

## COMPARISON OF ELITE HANDBALL PLAYERS RELATED TO ATTACKING POSITIONS ON THE EVIDENCE OF PSYCHOLOGICAL INVESTIGATION

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*Personality of players shows differences that determines their actions, motivations and attitudes on the court. The personality of the players has to be taken into consideration when choosing their posts, best matching their abilities. This paper studies the mental abilities of men and women handball players in relation to the different attacking positions. The Eysenck Personality Questionnaire (EPQ) was used. 8-8 female and male professional handball team were examined. The results were processed with the Kruskal-Wallis Anova statistical method based on the EPQ. The results show that the backcourt players have the lowest average in the psychoticism scale, but there are not significant differences between the males' and females' aggressive level. There are significant differences between the neuroticism level of men and women. The pivots seem to be the most stable from the point of view of emotion. No significant differences were found between the posts. Each handball players has a higher than average value on the extroversion scale, so they are sociable people.*

**Keywords:** psychoticism, neuroticism, extroversion, elite Hungarian handball players

In elite sport, as in case of handball, positive outcome of performance is many-sided. As handball is a psychomotor activity, the match performance of players shows not only the technical-tactical and physical preparedness, but it demands a high level of psychic activity, as well. Personality of players shows differences that determines their actions, motivations and attitudes on the court. The personality of the players has to be taken into consideration when choosing their posts, best matching their abilities. Huge attention has been devoted to the next personality characteristics:

- aggressiveness as psychoticism (who has this character is aggressive, hostile, solitary, odd man out)
- sociability as the extroversion level of the player (an extrovert person likes society, searches for contacts, speaks much and is very dynamic)
- level of emotion as neuroticism (stable people are calm, well-balanced and optimistic).

This paper studies the mental abilities of men and women handball players in relation to the different attacking positions. The answers for the following questions were searched for: Has the level of aggressiveness an effect on ranking the players for certain positions? Does the emotional background influence the suitability for that position? Is there any correlation between the position of the players and his/her type of personality?

## Hypotheses

On the evidence of these the followings were supposed:

1. The aggressive level of women is lower, than that of the men.
2. The wingers are the least aggressive.
3. The men are more stabile from emotional point of view than women.
4. The men goalkeepers have the lowest value in the neuroticism scale (on the emotional scale.)
5. The handball players are extroverts.

## Subjects and methods

The Eysenck Personality Questionnaire (EPQ) was used. This contains 90 questions with which the aggressiveness, the activation and the emotional stability of the players can be tested. On the first page of the questionnaire general question (name, age, post...) were listed. Based on the answers the players were categorized. Members of 8 female and 8 male professional handball teams were examined (n=134). The results were processed with the Kruskal-Wallis Anova statistical method based on the EPQ. The results are demonstrated by diagrams. The players could choose from yes or no answers. Points were given for the answers, so everybody got a value for P- (psychoticism), E- (extroversion), N- (neuroticism) and L-scale (level of lie). The persons were classified by post, sex and age.

## Results

Figure 1 shows the psychoticism level of handball players. The higher the value on the P-scale is, the more aggressive the behaviour of the person is. On the P-scale the Hungarian female goalkeepers have the lowest value with an 1,5 average, while the male playmakers and pivots have the highest one with a 3 point average. At females the next on the rank was reached by the backcourt players and pivots with a 1,6 value, followed by the wingers (1,7) and the playmakers (2,5). At male the goalkeepers are the least aggressive because they have a 2,3 value, followed by the backcourt players (2,5) and the wingers (2,6). While the female and male values were examined together in the attacking positions, the next order of rank was observed: the goalkeepers and backcourt players have the lowest value on the aggressive level with 2, the wingers have 2,2, pivots have 2,4 and playmakers have 2,6 average. There are not significant differences between the males' and females' assertive level. On the right side of Figure 1 Matolcsi's Hungarian data from 1984 can be seen.

Figure 1. The psychoticism level (P-scale)

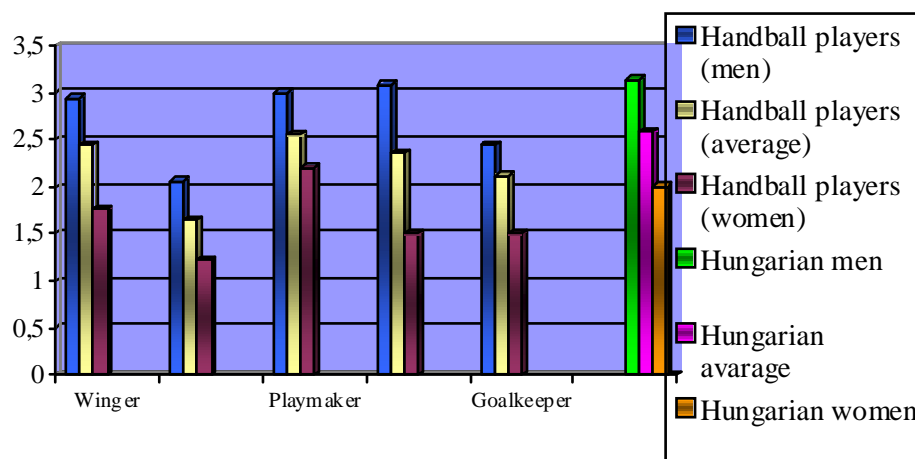
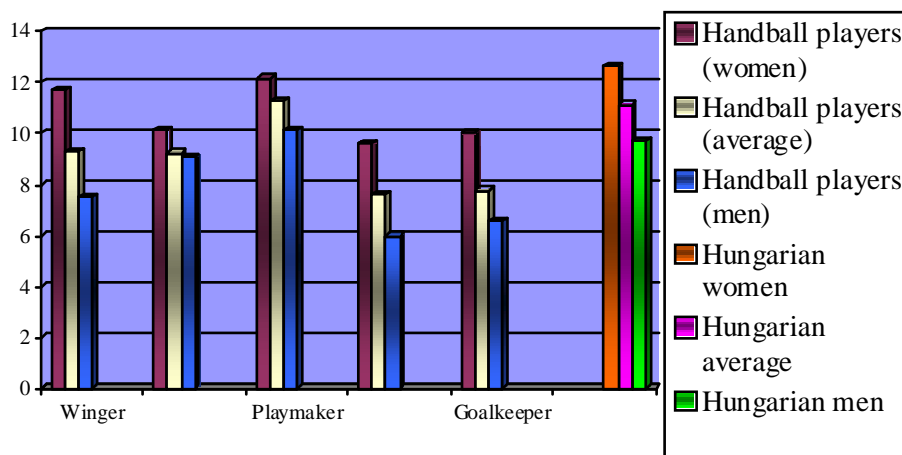


Figure 2 shows the N-scale (neuroticism). Here the higher value on the scale means a more unstable behavior. In emotion the pivots seem to be the most stable players with their 8,6 average, followed by the goalkeepers with their 8,7 and the wingers with their 9,1, and the backcourt players with their 10 point average, so the playmakers seem to have the lowest stability with a 10,9 average. At females the pivots have the lowest value in the N-scale with 9.6 (they are the most stable in emotion), the next are the goalkeepers (10), backcourt players (10,2) and playmakers (12,2). At the males the playmakers have the highest value with a 10,3 average, but the pivots have the lowest value with 6,7. The goalkeepers are on the second place (7,1), wingers are on the third (7,4), and the playmaker on fourth place (9,8). The female players' value is 10,94 and the male players' value is 6,08 on the neuroticism scale. There are significant differences between the neuroticism level of men and women, but no significant differences were found between the posts.

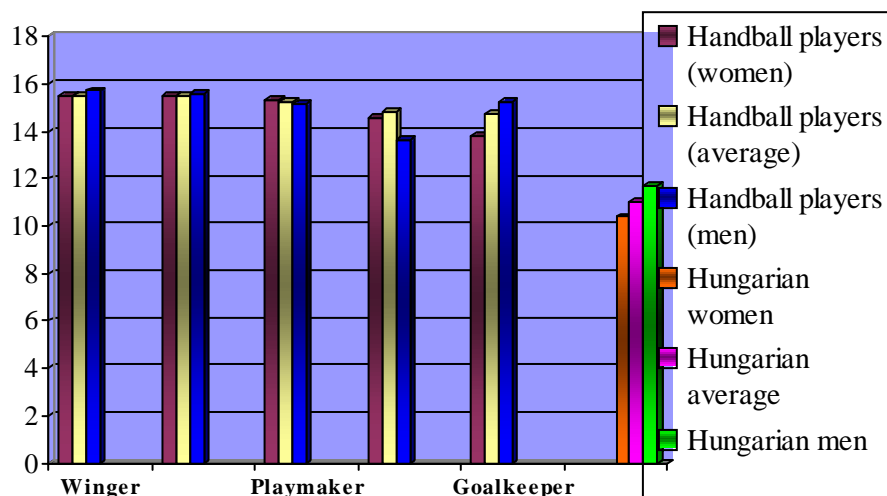
Figure 2. The neuroticism level (N-scale)



In the last part of the research extraversion and introversion level and E-scale (Figure 3) were examined. The higher value on the scale means a more extrovert person in the behavior. The results prove that the wingers are the most extrovert persons, because they have a 15,4 average. The other posts follow them: playmakers (15,4), backcourt players (15,2), goalkeepers (14,7) and pivots (14,3). All of the handball players' results (15) are higher than that of the Hungarians' one (11). (Matolcsi, 1984) The male and female players (15,1 and 14,9) have higher value too than the Hungarian males' and

females' (10,4 and 11,7), so it can be said that the handball players are sociable people. There are significant differences between the extroversion level of handball players and Hungarian.

Figure 3. *The extroversion level (E-scale)*



## Conclusion

The psychoticism level of handball players fall behind that of the Hungarian's one. The reason for this is that today the spirit of fair play is still valid in sport, and in elite sport these restrictions are very strong, and if you break them you will have an aftermath. This demands a controlled behaviour from the player, but it is not characteristic for the Hungarian society.

The significant difference observed between the sexes, that describes their emotional stability are much rather of genetic than of sports-specific origin. The more stabile emotions of men are not changing but the women's character is more sociable and variable.

The pivots seem to be the most stabile from the point of view of emotion. Deriving from their positions they are in permanent contact with the opposite players during the match. This stability level describes the other positions, as well. With this it can be explained that no significant differences can be found between the posts.

Extroversion is an important feature of ball games, because people with these characteristics can really play in a team. Extrovert people are sociable and need collective activities; they need excitement and take the risk. These are the basic features of modern handball players. (The more stabile emotions of men are not surprising, as it has been already proven among civilians as well. The expectations that male handball players have an open personality were also met.)

## Summary

Handball rules allow the physical contact. Handball players should have a certain level of aggressiveness if they want to succeed on the court. It depends on the way of thinking of the referee what they declare unsportsmanlike, rough or simply illegal.

It can be explained by the fact that if the players want to increase the performance of the team, they should form situations from the elementary to the highest tactical solutions together, in unison. This demands a player with such a personality, who stresses sociable connections (they are extroverts) during the game. Furthermore it is also a very important thing for them to maintain emotional stability in difficult situations during the match, even if an atrocity is executed against him/her, which might be harmful for his/her health. They have to keep their actions under control independently of their temperament.

The personality is a very important factor in the handball game, because everybody has an individuality and they have different good and bad points. The coach should choose the best post for the player although the players' personality can change like their anthropometrical data. The coach can observe the changes in time, so if they need help, they should get it in their new positions.

In personality factors I could not show significant differences between the posts in all scale. These result call the attention to "on more position playing", so the players need to play in more position (not only in one). During the match the team uses more position changing game and the players move out from their own positions, so they have to solve the problem in the new position. It is very important for the children to play in more positions, because they need to know what are the requirements in different positions and what can be asked from their team mates playing in difference positions.