

THE PSYCHOLOGICAL FEATURES OF TEAM HANDBALL REFEREES

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Abstract:

The necessity of incorporating psychological knowledge into the science of sport has a strong grounding in the fact that, through participation in sports, one strives to actualize, develop, and enrich one's physical and biological potentials, to enrich the natural determinatives of one's behavior employing one's psychological features. Information that is needed for performing technical elements, about the environment in which they are performed, expectations and their consequences, the way in which success or failure are accepted, etc., all this is determined by the processes belonging to the cognitive personal aspects. The role of cognitive capabilities is reflected in the fact that there's no such sport that doesn't require the capability of perceiving time and space, rapid differentiation, deduction and decision making. Referees make one distinct group of athletes. They are a building block of team competitions, and as such they draw the attention of both athletic and public in general. This is a transversal research empiric in character, encompassing 85 respondents divided in four sub-samples by the criterion of each referee's achieved ranking for the season 2003/2004. The subject of this research is the psychological features of team handball referees, on one hand, and their achieved rating in the list of referees for the given competition rank, on the other. The goal of the research is to analyze the psychological features of team handball referees and to determine their relation to the achieved rating in refereeing. By doing this research, we have analyzed the psychological features of a very distinct athletic group represented by handball referees, and we have determined effects that some psychological features have on the achieved rating in refereeing.

Key words: *cognitive capabilities, spatial perceptions, timeperceptions, tests, Analysis of variance*

INTRODUCTION

In sports in general, therefore also in team handball, the entire spectrum of functional and motor capabilities is important. In addition, the nature of sport's activity requires the processing of a large number of diverse information, the ability to perceive space and time, and quick differentiation, deduction and coming to decisions. Team handball belongs to the group of sport games with

movements of both circular and non-circular nature. During a game, in a court of 40 by 20 meters, two teams compete, each consisting of six players and a goalkeeper, and the game is led by two peer referees assisted by a timekeeper and a scorekeeper.

Referees are the special group of participants in athletic activities that bring important decisions during competitions. They are an integral part of

team competitions and as such they draw attention of both the athletic and the largest general public. Athletic refereeing has many facets, among them in particular: legal, social, ethical, psychological and economic. Referees play active role in sports and are exposed to and influenced by the diverse and complex *psychological* states of all participants in a competition. Their task is to subdue these influences and preserve harmonious rapport during the game. In case of serious errors or failures in judgment, the most difficult psychological and social issues arise. They bring about an abrupt decline of the referee's authority and open the possibility for expressing dissatisfaction in various ways. This, further, contributes to a negative atmosphere that is created in a sporting event.

Up until now, the area of sport psychology, in the world and locally, has seen a few works devoted to studies of team handball referees' psychological features. In this explorative study our intention was to make an initial step in determining the psychological characteristics of team handball referees who achieved various refereeing ratings in our environment.

One of the most important and, at the same time, most difficult research endeavors in psychology is studying the personality structure, dynamics and functioning. As the most complex and comprehensive psychological concept, personality represents an applicable, useful and the most relevant way to describe, explain and explore behavior in many different activities, thus also the sporting ones.

In the scope of general theoretical systems, most of the theoreticians (Catell, 1966; Guilford, 1959; Eysenck, 1973) place emphasis on personality as a whole, while weighing differently each particular personality feature. Personality and sporting activities are interlinked in an ongoing process of two-way conditioning. In particular, this means that certain personality characteristics (such as traits, motives, needs, desires, etc.) are important factors in choosing a sport and being successful in it, and, on the other hand, the sport responds by influencing the formation of some particular personality features.

The objective of this research is to determine the connection between psychological features and the achieved rating of referees.

The goal of this research is to analyze the psy-

chological features of team handball referees and to determine how they relate to their achieved ratings in refereeing.

- To reach the goal of this research, the following prerequisites were necessary:

- To assess the psychological features of international referees;

- To assess the psychological features of referees in the first level of competition;

- To assess the psychological features of referees in the second level of competition;

- To assess the psychological features of referees in other competition levels;

- To quantify the relation between international referees and their psychological features;

- To quantify the relation between the first level of competition referees and their psychological features;

- To quantify the relation between the second level of competition referees and their psychological features;

- To quantify the relation between referees from other competition levels and their psychological features;

- To assess the respondents' levels of intellectual structure;

- To quantify relations in intellectual capabilities of varied levels in the sub-sample of respondents;

- To assess the structure and the dynamics of respondents' personalities; and

- To quantify relations in personality structure and dynamics of varied levels in the sub-sample of respondents.

METHODS

This research is non-experimental. Based on the achieved ranking of each referee (using data available in the official list of the Affiliation of Referees of Serbia and Montenegro), respondent groups were formed, which in this research have the status of independent variables. Dependent variables are represented by personality features from the areas of cognitive capabilities, personality traits and psychological states. The means for collecting data about the referees' personality features were psychology tests performed during the spring season of the competition year 2003/2004.

The research included 85 respondents divided

Table 1 – The comparative analysis results for psychological features of the observed sample

Variable	M (intl.)	M (league I)	M (league II)	M (other)	F-test	P
F-1	19.2	22.5	21	21.5	0.6	0.6222
F-2	13.5	17.9	15.3	16.6	1.6	0.198
ALFA-7	26.4	28.3	27.6	27.2	0.2	0.8906
EPQ-P	4.6	4.5	4.8	4.8	0.1	0.9433
EPQ-E	15.4	14.9	15.7	16.3	0.5	0.7011
EPQ-N	8.3	9.8	8.4	10.1	0.9	0.4341
EPQ-L	11.2	9.8	10.9	10.2	0.3	0.8379
STAI	34.2	33.9	34.4	36.2	0.5	0.6505
SCAT-C	45.5	48.8	43.8	50.1	2.6	0.0583

into four sub-samples by the criterion of refereeing rank each individual had obtained by the season 2003-2004, as follows:

- 12 international referees,
- 13 referees of the first level of competition,
- 20 referees of the second level of competition,
- and 40 referees of other competition levels.

All of 85 respondents were of different social background and refereeing is not their only source of income – it was either their supplement job or a hobby.

All variables were divided into the following two groups: The group of respondents by rating, i.e. referees' ratings as specified in the list compiled by the official committee of the Affiliation of Referees of Serbia and Montenegro based on the grades for refereed games in their given level of competition; The following predictor variables comprised the second group: perceptive capability, symbolic and logical reasoning, Eysenck's Personality Dimensions, general anxiety trait, and competitive anxiety state.

For assessing the variables from the domain of personality, the following psychology tests were used: **F-1** (Bukvić) and **F-2** (Bukvić and Štajnberger) – for assessing the respondents' perceptive capability; **Alfa-7** (Wells) – for assessing the symbolic and logic reasoning on verbal content; **EPQ** (Eysenck) – the assessment of personality structure and dynamics; **STAI** (Spilberger) – the assessment of general anxiety trait; **SCAT** (Martens) – the

assessment of pre-competition anxiety.

To determine the significance of differences in arithmetic means of the results obtained for referees of different ranking, the analysis of variance (F-statistics) was used in the applications Statistica and Excel.

The tests for determining the significance of differences in psychological features of differently ranked referees' categories have shown that there are no statistically significant differences in the observed personality features ($p > 0.05$).

The variance analysis of the variable *anxiety state* (SCAT-C) is close to the value of statistical significance ($F=2.6$, $p=0.058$). Considering a relatively small number of respondents in the sample, and also an uneven distribution of respondents in sub-samples, it may be assumed that the difference would have been statistically significant had a larger sample of respondents been used.

RESULTS AND DISCUSSION

The cognitive capabilities testing did not provide statistically significant differences between the different categories of tested referees. However, the overview of results (Table 1) shows that the average values obtained from the tests are above the theoretical average and above the average for general population, in all of the sub-samples. When explaining these results, the discussion must certainly take into consideration the fact that team handball is a fast and dynamic game, which thus

poses high requirements on referees in the regard of speed, anticipation and making decisions fast, irrespective of competition levels. Individuals lacking these features in a "sufficiently" developed level can not expect to succeed in this profession.

Personality structure and dynamics were assessed using the Eysenck Personality Questionnaire (EPQ). This instrument is based on the study of physiological functioning of the autonomous and the central nervous systems. The test has four scales: Psychoticism (P), Extraversion (E), Neuroticism (N) and the Lie (L) scales. As can be seen from the Table 1, the Eysenck Personality Inventory showed no statistically significant differences between differently ranked referees in the used scales. In the scale of Extroversion /Introversion, the data show that all of the respondents have high scores in the scale E, or, in other words, that they belong to extrovert personality type. This personality type is outgoing, cooperative, venturesome, and daring, with a tendency towards the reactions of controlled aggressiveness. All these personality traits are desirable in sport referees. We can assume that introvert personality types seldom choose refereeing, and take, thereof, this as being one of the reasons why there were no differences in the level of extroversion in referees performing in different competition ranks. In the scale of Neuroticism, the scores in all of the subsamples of respondents were significantly lower than for the general population, and also than the results obtained from the sample of handball players. Their behavior is described as balanced and emotionally stable. The factor of emotional stability/instability is considered by the majority of psychologists to be of the utmost importance for any sporting activity. The analysis of prerequisites for the refereeing profession shows that previously mentioned personality features are an indispensable precondition for the refereeing profession. In the scale of Lie (L-scale), the respondents in this study have achieved results that match their respective self-estimates realistically, i.e. the respondents were not prone to embellish their self-image or to give socially desirable answers.

The inventory for the assessment of the anxiety trait, STAI, showed no statistically significant differences between the categories of differently ranked referees. Anxiety in particular is the psy-

chological trait, or personality feature, defined as the state of anguish, uneasiness, worry, tension or unidentified fear. This state is characterized by a specific subjective experience, by behavioral changes and by psychosomatic (physiological) changes, such as ample perspiration, cold and wet palms, heart palpitation, frequent urinating urge, headaches, nausea, or empty look. Measurements of anxiety in the observed sample show that the tested team handball referees had no tendency towards anxiety, i.e. respondents had no explicit proneness to estimate as threatening the situations that were not objectively dangerous, or to react to these situations with an anxiety that was out of proportion. All of the tested referees showed "an optimal level of anxiety" which supports adaptive needs in the sense of mobilizing for activity, and as such represents a desirable psychological feature.

The test of competitive anxiety, SCAT, has a greater predictive potential for pre-competition anxiety mood than all of the other tests so far used in sports. And although the statistically significant difference was not obtained, the result is still close to significance ($F=2.6$; $p=0.058$). It may be assumed that the difference would have been statistically significant had the study been conducted on a larger sample. The referees of the Second Federal League had the lowest level of competitive anxiety, $M=43.8$. The value of competitive anxiety for international referees was $M=45.5$, for the referees of the First Federal League $M=48.8$, while the competitive anxiety of other referees was $M=50.1$. The lowest value of competitive anxiety ($MIN=32$) was for the referees of the Second Federal League, and the highest value ($MAX=77$) for the referees of the First Federal League.

When compared with the results for young athletes ($M=52.35$) obtained in a research conducted by the Republic Institute for Sports (1995), team handball referees have lower level of competitive anxiety, as may be expected based on the nature of their profession. In all probability, athletes show high level of competitive anxiety because they perform in the context of achievement and with often uncertain outcome. On the other hand, lower anxiety in referees may be caused by the fact that they do not perform in the context of "competing against another team," and they do not carry the result load of which team would win the game — they perform

following the prescribed rules of the game.

In the final conclusion we shall point at the crucial findings of this study about the characteristics of cognitive capabilities and personality of team handball referees.

The assessment of cognitive capabilities did not show statistically significant differences between the different categories of tested referees. Average values of tests applied on all sub-samples are above the theoretical average and above the average for general population. The findings are in agreement with the characteristics of handball game, which is fast and dynamic, and during which referees must make decisions fast. Also, the game's characteristics could be the reason why the results show that the developmental level of cognitive capabilities does not vary by different referees' rank.

Eysenck's personality dimensions showed no significant differences for the referees of different ranking. Based on the obtained results, it may be concluded that referees belong to extrovert personality type, i.e. that they are cooperative, venturesome, daring and tend to have the reactions of controlled aggression.

In the dimension of Neuroticism, the tested referees achieved scores distributed around the lower scale values, which means that they are of a balanced and emotionally stable behavior. Also, the difference between referees performing in variously ranked competitions is not statistically significant.

CONCLUSION

Based on the average value for the sample, it may be concluded that team handball referees are of "an optimal anxiety level", which serves the adaptive needs in the sense that it mobilizes for activity, thus representing the desirable psychological feature.

Consistent to the previously mentioned finding, the tested handball referees show a lower level of competitive anxiety. Their average is below the average level of anxiety in athletes. The results of this kind may come from the fact that referees perform in an outcome-free context, refereeing based on the prescribed rules of the game.

When observing the results of the study critically, their downsides, for the most part, have to do with the sample size, i.e. the small number of

respondents classified in sub-samples. Another methodology disadvantage, which also has to do with sample's characteristics, is in unevenly distributed respondents by sub-samples.

Finally, we believe that in future studies of the psychological features of team handball referees it may be useful if qualitative methodology is also introduced, and the objective of such research could be the comparison of psychological features of referees performing in various sports, both the team and the individual ones.

LITERATURE

- Allport, G. W. (1977). *Personality: A Psychological Interpretation*. London: Third reprint, Redwood Press LTD.
- Baćanac, LJ., Žigić, Ž. & Lazarević, LJ. (1989). Primena EPQ na sportskoj populaciji. [Application EPQ on sport population. In Serbian]. *Psihologija*, (3-4).
- Baćanac, LJ. (2001). *Karakteristike intelektualnih sposobnosti sportista sportskih igara* [Characteristics of the intellectual abilities. In Serbian]. Magistarski rad, Beograd: Fakultet za fizičku kulturu.
- Catell, R. B. (1966). *The scientific Analysis of Personality*. Chicago: Aldene.
- Eysenck, H. J. (1973). *The inheritance of Extra-version-Introversion*. London: Crosby Lockwood Staples.
- Guilford, J. P. (1959). *Personality*. New York. McGraw-Hill Book Company.
- Havelka, N. & Lazarević, LJ. (1981). *Sport i ličnost* [Sport and personality. In Serbian]. Beograd: Sportska knjiga.
- Lazarević, LJ. (2003). *Psihološka priprema sportista* [Psychological preparation of athletes. In Serbian]. Beograd: Viša škola za sportske trenere.
- Perić, D. (1994). *Operacionalizacija istraživanja u fizičkoj kulturi* [Operationalization of research in physical culture. In Serbian]. Beograd: Autorsko izdanje.
- Perić, D. (2000). *Projektovanje i elaboriranje istraživanja u fizičkoj kulturi* [Design and elaboration of the physical culture. In Serbian]. Beograd: Autorsko izdanje.

ПСИХОЛОШКИТЕ КАРАКТЕРИСТИКИ НА РАКОМЕТНИТЕ СУДИИ

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(Оригинален научен труд)

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Апстракт:

Поитребата за вклучување на психолошките сознанија во науките за спорти, има снажна поткрепа во тоа што човекоите, учествувајќи во спортските активности настојува да ги актуелизира, развие и збогати своите физички и биолошки потенцијали, а природните детерминанти на своето однесување да ги подобри со своите психолошки карактеристики. Информациите за изведувањето на техничките елементи и за средината во кои се изведуваат тие елементи, за очекувањата и последиците од тие очекувања, како и начинот за прифаќање на успехот или неуспехот на поединецот и слично, се детерминирани со процесите на когнитивната (сознајната) сфера на личноста. Улогата на когнитивните способности се огледа во фактот дека нема спорт во кој не се присутни просторните и временските перцепции, брзоо диференцирање, заклучување и донесувањето одлуки. Судииите во спорти дефинираат посебна група на спортисти. Тие се составен дел на најпреварувачките спортски екипи, поради што привлекуваат вниманието на спортската и пошироката општествена јавност. Со ова трансферално испражување кое има експериментален карактер, беа опфатени 85 испитаници, поделени во четири примероци според критериумот за постигнатото ранг при судењето во сезоната 2003/2004 година. Предметот на испражувањето го претставуваат психолошките карактеристики на ракометните судии и нивниот освоен рејтинг, дефиниран на листата на судииите за одреден ранг на најпревари. Целта на испражувањето беше анализата на психолошките карактеристики на ракометните судии и утврдувањето на нивната поврзаност, односно на влијанието на нивните психолошки карактеристики врз освоеното рејтинг во судењето.

Клучни зборови: *когнитивни способности, просторни перцепции, временски перцепции, тестови, Анализа на варијанса*