

CONATIVE CHARACTERISTICS' STRUCTURE OF PROMISING BOXERS

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(Original scientific paper)

Benin Murić, Izet Kahrović, and Rifat Mujanović

*State University of Novi Pazar, Study Program of Sport and Physical Education,
Novi Pazar, Serbia*

Abstract

All psychosomatic characteristics and abilities are very important for achieving sporting success in boxing. Therefore, it is an obligation of professionals, among other things, to seek out new methods that permit the identification of personality dimensions and their connections, which are responsible for achieving success in sport. We analyzed the structure of conative characteristics of boxers. The purpose of the research is to determine the structure of conative characteristics of promising boxers. The study is managed with the hypothesis: H1-In the space of conative characteristics we expected to obtain a general factor. The population from which the sample was taken for this study can be defined as a population of boxers from boxing clubs in Serbia aged 15-19 years. The sample consisted of 100 boxers, boxing club members from Serbia, which is the optimal number for the planned research. For the evaluation of conative characteristics we applied the following measuring instrument KON6 which will be evaluated following conative regulators: EPSILON, HI, ALFA, SIGMA, DELTA and ETA. Factor analysis of the instrument has determined two conative factors. First oblimin factor the highest parallel and orthogonal projections are the test vectors whose intentional object measurements were by regulation of organic functions, coordination of regulatory functions, integration of regulatory functions and regulation of defense reactions. Another factor is the dual oblimin factor the regulator of activity and response regulator of attacks.

Keywords: *boxing club, sports training, conative factors, factor analysis*

INTRODUCTION

Achieving top results in modern sports is increasingly subject of application the latest scientific knowledge in selection process and directing athletes, programming control of training, programming of recovery, and planning and programming of competitions. All psychosomatic characteristics and abilities are very important for achieving sporting success in boxing. Regarding that, boxing success directly depends on the complex morphological, motoric, functional, cognitive, conative and sociological skills and characteristics of the boxer.

It is known that top athletic performance today requires high volume and intensity of exercise. In order to optimize sports training there are a lot of researches that contributes to changing the process. This is understandable

considering the fact that achievements of a man are confined to his genetic potential (Muric, and Kahrović 2008). Therefore, it is an obligation of professionals to seek out, among other things, new methods that permit the identification of personality dimensions and their connections, which are responsible for achieving successful sport results.

For achieving high sport results in each kinesiological activities, even in boxing, of essential importance is scientific research knowledge application in the training process. How to success in sport depends on various factors which are very important to have as a reliable indicators of what size and how much influence on the achievement they have for maximum results. This paper will cover only a part of an

anthropological segment and conative dimensions.

Cognitive scope is part of a person which is responsible for the modalities of human behavior. The influence of conative factors is not equal on all the activities. Some of the activities are weakly sensitive on the influence of conative factors, and some of which the influence of these factors is crucial. This impact may be positive or negative, depending on the factor's and activities order. Therefore, there are no such activities that would be completely independent from the influence of conative factors which are determining the structure of conative regulation mechanisms in boxing, which is of great importance.

The links between personality and type of sport can be determined in several different ways. The first assumption is about the personality characteristic structure that motivates the individual in the choice of the sports discipline also is of great importance for success in the sport. Second, it can be assumed that if such specific structure of conative characteristics does not exist, but engagement in a particular sporting could bring structural modification of conative characteristics within that sport. A third possibility is that there is so called "sport personality" which drives the initial sports practicing, but participation and selection within various sport disciplines brings to personality characteristic modeling of a chosen particular sport discipline.

Scope of the research was to study the structure of conative characteristics of boxers. Purpose of the research was to determine the structure of conative characteristics of boxers.

METHODS

The population from which the sample was taken for this study can be defined as a population of boxers from boxing clubs in Serbia aged from 15 to 19 years.

Sample consisted of 100 boxers, as members of various boxing clubs in Serbia, which is the optimal number for the planned research.

For the evaluation of conative characteristics we selected the KON6 measuring instrument which will be evaluated following conative regulators:

Regulator of activity (EPSILON),
Regulator of biological functions (HI),
Regulator of defense reactions (ALFA),
Regulator of attack reaction (SIGMA),
System for the coordination of regulatory functions (DELTA) and
System of the integration of regulatory functions (ETA).

The collected data from the research were processed by factor analysis.

RESULTS AND DISCUSSION

Using mentioned methods for processing the obtained results provides arguments on affirmation or rejecting the hypotheses. Data presentation order of the results followed by a logical sequence, which contains the presentation of the results of treatment in the latent space (intercorrelation matrix of variables, matrix of principal components, matrix pattern and structure, intercorrelation matrix of factors and relations between blocks of variable's corresponding space).

In order to determine the basic space characteristics of conative variables, transformation and condensation of the data into an intercorrelation matrix has been made and thus obtained properties of the measuring instruments.

Intercorrelation matrix of conative variables structure, showed their high leveled intercorrelation.

Hottelling's principal component analysis reduced the intercorrelation matrix of the GK criterion for the value $\lambda = 1.00$, on two main components that explain 72.91% of the total variance of variables (Table 1).

The first characteristic root pulled out 53.0% of common variance of variables. Most variables have high positive projections ETA

Table 1. Main components of conative variables

Variables	Component		
	FAC1	FAC2	h^2
EPSILON	,085	,885	,790
HI	,863	-,172	,775
ALFA	,795	-,067	,636
SIGMA	,518	,589	,615
DELTA	,864	-,166	,775
ETA	,884	-,039	,783

Characteristics roots = 3.181 1.193

% = 53.025 19.889

Cumulative% = 53.025 72.914

.88, .86 DELTA, HI .86, .79 ALFA on the first principal component. Main component, undoubtedly, acts as a general conative factor.

There has been extracted two conative factors factor by applying a factor analysis method. The second principal component

explains 19.88% of the variance where the it's highest projection have regulator activity EPSILON .88 and regulator attack reaction SIGMA .58 variables.

Communalities of all the variables were of satisfactory degree. Although the other major components may not be of great importance as within the first principal component, by their inspection may reveal that they are generators of variability of its importance to the position responsible for the variability of the analyzed area.

The parsimonious initial coordinate system has been rotated in one of oblimin rotation toward obtaining the complete structure. On this occasion we used the direct oblimin criterion Jenricha and Sampson in which the same number of factors has been kept toward obtaining three matrices: matrix assembly (Table 2), the structure matrix (Table 3) as well as the intercorrelation factors matrix (Table 4). In order to obtain interpretable factor structure matrix within matrix structure form, they will be interpreted simultaneously.

Table 2. The complex matrix of variables conative

	Oblimin factors	
Variables	OBL1	OBL2
EPSILON	-,183	,902
HI	,889	-,063
ALFA	,791	,034
SIGMA	,326	,659
DELTA	,888	-,057
ETA	,869	,073

First oblimin factor the highest parallel and orthogonal projections have with the test vectors whose intentional object measurements were regulation of organic functions (HI), coordination of regulatory functions (DELTA), regulatory functions integration (ETA) as well as the defense reactions regulation (ALFA).

It has been reflected within the hypo or hyperfunction of inhibitory mechanisms in certain situations, followed by some physiological processes and enhanced egotonicity slowing down. This first order factor belongs to astenically (anxiety) syndrome which is characterized by a decrease in higher centers excitation toward its regulation and control. It is obvious that it causes adaptation reduction of sport activities because it inactivates the whole structures of the nervous system which is responsible for it. This control has a two-way connection with the regulation of defense

reactions which modulates the tonic arousal.

Another factor is the dual oblimin factor is activity and response attacks regulator. Regulator activity (epsilon) is one of the lowest and elementary regulation systems located in the hierarchy. Its function is regulation and modulation of reticular formation activating, and therefore is directly responsible for the activity and energy level at which other systems are functioning, including cognitive and motor processors. Extroverted and introverted patterns of behavior depends partly on the primary regulator of the functional level of activity and partly of (mostly slowing down) cortical processing functions. The regulator attack reaction (Sigma), located probably in the limbic system, which modulates the tonic excitement, partly on the basis of the transferred genetic code, partly formed usually under the conditioning influence during personality's ontogenetic development. Regulatory activity disorders can be produced directly or indirectly by the destructive abulic reactions also by some depressive or hypomanic reactions regarding its main function which is to maintain the certain

Table 3. Matrix structure variables conative

	Oblimin factors	
Variables	OBL1	OBL2
EPSILON	-,027	,871
HI	,878	,091
ALFA	,797	,171
SIGMA	,440	,716
DELTA	,878	,096
ETA	,882	,224

Table 4. Intercorrelations oblimin factors

Factors	OBL1	OBL2
OBL1	1,000	,173
OBL2	,173	1,000

level of excitation and to selectively activate or inhibit the excitation.

The intercorrelation matrix factor (Tables 3 and 4) indicates that the first latent dimension is no statistically significant in association with another, which means that isolated latent dimensions are factorial pure. The conative regulators cybernetic model, which is actually integrated into the model of cognitive functions, operates through, biologically and socially the most important and most complicated

system for regulation and control of regulatory functions that is related to all other systems. The conative regulation mechanisms efficiency depends partly on physiological factors which determines the extent and stability control, and partly of the program developed under the influence of exogenous factors, as well as social factors interaction with physiological basis of regulatory mechanisms. As the boxers, except a very pronounced desire to fight, there are more aimed at the destruction of a symbolic than an actual opponent, it is assumed that the aggressiveness of all remaining anthropological characteristics are most relevant for the success in boxing. For this reason, this pathological personality trait should particularly examine all available methods.

CONCLUSION

The study was aimed to determine the structure of connotative dimensions in athletes who are actively involved in boxing. The efficiency of conative regulation mechanisms depends partly on physiological factors which determines the extent and stability control, and partly depends on the program formed under the influence of exogenous factors, as well as on social factors and the regulatory mechanisms physiological basis interaction.

Two conative factors were examined by applying the factor analysis method. The first oblimin factor was consisted of highest parallel and orthogonal projections which were the test vectors whose intentional object measurements were regulation of organic functions, coordination of regulatory functions, regulatory functions integration and defense reactions integration. Another determined factor was the dual oblimin

factor as activity and response attacks regulator.

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СТРУКТУРА НА КОНАТИВНИТЕ КАРАКТЕРИСТИКИ КАЈ ПЕРСПЕКТИВНИТЕ БОКСЕРИ

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(Оригинален научен труд)

Бенин Муриќ, Изет Кахровиќ и Рифат Мујановиќ

*Државен универзитет во Нови Пазар,
Студиска програма Спорт и физичко воспитување, Нови Пазар, Србија*

Апстракт

За успехот во боксот, речиси сите психосоматски карактеристики и способности имаат посебно значење. Поради тоа, стручните и научните кадри, покрај другото имаат

особена обврска да наоѓаат нови методи кои овозможуваат да се утврдат димензиите на личноста и нивната меѓусебна поврзаност. Целта на истражувањето беше да се утврди структурата на конативните карактеристики на боксерите. При истражувањето се постави хипотезата дека во просторот на конативните карактеристики кај боксерите, се очекува да се добие еден генерален конативен фактор. Популацијата од која е земен примерокот на испитаниците за ова истражување е дефинирана како популација на боксери од клубовите на Србија на возраст од 15 до 19 години. Примерокот беше сочинет од 100 боксери кои беа членови на тие клубови. За проценување на конативните карактеристики беше применет мерниот инструмент КОН6 кој ги содржи следните регулатори: ЕПСИЛОН, ХИ, АЛФА, СИГМА, ДЕЛТА и ЕТА. Со примена на метадата на факторска анализа добиени се два конативни фактори. Најголеми проекции на првиот фактор покажаа тестовите за проценување на регулацијата на органските функции, координацијата на регулативните функции и регулацијата на реакциите на нападот. Вториот фактор дефиниран е како дуал фактор за регулирање на активитетот и одбранбените реакции.

Клучни зборови: боксерски клубови, српски тренинг, конативни фактори, факторска анализа

Correspondence:

Benin Murić

State University of Novi Pazar

Study Program of Sport and Physical Education,

Department of Bio-medical Sciences

Vuka Karadžića bb, 36300, Novi Pazar, Serbia

E- mail: beninmuric@live.com