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Contributions to the identification of personality traits in athletes

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Abstract

This study belongs to a larger research project undertaken in an effort to develop a strategy to optimize the mental preparation in athletes along the formative stages of training, and consisted of identifying the personality traits in the members of the national athletics team (12 athletes, 7M and 5F).
The personality traits were identified through the use of the Five-Factor Personality Inventory (FFPI). Through an analysis of the results, a psychological profile was created for each athlete, being considered a necessary prerequisite in the undertaking of mental preparation with the purpose of maximizing sport performance, through the corroboration of these with their level of motivation.

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1. Introduction

In sport, competition is a confrontation between two or more individuals, a confrontation which takes place on a predominantly motor level on a volitive-affective base. At the current levels of sport performance, mental preparation plays an extremely important role taking into consideration the fact that the level of physical and technical capabilities of two athletes being equal, the winner in a competition will be the one with solid mental preparation realised. Competition between two or more athletes is not a race solely between physical forces, but one

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in which the whole personality of the athlete is engaged. The effort to achieve performance, which is motor, cognitive-affective and volitive all in the same time, constitutes, in fact, an action of crystalisation and polishing of the personality. Satisfying the demands of sporting performance in general and in athletics especially, as it manifests today, entails, alongside preparation common to all athletes, strict individualisation. This involves without question a psychological approach to each athlete and requires the study and perfect knowledge of their personalities. According to Epuran (2008), mental preparation of an athlete presumes "the ensemble of training and education strategies and techniques used for the purpose of increasing mental capacity and developing the personalities of the athletes, corresponding to the requirements of the event/sport, in order to obtain superior effects and results in training and in competition." Knowledge of the athletes' personalities represents an incredibly important aid in optimizing their mental preparation. Personality traits decisively influence the athletes and also the intensity of their involvement in sport, as well as the coach-athlete relationship „The study of the personality is not only the most ambitious, but also the oldest area of interest in psychology" (Atkinson & Atkinson, 2002). The personality identity of a competitive athlete differs from personality in general through the specific sporting atmosphere and the event practiced each with its own mental and physical components. (Niculescu, M., 2000). According to Allport (1981) "Personality is the dynamic organization within the individual of those psychophysical systems that determine his characteristic behavior and thought" (p. 40). Maximizing sporting performance through the use of methods aimed at optimizing the motivational sides to mental preparation requires knowledge of the athlete. This has a decisive role in achieving performance in sport and constitutes a common denominator for outstanding results.

2. Problem Statement

This study is part of a larger research project which aims at developing a strategy to optimize mental preparation in the formative stages of athletics.

This research was carried out on 12 athletes, members of the national athletics team, aged between 20 and 32 years of age. These athletes represent the senior national squad with notable performances achieved in the Olympic Games, the European Athletics Championships and the National Athletics Championships, practicing different events (triple jump, 100m, 400m, long jump, heptathlon, decathlon, shot put). Athletes of both sexes took part in the research, from which 8 were boys and 4 girls.

The research was initiated with the purpose of identifying personality traits in the members of the national athletics team, the knowledge and development of athlete personalities being considered factors of efficiency in sport training, which maximize performance owing to the complexity of the specific effort. This study is within a larger research project which aims at the development of a strategy to optimize mental preparation, in the formative stages of training, by optimizing the motivation of the athletes.

In the research, the five-Factor Personality Inventory (FFPI) was used, which evaluates five factors from the Big Five model: extraversion (E), agreeableness (Am), conscientiousness (C), emotional stability (S), and autonomy (At). The test is structured with 100 items in 5 different scales, one for each superfactor and each containing 20 items. Each item is condensed into a brief, concrete statement, to which each is answered by choosing a variant which indicates how true the statement is for the subject. The authors of the test established the mean and standard deviation values of the FFPI scores, as presented in the following table.

Table 1. Mean and standard deviation values of the FFPI scores (Hendriks, et al.1996)

SCALE	m	σ
Extraversion	69.05	12.14
Agreeableness	72.67	10.43
Conscientiousness	70.50	11.57
Emotional Stability	69.10	12.35
Autonomy	74.88	9.53

In order to identify the personality traits of the subjects through the test, extreme scores were established (table 2), using mean and standard deviation values for each scale (superfactor), as follows: m - 1 σ = low extreme, where m - mean, σ - standard deviation ; m + 1 σ = high extreme, as well as interpretation of the results.

Table 2. Extreme scores

SCALE	HIGH EXTREME	LOW EXTREME
Extraversion	81.19	56.91
Agreeableness	83.10	62.24
Conscientiousness	82.07	58.93
Emotional Stability	81.45	56.75
Autonomy	84.41	65.35

Table 3. Interpretation of the scaled scores (Hendriks, et al., 1996)

SCALE	HIGH EXTREME	LOW EXTREME
Extraversion	Feels good in society. Likes to talk. Easily makes contact with others	Isolates himself from others. Quiet.
Agreeableness	Shows an interest in those around him. Respects the opinions and rights of others. Tries to have good relationships with others.	Interested only in himself. Tries to draw attention upon himself. Wants to impose his own point of view. Bothers those around him.
Conscientiousness	Respects norms and rules. Orderly. Plans his actions. Strives to do everything right. Trustworthy.	Nonconformist. Begins actions without thinking about the consequences. Doesn't respect deadlines.
Emotional Stability	Positive thinker. Optimistic. Controls his emotions. Has confidence in his own strength.	Worries over everything. Always quiet. Can't handle stressful situations.
Autonomy	Acts differently than others. Creative. Doesn't let himself be lead by others.	Doesn't have his own opinions. Accepts whatever is said to him. Can be easily manipulated.

In the opinion of Eysenck, "Introversion/extraversion refers to the way in which a person relates to his environment, both traits coexisting but only one, however, predominating." (Eysenck, 1970).

After determining the results of each superfactor, the scores of the 20 items corresponding to each scale were accumulated and the personality traits of the subjects were identified.

Table 4. Scores for the target group subjects

Target group	Scaled scores				
	Extraversion	Agreeableness	Conscientiousness	Emotional Stability	Autonomy
Subject 1	51	52	80	70	80
Subject 2	52	58	56	53	56
Subject 3	49	57	58	56	54
Subject 4	68	59	69	76	69
Subject 5	64	67	57	74	59
Subject 6	77	56	51	59	76
Subject 7	48	53	78	69	74
Subject 8	49	74	76	75	66
Subject 9	61	66	69	84	76
Subject 10	50	57	72	70	75
Subject 11	90	72	56	69	77
Subject 12	65	65	81	70	74

3. Purpose of study

The research was initiated with the purpose of identifying the personality traits of the athletes from the national athletics team, the knowledge and development of athlete personalities being considered factors which increase the efficiency of sport training and maximize performance, owing to the complexity of the specific effort.

4. Hypothesis

We believed that the use of the Five-Factor Personality Inventory (FFPI), through its structural complexity, could highlight the most relevant athlete personality traits, necessary knowledge in the elaboration of a strategy to optimize mental preparation with the purpose of improving the athletes' performances in the different athletics events.

5. Research objectives

To identify the personality traits of the subjects through the use of the Five Factor Personality Inventory.
To create psychological profiles of the athletes.

6. Research methods

The principle research instrument used was the Five-Factor Personality Inventory (FFPI), which I combined with statistical and mathematical methods in order to determine the scaled scores, using average values and standard deviations for every scale (superfactor).

7. Findings

The results of the research are centralized in table 5 and were individually analyzed, according to the interpretations of the scores (table 4). We will illustrate at random, presenting an analysis of the FFPI scores for S1 and S8.

Subject 1 registered a score of 51 points on the extraversion scale, which, according to the possible interpretations of the scores presented in table 4, signifies that this is an introverted, quiet individual, who isolates themselves from others. Introverts become more active in failure, reacting well to reprimand and in major competitions, a certain degree of introversion allows the athlete to maintain their self-control. For the agreeableness scale (Am), the score was 52 points, categorized as a low score, which signifies that the subject is interested only in themselves, wishing to draw attention to themselves and impose their points of view even if it bothers those around them. On the consciousness scale (C), a score of 80 points was registered, a high score which allows us to affirm that the subject is orderly, planning their actions, respecting norms and rules, striving to do everything right and being a trustworthy person. In terms of emotional stability, a score of 70 was obtained, a medium score, and the interpretation was that this athlete is an optimist, with confidence in their own strengths, who tries hard to control their emotions. On the scale measuring autonomy the subject had a score of 80 points, a score which emphasizes capacities of creativity and orientation depending on the environment and situation, aspects which characterize a person with a high level of autonomy, who doesn't let themselves be lead by others. In the triple jump event practiced by subject 1, characterized by intense, short bursts of anaerobic alactic effort, the nervous system is heavily solicited in order to obtain control over motor coordination. The demands of this event require the subject to demonstrate a good ability to concentrate their attention, self-control, tenacity, perseverance, ambition and emotional stability.

As for S8, this person registered a low score for superfactor 1, and so is an introverted individual, characterized by internalization, calmness, restricted social relationships, decisiveness and conscientiousness, a person who respects the opinions of others and makes an effort to relate to those they come into contact with.

By reporting the high scores obtained by this athlete for superfactors 2 and 3 to the possible interpretations of the scores offered by the authors of the test, we observe that the subject plans their activities following the norms and

rules applied, they are orderly, decisive in fulfilling the planned objectives and a trustworthy person. Regarding superfactor number 4, emotional stability, the subject obtained a high score, which allows us to affirm that they demonstrate confidence in their own strengths, they can control their emotions and have a positive attitude, unwilling to lose control in stressful situations presented by the activity participated in. On superfactor 5 the subject has a low score, a score which reflects, according to the interpretations offered, the fact that the athlete is amenable, easily accepting the opinions of the coach and orientating themselves in sport according to the coach's directions, letting themselves by easily maneuvered by the coach. The event practiced by subject 8, the 100m sprint, implies efforts of maximum intensity for short durations in which the nervous system is extremely solicited, sprint events being considered extremely tough and practiced by athletes with well defined personality traits. In the demands of this event, the subject must demonstrate temperamental balance, self-control during effort, a strong ability to concentrate their attention, resistance to physical fatigue, strong powers of mobilization, tenacity, perseverance, ambition and emotional stability.

8. Conclusions

The FFPI test can be used to determine the personality traits of high performance athletes and furthermore, the scaled scores of the five factors can offer objective arguments in the creation of their psychological profiles.

The research highlights the fact that the large majority of the subjects (83.33%) manifest a tendency of introversion and emotional stability, traits specific of a phlegmatic temperament, characterized by an increased effort capacity, tenacity, robustness and emotional balance, the type of temperament which is compatible with the specific effort in athletics events.

The personality traits of each athlete can be related to the requirements and specificity of the physical effort that is characteristic of the various events in athletics and they can be objective factors in developing the praxiological path of a strategy to optimize individualized mental preparation.

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