STUDIA UBB EDUCATIO ARTIS GYMN., LXIV, 4, 2019, pp. 59 - 67
(RECOMMENDED CITATION)
DOI:10.24193/subbeag.64(4).30

THE PSYCHOLOGICAL IMPACT OF EMOTIONS IN INCREASING THE PERFORMANCE OF FOOTBALL PLAYERS

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ABSTRACT. From a theoretical standpoint, the innovative aspects of the current paper stem from applying a new psychological approach in the training of football players. The psychologically-enhanced training leads to a dramatic increase in the players' performance. Our scientific initiative focuses on new elements which optimize the training of football players in order for them to achieve their full potential. Current theoretical research claims that introducing therapy elements in football training mitigates the effect of dysfunctional emotions and increases the effect of functional emotions, ultimately leading to a proportional increase in the performance of football players aged 7 – 10.

Keywords: *football, emotions, sport performance*

REZUMAT. ***Impactul factorului psihologic de emoţie în creşterea performanţei sportive la jucătorii de fotbal.*** Importanţa teoretică a lucrării constă în faptul că pune în evidenţă o nouă orientare a procesului de pregătire prin implementarea programului de pregătire psihologică, care contribuie în mod semnificativ la creşterea performanţelor sportive a jucătorilor de fotbal. Demersul ştiinţific aduce o serie de elemente de noutate şi originalitate în ceea ce priveşte programul de pregătire psihologică pentru optimizarea pregătirii jucătorilor de fotbal în vederea valorificării la maximum potenţialul jucătorilor. Conform cercetărilor teoretice deja existente în literatura de specialitate s-a plecat de la faptul că introducerea unei intervenţii terapeutice în cadrul antrenamentul de fotbal cu diminuarea emoţiilor disfuncţionale în favoarea dezvoltării unui nivel mai crescut de emoţii funcţionale va avea ca şi consecinţă creşterea performanţei sportive în jocul de fotbal la grupele de 7-10 ani.

Cuvinte cheie: *fotbal, emoţii, performanţă sportivă*

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Introduction

Conceptually speaking, "emotions" define our existence as individuals and as society. However, the concept is hard to define. Emotions refer to a specific state which temporarily pauses the stable functioning of an organism, the resulting exchange having behavioral, physiological and experimental traits (Cashmore, 2008). Emotions are complex feelings which carry mental, behavioral and physical components. Mentally speaking, emotions can be experienced as being pleasant or unpleasant. Behaviorally speaking, emotions can be experienced as a trigger which makes us take action. Physically speaking, emotions can be experienced as a powerful tension or as an awakening (Lynn, 2002).

Most sportsmen are involved in the sport activity they will perform before the sport activity actually begins, in that sportsmen project negative mental images related to the situations they will encounter in the contest. Contests usually have both financial and social stakes. Therefore, emotions are a normal reaction to this kind of situation. Stopping these negative thoughts or beliefs, which anticipate a reality which may never come true, is one solution to achieving the desired level of performance (Holdevici, 2005).

Emotions are fundamental affective reactions which can be primary, spontaneous reactions or more complex processes (Ştefănescu, 2013).

Psychology has been studying emotions and their role in human activity for a very long time, trying to establish whether they support the adoption of a given behavior. It was demonstrated that affection has a huge mobilizing impact which can even resort to disengaging reactions. For sportsmen, controlling one's emotions is a matter of self-education. Being aware of their own abilities, sportsmen must nurture their ability to self-control and self-lead. Emotion has been the focus of extensive scientific research and encompasses several dimensions: subjective, cognitive, physiological and behavioral. It has been suggested to view emotions as a side effect of the operations performed by complex mechanisms. Emotion is an automatism which triggers the correct response. In Western countries, emotion is seen as the opposite of reason. As a result, most psychotherapy interventions are crafted around this observation (Sabău, 2010).

Emotions can be positive or negative. Positive emotions are triggered when what a person wants corresponds to what a person experiences (e.g. sympathy, gratitude, enthusiasm, exaltation, security, confidence, joy, delight etc). Negative emotions are triggered when there is a lack of concordance between what a person experiences or achieves and that person's expectations (e.g. dissatisfaction, fear, anger, regret, sadness, outrage, worry, trouble etc). Of course, this classification is subjective, as it is influenced by the way we distinguish what is pleasant from what is not pleasant. Instead of talking about

positive and negative emotions we might talk about pleasant and unpleasant emotions, since, from a certain point of view all emotions are positive. Emotions could be classified as healthy or unhealthy. For example, being worried ahead of an important contest is a healthy negative emotion, but being panicked is an unhealthy emotion. The joy triggered by a successful exercise is a healthy positive emotion, but being satisfied when someone is in pain is an unhealthy emotion. A person's emotion brings about several changes: biological/physical (e.g. increased breathing rate, increased cardiac rhythm); cognitive („My colleague hit me on purpose!"); behavioral (the way people behave as a result of the education they receive, the way people express themselves at an emotional level). To identify and understand emotions, children must practice them in their social environment (Batiș, 2007).

Objects

We aim at studying the relationship between functional emotions and sport performance. More specifically, we aim at showing that functional emotions are an important predictive factor in achieving football performance starting from the ages of 7-10.

Material and methods

For the purpose of the current research, we conducted a study which includes 90 participants aged 9 from several football groups. The participants were studied before and after our psychological intervention. The participants were selected from the following cities: Cluj-Napoca, Mediaș, Baia-Mare, Gherla, Luduș, all being football club members and all being born in 2006.

The sample size was established based on the Gpower statistical program, setting a 0.05 threshold as the medium effect size in order to obtain a 0.80 statistical correlation. The experiment took place for the duration of one competition year, starting with the 1st of August 2014 and ending with the final assessment on the 20th of June 2015. The training program of the 5 groups comprised of the same number of daily and weekly sessions.

For the technical training we used the following materials:

- Frequency ladder – It is an ideal equipment for a wide range of exercises meant to improve attention and coordination. The ladder is 6-meter long, is made of fabric, and can be used inside or outside the gym.

- SenseBall – It iss ball with a wire developed by CogiTraining. It is a revolutionary football practice technique used by most of the football clubs and federations in the entire world (FA Belgian, AC Milan, RSC Anderlecht and FC Metz to name a few). Recommended by professional football players, SenseBall is specially designed for young players aged 6 to 20. SenseBall practice improves football skills, especially hitting the ball with either leg. The SenseBall technique is based on bilateral activity and coordination. Due to its unique design, a player who trains with SenseBall will perform on average more than 500.000 ball interventions per season.

For the psychological training we used the following tests:

- A structured interview for rational and irrational beliefs;
- A structured interview for emotional control.

In the research, the software product SPSS 23.0 is used specifically for the statistical analysis of data in the field of social sciences (Statistical Package for Social Sciences). In the descriptive statistics part, we used, besides the frequencies, indicators of the central tendency (arithmetic mean, median) and indicators for characterizing the data sharing with the average (standard deviation, dispersion, minimum, maximum).

In the inferential statistics, nonparametric Wilcoxon tests were used. Statistical processing is accompanied by graphical representations with frequencies observed in absolute values and percentages, which illustrate the results and support the conclusions drawn.

Results

Rational beliefs

Table 1. Statistical-mathematical analysis before and after applying the training program, rational beliefs – preliminary research

TESTING	Mean	Medium score difference	Median value	Min. value	Max. value	WILCOXON TEST		Effect size
						Z	P	
Pre	6.79	4.00	5	1	14	-3.833	<0.001	0.62
Post	10.79		11	4	15			

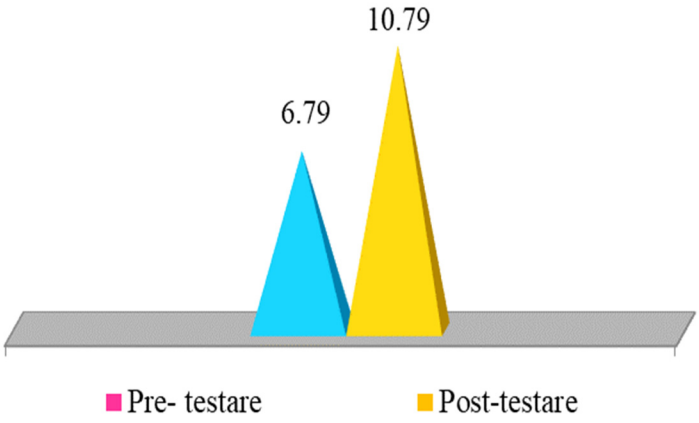

Fig. 1. Mean values – initial testing vs. final testing – rational beliefs

Table 2. Rational beliefs - results

Medium score difference	Progress	P	Statistically significant difference	Large effect size (effect size=0.62)	The null hypothesis
4.0	58.9%	< 0.001	Pre-test vs. Post-test		is rejected.

Irrational beliefs

Table 3. Statistical-mathematical analysis before and after applying the training program, irrational beliefs – preliminary research

TESTING	Mean	Medium score difference	Median	Min. value	Max. value	WILCOXON TEST		Effect size
						Z	P	
Pre	8.21	-4.00	10	1	14	-3.833	<0.001	0.62
Post	4.21		4	0	11			

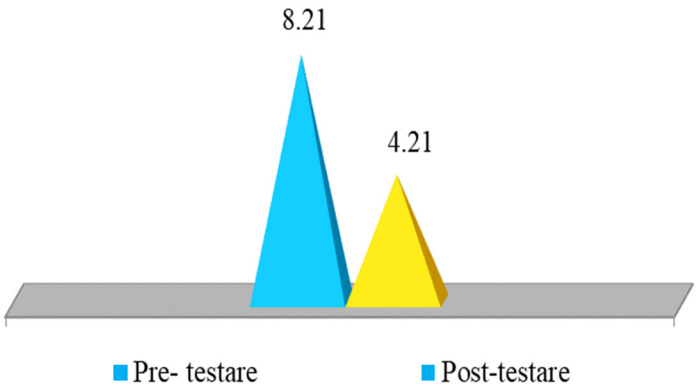

Fig. 2. Mean values initial testing vs. final testing – irrational beliefs

Table 4. Irrational beliefs – results

Medium score difference	Progress	P	Statistically significant difference	Large effect size (effect size=0.62)	The null hypothesis
-4.0	48.7%	< 0.001	Pre-test vs. Post-test		is rejected.

Emotions

Table 5. Statistical-mathematical analysis before and after applying the training program, emotions – preliminary research

TESTING	Mean	Medium score difference	Median	Min. value	Max. value	WILCOXON TEST		Effect size
						Z	P	
Pre	64.53	-23.06	76	0	120	-3.487	< 0.001	0.57
Post	41.47		48	0	84			

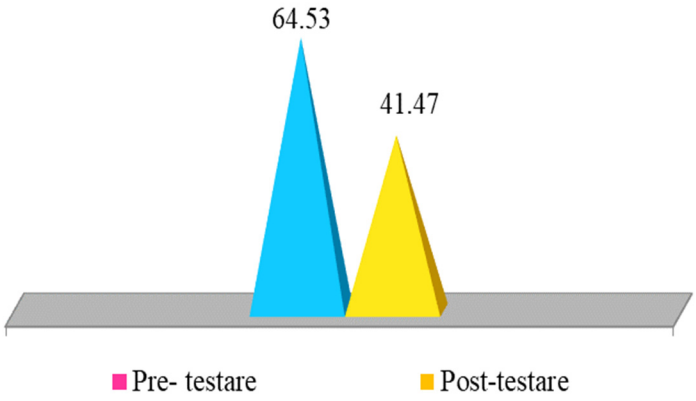

Fig. 3. Mean values initial testing vs. final testing– emotions

Table 6. Emotions – results

Medium score difference	Progress	P	Statistically significant difference	Large effect size (effect size=0. 57)	The null hypothesis
-23.6	35.7%	< 0.001	Pre-test vs. Post-test		is rejected.

Discussion

The role of psychology in sports was discussed in various studies targeting several sports and various participant ages. McCarthy et al. (2013) demonstrates that emotions are important for cognitive interference. Tempering with concentration supports some of the initial findings. Cognitive interference is important for improving the performance of children or junior players.

Predoiu et al. (2016) notes that negative emotions lead to weaker results in the case of working memory and creativity. His study focused on martial arts practitioners and football players.

Studying the basketball game of junior players, Kalloş et al. (2013) concludes that players are the most stressed during competitions, which requires them to undergo psychological training in order to mitigate the effects of stress.

LiWei et al. (1992) studied a group of table tennis players aged 7-10 and notes that the players' technical-tactical execution dramatically improved when execution practice was combined with video recordings. The players found the learning process easier and faster in this context.

As a result of the structured interview for rational beliefs, the medium score for the participants who had rational beliefs increased by 4 points, from 6.79 during pre-testing to 10.79 during post-testing. Percentage-wise the increase correlates to a 58.9% progress. The mean increase in the number of rational beliefs is statistically significant, according to the non-parametric Wilcoxon test, where $p < 0.001 < 0.05$ for $z = -3.833$. The effect size shows (0.62) a large difference between the number of rational beliefs during pre-testing as opposed to post-testing. Figure 1 presents the mean score for rational beliefs in the two tests.

As a result of the structured interview for irrational beliefs, the medium score for the participants who had irrational beliefs decreased by 4 points, from 8.21 during pre-testing to 4.21 during post-testing. Percentage-wise the decrease correlates to a 48.7% progress. The mean decrease in the number of irrational beliefs is statistically significant, according to the non-parametric Wilcoxon test, where $p < 0.001 < 0.05$ for $z = -3.833$. The effect size shows (0.62) a large difference between the number of irrational beliefs during pre-testing as opposed to post-testing. Figure 2 presents the mean score for irrational beliefs in the two tests.

The structured interview targeted at emotional control shows a decrease in the Likert score by 23.06 units, from 64.53 during pre-testing to 41.47 during post-testing. Percentage-wise the decrease correlates to a 35.7% progress. The non-parametric Wilcoxon test shows that the decrease in the mean score of emotional control is statistically significant, $p < 0.001 < 0.05$ for $z = -3.487$. The effect size (0.57) shows a large difference between the emotional control abilities during pre-testing as opposed to post-testing, emotions showing a significant decrease in the post-testing phase. Figure 3 presents the mean score for emotions in the two tests.

Conclusions

The conclusions that we can draw as a result of our scientific study aim at evaluating the hypothesis which targeted the process of reaching a balance between the functional and dysfunctional emotions involved in a football game.

The results obtained by performing the statistical modelling of our data are significant, which confirms our hypothesis according to which: *As a result of psychological intervention, players will have a significantly higher level of functional emotions and an increased sports performance in post-testing settings as opposed to pre-testing settings.*

The results of the semi-structured interview show us that the results of the final assessment are superior compared to those of the initial testing due to the variable that we introduced in our research.

The importance of applying psychological tests at the level of football groups and the intention of mitigating dysfunctional emotions by balancing functional emotions is demonstrated by the results obtained in the context of the semi-structured interview focused on beliefs and emotions.

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