

# Personality profile of athletes who declare that they train kyokushin karate as a martial art

## Authors' Contribution:

- ✍ A Study Design
- 📁 B Data Collection
- 📊 C Statistical Analysis
- 📄 D Manuscript Preparation
- 🏠 E Funds Collection

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## Abstract

### Background & Study Aim:

Martial arts shape the character of practitioners, while combat sports rely on the direct clash of two competing athletes. The aim of the study was the knowledge about the personality profile of people training kyokushin karate as a martial art.

### Material & Method:

Twenty nine athletes (14 men and 15 women) between 18 and 54 years old, holders of degrees from 9 kyu to 4 dan were examined. All respondents declared that they train kyokushin karate as a martial art. The Personality Inventory NEO-FFI was used to measure personality.

### Results:

Women are characterized by a significantly higher level of neuroticism and agreeableness than men. Personality profiles of men and women practicing kyokushin karate are distinguished by low neuroticism, high extraversion and conscientiousness, and average openness to experience and agreeableness.

### Conclusions:

The personality profile of people training kyokushin karate as a martial art is a typical personality profile of combat sports athletes. Despite the adopted philosophy of kyokushin karate martial arts training, the personality of adepts is typical for athletes – it is shaped by sport activity. Differences among kyokushin karatekas occurred between personality profiles of men and women; but they still keep the same profile sketch typical for athletes (combat sports). The differences in personality traits of kyokushin karate practitioners are determined by gender.

### Keywords:

Big Five • combat sports theory • gender • sport psychology

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Authors have declared that no competing interest exists

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**Tactics** – plural noun the art of finding and implementing means to achieve immediate or short-term aims [73].

**Technique**– noun a way of performing an action [73].

**Knockout** – noun 1. (in boxing) a punch that knocks an opponent down for a count of ten and so wins a contest 2. a sports competition in which a person or team beaten in one game or match is eliminated from the entire competition [73].

**Sports psychology** – noun the scientific study of the mental state of sportspeople, looking at issues such as motivation, concentration, stress and self-confidence [73].

## INTRODUCTION

Martial arts are defined in those areas of psychophysical activity of people whose declared essence consists in the physical and mental improvement of personality through the use of mainly practice forms of physical confrontation between individuals or an individual and a small group of people, without or using specific tools. In contrast, combat sports are usually defined as a group of those disciplines whose essence of competition consists in the direct clash of two competing athletes. The main criterion that distinguishes martial arts from combat sports is the competition consisting in the direct clash of two competing athletes. Therefore, any combat sports is also a martial art to a greater or lesser extent, not the other way around [1].

The aim and effect of sports training and sports competition is sports championship. While sports karate gives us champions, the aim of karate art is mastering, which has nothing to do with seasonal competition. The art of karate shapes strength and power of character to a greater extent than sports karate. Working on your own character is the final aim. Often in sports karate, this mission ends when your career ends. You are once a champion once you are not, but master you are all the time [2].

The sports competition in kyokushin karate takes place in the knockdown formula [3]. The system requires full motor [4], technical [5], tactical [6] and mental preparation [7]. But the practice of karate kyokushin as a martial art is based on the self-improvement of practitioners through formal exercises and life discipline determined by philosophy and ethics [8].

If karate kyokushin is trained as a martial art (method of self-improvement of character), then practitioners should be distinguished by an exemplary personality profile – low neuroticism, high extraversion, openness to experience, agreeableness and conscientiousness [9] – first hypothesis. However, if kyokushin karate is trained as a combat sport (primarily sports activity), then practitioners should be characterized by the personality of athletes – low neuroticism, high extraversion and conscientiousness, and average openness to experience and agreeableness [10] – second hypothesis. Kyokushin karate students declared that the essence of their training is martial art. So their personality should be consistent

with the first hypothesis. But if their personality is shaped by sports activity, despite the declared philosophy of martial arts training, then the second hypothesis will be confirmed.

The aim of the study was the knowledge about the personality profile of people training kyokushin karate as a martial art.

## MATERIAL AND METHODS

### Research subject

The research was conducted in December 2019 at SKS “Husaria Karate” in Szczecin, representing the IKO “So-Kyokushin” organization in Poland. 29 people aged 18 to 54, holders of degrees from 9 kyu to 4 dan, were examined.

The subjects were divided into 2 groups according to gender. The first group consisted of 14 men and the second 15 women. The subjects had various training and sporting experiences. Among them were people with significant sports achievements, representatives of the country at the 2018 So-Kyokushin World Championship. All respondents declared that they train kyokushin karate as a martial art. The experience of practitioners is 3 or more years.

All subjects agreed to participate in a cognitive experiment. The project was approved by the Senate Committee on Ethics of Scientific Research at the University of Physical Education in Wrocław, issue 20/2019.

### Research Method

The research used the NEO -FFI Personality Inventory to measure personality in five-factor terms, known as the “Big Five”. The questionnaire consists of 60 self-descriptive statements, in which, after reading the statements, they choose one of five values on a five-point scale: 1 – “I strongly disagree”; 2 - “I do not agree”; 3 - “I have no opinion”; 4 - “I agree”; 5 - “I definitely agree”. The method determines the personality of the respondents in five dimensions:

- Neuroticism (anxiety, angry hostility, depression, impulsiveness, vulnerability, self-consciousness);
- Extroversion (gregariousness, warmth, assertiveness, activity, excitement-seeking, positive emotions);

- Openness to experience (fantasy, aesthetics, feelings, actions, ideas, values);
- Agreeableness (trust, straightforwardness, altruism, compliance, modesty, tendermindedness);
- Conscientiousness (competence, order, dutifulness, achievement striving, self-discipline, deliberation) [11].

The NEO-FFI Personality Inventory is internally compliant. Accuracy was demonstrated on the basis of research on the relationship between the results of the questionnaire and the evaluations of the subjects made by observers, the heritability of the measured features and their correlation with other personality and temperament dimensions. Factor relevance was also verified. The results allow a full description of the respondents' personalities in a five-factor Big Five perspective and forecast their adaptation possibilities to the professional environment [11].

### Statistical analysis

Using the statistical environment R 3.6.1, preliminary data mining, descriptive statistics, appropriate hypothesis tests and graphs presenting data were performed. Due to the fact that the dependent variables in the tests performed were the results on the quantitative personality scale, it was possible to assume the normality of the distribution of variables at the population level. In line with this assumption we decided to test hypotheses using the Student's parametric t-test. No corrections were made for the values of degrees of freedom in t-tests. The level of significance in this chapter was assumed to be classic  $p \leq 0.05$ .

The estimation of the results is based on the following indicators: mean (M); minimum; maximum; standard deviation ( $\pm$ ); skewness (Skew); degrees

of freedom (*df*); significance level (*p*), probability (P); Student's *t*-distribution (*t*); Cohen's *d* (*d*) is frequently used in estimating sample sizes for statistical testing (a lower Cohen's *d* indicates the necessity of larger sample sizes, and vice versa).

## RESULTS

The distributions of variables were relatively symmetrical, as indicated by the relatively small values of skewness recorded at both the aggregate level in (Table 1). In all cases, the results of the F test indicated that the variances in the compared groups were homogeneous (Table 2).

The women are characterized by a significantly higher level of neuroticism and agreeableness than men. On the other hand, testing the level of extraversion, openness to experience and conscientiousness showed no statistically significant difference in the average intensity of these traits. At the same time, personality profiles of men and women practicing kyokushin karate are distinguished by low neuroticism, high extraversion and conscientiousness, and average openness to experience and agreeableness (Figure 1).

## DISCUSSION

The profile of kyokushin karate practitioners, both men and women, is low neuroticism, high extraversion and conscientiousness, and average openness to experience and agreeableness. This profile does not stand out from the profiles of other athletes from various sports [12-17]. The obtained test results confirm that despite the declared kyokushin karate training aims as a martial art, the personality of the trainees is analogous to the personality of combat sports fighters [10].

**Table 1.** Descriptive statistics of variables included in the study.

NEO-FFI Personality Inventory variable	M	min.	max.	SD	Skew
Neuroticism	18.47	3	35	8.25	0.44
Extraversion	32.74	19	45	6.92	-0.06
Openness to experience	29.62	17	45	6.18	0.44
Agreeableness	29.44	15	41	6.85	-0.52
Conscientiousness	34.38	24	46	6.55	-0.02

**Table 2.** Results of personality tests by gender (m men; w women).

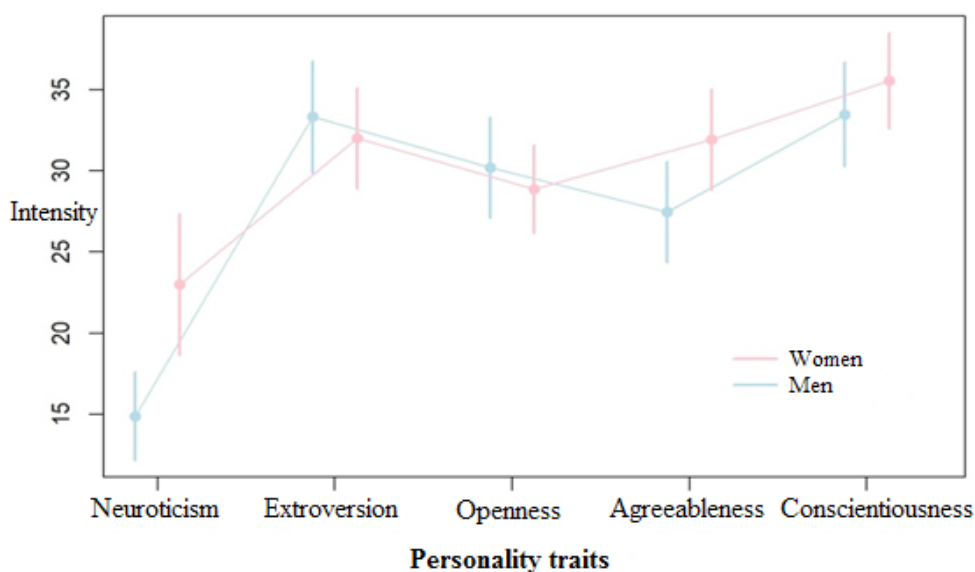
NEO-FFI Personality Inventory variable	Gender	M	SD	Skew	df	p	p	t	d	LI	UI	F
Neuroticism	m	14.89	6.05	3	32	<b>0.003</b>	0.162	-3.22	-1.11	13.51	-2.7	0.5
	w	23	8.6	6								
Extroversion	m	33.32	7.61	19	32	0.59	0.408	0.54	0.19	-3.48	6.11	1.55
	w	32	6.11	21								
Openness to experience	m	30.21	6.87	17	32	0.537	0.335	0.62	0.22	-2.91	5.6	1.67
	w	28.87	5.32	21								
Agreeableness	m	27.47	6.9	15	32	0.058	0.653	-1.97	-0.68	-9.01	0.1	1.27
	w	31.93	6.11	19								
Conscientiousness	m	33.47	7.11	24	32	0.371	0.448	-0.91	-0.31	-6.57	2.45	1.5
	w	35.53	5.8	26								

The obtained results showed that women are characterized by a higher level of neuroticism and agreeableness in relation to the examined men. This is due to personality differences between the sexes. Women are genetically less emotionally stable and more agreeable in relation to men [18].

Because there is no knowledge about the personality of the karatekas from the earlier periods of their careers, there is no reason to conclude on how many years of kyokushin karate training had an impact on possible modifications of this important human property. In addition, it

is not known to what extent the specificity of kyokushin karate, training and participation in sports competition could have a decisive impact on the personality of the trainers. Apart from the influence of the coach and other entities of the closest social environment of karatekas. Social and cultural factors cannot be excluded [19-21].

Studies have shown that the impact of kyokushin karate on the personality of the trainees is determined by combat sports and not by martial arts. It is sporting activity that shapes the personality of kyokushin karate practitioners. But maybe it's



**Figure 1.** Summary of personality profiles of people training kyokushin karate based on gender.

the philosophy and ethics that makes the student kyokushin karate despite the training of brutality (knockdown formula) a non-conflict person [22-25].

However, future research should combine the applied research tools with other methods of examining the personality of people practicing martial arts in comparison with other social groups. An example may be the unique simulation methods (laboratories using sophisticated technology [26-30], motor, non-motoric, psychomotor multidimensional tests [31-41]) of human activity in various circumstances that threaten life and health [42-49].

Since there are clear discrepancies in the research to date verifying the profile of the sense of somatic health declared by students of physiotherapy [50-52], a similar result should be expected with regard to the sense of mental health, social health, and the ability to survive. However, it should be taken into account that between the publication of even the most reliable research results informing about the positive effects on all dimensions of health and enhancing

people's ability to survive through competent martial arts training and extreme physical activity, there are many barriers to implementation [53-56], despite the acceptance of the participants of education [57, 58]. An example may be the achievements of the so-called Polish School of Safe Fall [59-72], which, so far, have not been widely implemented, even in Poland.

## CONCLUSIONS

The personality profile of people training kyokushin karate as a martial art is a typical personality profile of combat sports fighters. Despite the adopted philosophy of kyokushin karate martial arts training, the personality of adepts is typical for athletes – it is shaped by sport activity. Differences among kyokushin karate occurred between the personality profiles of men and women; but they still keep the same profile sketch typical for athletes (combat sports). Differences in personality traits of kyokushin karate practitioners are determined by gender.

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