В исследовании приняли участие 90 футболистов играющих в шести командах Высшей Лиги Латвийского чемпионата. Использование авторской методики, метода экспертных оценок и методов математической статистики позволили определить, что концентрация внимания, эмоциональный контроль, быстрота принятия решений, автоматичность и коммуникативность являются теми психологическими навыками, которые определяют эффективность игровой деятельности латвийских футболистов высокой квалификации. Результаты этого исследования были положены в основу разработки психодиагностической методики Тест Психологических Навыков Футболистов.

**Ключевые слова:** футбол; психологические навыки; измерение психологических навыков; метод экспертной оценки; эффективность футболиста.

**Habilidades psicológicas de jugadores de fútbol altamente calificados. Determinar la efectividad de sus actividades de juego**

**Resumen**

El artículo presenta resultados de investigaciones sobre las habilidades psicológicas de jugadores de fútbol altamente calificados. Estas habilidades son esenciales para jugadores de fútbol efectivos. Sobre la base del análisis de los resultados, obtenidos mediante el uso de la metodología del autor, el método de evaluación experta y los métodos estadísticos, se han establecido las habilidades psicológicas relacionadas con la eficiencia del juego de los jugadores.

**Palabras clave:** fútbol; habilidades psicológicas; medición de habilidades psicológicas; método de evaluación experta; eficiencia del jugador de fútbol.

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