

Psychological factors of students training Olympic taekwondo at various level of sports advancement

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Summary

Introduction. The aim of the present investigations was to evaluate selected motor and psychological factors characterising students training Olympic taekwondo at various level of sports advancement.

Material and methods. Forty students of the Universities from Zamość representing Olympic taekwondo took part in the research. The type and structure of personality were measure by Questionnaire of Personality of ZKKO Zuckerman-Kuhlman and International Committee on the Standardisation of Physical Fitness Tests (ICSPFT) were measure level of physical fitness.

Results. The research proved that personality features under investigation, i.e. Imp-SS, N-Anx., Agg-Host, Act. fall into the range of medium results. The group of subjects demonstrating high levels of sports advancement Imp-SS and N-Anx fall into the range of low results. The other features, i.e. Agg-Host, Act. and Soc. are at the level of medium results. As far as the group of subjects with medium levels is concerned, all personality traits fall into the range of medium results.

Conclusion. It was observed that competitors with higher levels of physical fitness manifest higher levels of Imp-SS, N-Anx and Agg-Host, whereas those with higher levels of sports advancement demonstrate lower intensity levels of those features.

Introduction

The knowledge concerning motor abilities and the psyche of a human is a fundamental issue in sport sciences. The application of mental skills in sports is linked with the development and maintenance of expert performance in sport. The best results in contemporary sports are achieved only by those highly talented, optimal body build and highly fit technically, tactically, psycho-emotionally and teoretically [1,2]. A very broad spectrum of conditions of manifesting psychomotor abilities in ontogenesis generates the demand for such research in various age and social groups significant from the viewpoint of health and economies of all countries [3-6].

In the constantly changing world youth and students from universities often receive many contradictory data and proposals both in the sphere of life philosophy as well as in lifestyle. In many books and a number of journals we can find research concerning of physical activity e.g. recreational and sport of different kind social groups. Student is a special social category of society [7]. Sport training is a complex

process and its efficiency depends on a lot of factors, the knowledge of whose forms the basis of the whole training process. In many kind of combat sports is a highly demanding sport with respect to body build [8-12], physical fitness [13], coordination motor abilities and technique [14-18] and optimal psychological features e.g. personality [19-25]. Research into personality in psychology of sport has been done for a long time yet a lot of conclusions drawn from the research are contradictory [26]. Athletes' personalities more often become the subject of psychologists' researches, because they help to solve many problems connected with efficiency of trainings and success in sports competition. Moreover, it has been difficult to find out which personality components are closely connected with success in sports and life after sport career. The aim of the present investigations was the evaluation chosen psychological factors characterizing students training Olympic taekwondo.

Material and methods

The investigation included 40 students of the Universities from Lublin and Zamość engaged Olympic taekwondo in sections, aged=19,2±1,22. The training experience was 4-7 years. In the investigations was used Questionnaire of Personality of ZKKO Zuckerman-Kuhlman to measure of type and structure of personality consist with 5 scale, alternative to "big five" Coste'a and McCrea and International Committee on the Standardisation of Physical Fitness Tests (ICSPFT) were measure level of physical fitness.

Results

The research revealed that not all olympic taekwondo competitors demonstrated high levels of physical fitness in tests assessing particular motor features according to the

norms of ICSPFT (Table 1) [27]. Only slightly more than a half of the subjects (52.5%) achieved high results. Therefore, the subjects were assigned to two groups according to their levels of physical fitness.

One group included those demonstrating medium levels, while the other one consisted of the subjects manifesting high levels of physical fitness.

The research proved that personality features under investigation, i.e. Imp-SS, N-Anx., Agg-Host. Act., fall into the range of medium results, which means that taekwondo competitors are emotionally stable; they are able to control their emotions and behave adequately to a situation, particularly in conditions of a fight on a mat during a sports competition. In turn, the subjects with high levels of physical fitness demonstrate higher levels of Imp-SS, Agg-Host and lower levels of Soc., while N-Anx. is comparable in both groups.

Table 1. The of level physical fitness olympic taekwondo competitors (n=40)

Statistics (scores)	50 m dash	Standing board jumping	1000m run	Hand grip	Bent arm hang	Shuttle run	Sit ups	Bend trunk
Mean	58,4	61,3	62	47,85	56,55	59,1	52,15	52,75
SD	4,89	7,26	5,45	14,46	18,17	4,35	6,39	9,48
V (%)	8,37	11,84	8,79	18,81	32,13	7,36	12,25	17,97

*[motoric level taken together]

Table 2. Personality structure of taekwondo competitors measured with the use of ZKKO test taking into consideration their levels of physical fitness (n=40)

Feature of Personality	Level of physical fitness		t	p
	High (n=21)	Middle (n=19)		
	Mean±SD	Mean±SD		
Impulsive Sensation Seeking (Imp-SS)	8,05±1,9	6,6±1,5	2,192	0,034*
Neurotism (N-Anx.)	6,3±2,1	6,2±2,1	0,206	0,836
Aggression – Hostility (Agg-Host.)	7,7±1,8	7,0±1,4	1,176	0,245
Activity (Act.)	9,8±2,3	10,2±1,0	-0,582	0,556
Sociability (Soc.)	8,5±2,1	9,8±1,1	-2,054	0,046*
Inf.	2,3±0,4	2,1±0,3	1,113	0,323

* Statistically significant at the level of <0,05

Table 3. Personality structure of olympic taekwondo competitors measured with the use of ZKKO test taking into consideration their levels of sports advancement (n=40)

Feature of Personality	Level of sport advancement		T	p
	High (n=20)	Middle (n=20)		
	Mean±SD	Mean±SD		
Impulsive Sensation Seeking (Imp-SS)	6,9±2,1	7,7±2,1	-1,119	0,269
Neurotism (N-Anx)	5,1±1,8	7,4±2,1	-3,795	0,001*
Aggression – Hostility (Agg-Host)	7,0±2,2	7,8±1,7	-1,343	0,187
Activity (Act.)	10,5±2,6	9,5±2,0	1,412	0,165
Sociability (Soc.)	9,2±2,7	9,1±1,5	0,072	0,943

* Statistically significant at the level of <0,05

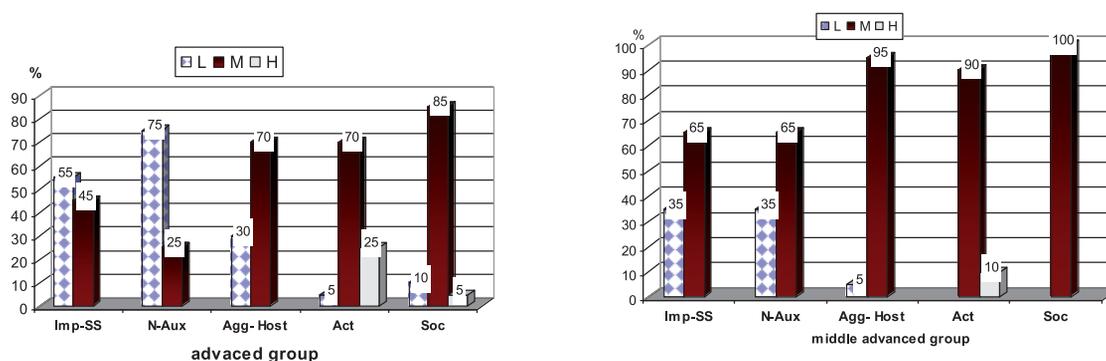


Fig. 1. Personality structure of taekwondo competitors measured with the use of ZKKO test taking into consideration their levels of sports advancement (n=40)

Table 4. Dependencies between personality traits of olympic taekwondo competitors taking into consideration their levels of physical fitness and advancement (n=40)

Feature of Personality	Value of correlation coefficients	
	Level of physical fitness	Level of sports advancement
Impulsive Sensation Seeking (Imp-SS)	0,51**	0,46*
Neurotism (N-Anx)	0,46*	0,43*
Aggression – Hostility (Agg-Host)	-0,44*	0,20
Activity (Act.)	0,32*	-0,31*
Sociability (Soc.)	-0,25	-0,53**

*Correlation coefficients $p < 0,05$

** Correlation coefficients $p < 0,01$

Furthermore, it was observed that in the group of subjects demonstrating high levels of sports advancement Imp-SS and N-Anx fall into the range of low results. The other features, i.e. Agg-Host, Act. and Soc. are at the level of medium results. As far as the group of subjects with medium levels is concerned, all personality traits fall into the range of medium results.

Taekwondo competitors from both groups (medium and high levels of sports advancement) differ in the levels of personality traits under examination. As for the group at a high level of sports advancement, there are more people demonstrating low levels of Imp N-Anx and Agg-Host and high levels of Act. than in the group at a medium level of sports advancement.

A connection between Imp-SS, N-Anx and Agg-Host and levels of physical fitness was observed. Higher levels of Imp-SS, N-Anx and Agg-Host are connected with higher levels of physical fitness. In turn, higher levels of Act. are linked with lower levels of physical fitness. A connection between levels of sports advancement, technical skills, training experience and neuroticism was found. In competitors with longer training experience and higher levels of technical skills there occur lower levels of N-Anx, while in the case of Act. and Soc. it is the other way round.

Discussion

Obtaining the highest results in combat sports is currently impossible without a thorough multi-aspectual consideration of the achievements of contemporary science [28]. The process of developing sports advancement in combat sports is extremely complex and relatively long compared to other sports, particularly those with a simple structure of movements and a dominant role of one coordination ability, e.g. long-distance running or cycling. In combat sports, including taekwondo, apart from possessing utmost morphofunctional capabilities that are to a large extent genetically conditioned, versatile fitness preparation involving both conditioning and coordination aspects as well as adequate motivational, volitional and personality features is required. In the previous research concerning not only combat sports basic manifestations of a human personality were examined. These works [29-30] are convergent with the results of our research although some differ significantly [31-35]. However, it was difficult to define precisely their meaning for the achievement of high sports results and the connection with training experience and sports advancement. The majority of research Zuckerman [36, 37] confirms that people looking for experiences prefer activities and situations which are new and strongly stim-

ulating, connected with high risk as well as fulfilling hedonistic needs whether they are socially accepted or not. As far as looking for experiences is concerned, there are more alcoholics, drug addicts, criminals and psychopaths among people achieving high positions than among people holding low positions in this field. However, Craig Fisher [38] suggests a new course of research in sports personology. He criticises a factor model of personality research in sport and suggests an interactive model in which personality and environment are co-dependent since personality influences behaviour and behaviour influences personality, which is compliant with our course of research.

Conclusions

1. Both groups of taekwondo competitors (at a medium and high level of sports advancement) do not differ in a statistically significant way in the levels of physical fitness and

sports advancement. The level of physical fitness is linked with biological features of an organism, while the final sports result is also conditioned to a large extent by mental features of a competitor.

2. High levels of the aforementioned traits are not always conducive to achieving high sports results as in a sports competition high emotional tension brings about problems with concentration and movement precision and impedes making proper decisions from the viewpoint of tactics and strategy, thus rendering a competitor less effective in a sports fight.
3. Students who training combat sports characterising higher level of physical fitness and more stable of structure of personality than non training student. Systematic combat sport training prepare to pro health lifestyle and more effective work in the future.

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