

Mental training in the opinion of the Polish national karate kyokushin team

Authors' Contribution:

- A Study Design
- B Data Collection
- C Statistical Analysis
- D Manuscript Preparation
- E Funds Collection

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Abstract

Background and Study Aim:

The widely understood mental training was adopted as the background of the work as it has a sound grounding in numerous scientific papers as well as in the experience of trainers and coaches. The aim of the paper was to verify the opinions of kyokushin karatekas on mental training.

Material and Methods:

The Polish representation of juniors and seniors in karate kyokushin (n = 48) from the 2021/2022 season took part in the study. The average training experience in the entire sample of respondents was 12.7 years. Three people are kata competitors and 45 people are kumite competitors. A diagnostic survey method was used, and for this purpose the authors' own questionnaire was used.

Results:

The investigated athletes pay a significant role to mental preparation: they cooperate with sports psychologists and mental trainers; some of them also carry out their own mental training. Standard methods of mental preparation as well as meditation and wakefulness are used by the surveyed karatekas. These methods help to reduce the level of stress, which some of them experience before the competition day, while others experience stress on the day of the competition. The training level of their opponents does not affect their stress level.

Conclusions:

For the studied athletes, mental training is very important. Karatekas cooperate with specialists, and also independently undertake mental exercises from the karate culture array. Practicing mental training by karatekas reduces their stress level. Most of them experience stress only on the competition day and this stress is related only to the starting situation.

Key words:

combat sports • meditation • self-defence • sports psychology • stress • training experience • wakefulness

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Authors have declared that no competing interest exists

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Sports psychology – the merger of knowledge from the disciplines of physical culture and psychology, located within physical culture science. Its utilitarian use includes mental preparation of athletes and its theoretical usage comprises relevant research in this field [10].

Mental training – training in psychological skills such as relaxation, attention focus, visualization, emotion management, aggressiveness control, maintaining motivation, etc. [11].

Karate – a form of unarmed combat that uses the upper and lower limbs in defensive and offensive techniques. It can be practiced as a martial art, combat sport or self-defence system [1].

Kumite – *noun* is a karate competition in which two karatekas perform different techniques of kicking, punching and blocking against each other according to specific rules in order to score and win the match. The range of techniques that can be used in a competition is limited due to the safety of karatekas. Destruction is a fiction. Today, there are four systems of sports competition in kumite: semi-contact, full contact, mix fighting, knockdown [1].

Kata – *noun* a sequence of movements in some martial arts such as karate, used either for training or to demonstrate technique [62].

Kyu – *noun* a level of proficiency in some martial arts [62].

Dan (dan’i) – a term used to denote one’s technical level or grade [63].

Technique – *noun* a way of performing an action [62].

INTRODUCTION

Nowadays karate is practiced in three forms: as a martial art, a combat sport, and a self-defence system [1]. The martial art form aims at pro-health values [2]. The combat sport form refers to competition according to specific rules in seasonal competition [3]. And the self-defence system form focuses on the utilitarian use of karate in life-threatening situations [4]. Regardless of the training goals, the training of a karateka covers four areas, namely motor [5], technical [6], tactical [7] and mental [8] preparation. The first three areas are realized through physical training. A karateka is able to improve his/her physicality through specific training measures [9]. Physical training is simultaneously accompanied by mental training. Karateka’s mental features are not constant and may change depending on his/her development and acquired experience [10]. Therefore, mental training is justified because it builds a strong and resistant psyche of a karate adept. And the strong psyche of a karateka allows him or her to fully use their potential in the competition [11].

The mentality of a karateka is influenced by many different factors, including self-confidence, mental resilience, motivation, emotions, visualization, concentration of attention, aggressiveness, as well as attitudes towards oneself and the environment. Karateka’s self-confidence is reflected in the ability to make decisions at a given moment and to deal with problems in a given situation [12]. Systematic repetition of given techniques, combinations, combat fragments and tactics, depending on the somatic conditions of the opponent, will have a positive effect and increase the level of self-confidence in a karateka [13]. On the other hand, the mental resistance of a karateka is emphasized in bravery and in fighting to the very end despite adversities [14]. By starting to challenge himself or herself while training during the preparatory period, a karateka will gradually move the limits of their endurance and increase their tolerance to inconvenience [15]. An important role is played by the competitor’s motivation to train, which manifests itself in a positive attitude, willingness and readiness to take up physical activity, even if the athlete feels pain and fatigue or the tasks ahead of him/her are of a high level of difficulty [16]. Due to the strong relationship between motivation and emotions, karateka, depending on their goal, aims to achieve specific emotions [17]. With the number of trainings, exams, camps or training camps, and above all, tournament fights,

the experience [18] and emotional maturity of a karateka [19] increases. The better a competitor is prepared and familiar with the challenge that awaits him/her, the better he or she will be able to cope with emotions. Through systematic training that yields results, a karateka can gain inner peace [20]. By repeating and perfecting the selected combinations, karatekas are aware that it will be much easier for them to perform certain passages during combat. They are not worried that they cannot do something, so they are better at managing their own emotions [21]. In turn, the emotions of karatekas translate into their visualization [22], which significantly affects the technical and tactical preparation [23]. The systematic re-enactment of a fight in their mind gives the competitor a sense of better mental preparation for the start, because due to the greatest possible number of “worked through” situations in theory, he or she will know how to react appropriately in a fight [24]. By adding physical training, shaping muscle memory, and reflecting visualizations, we increase the chance of a karateka’s success [25]. It is accompanied by the ability to concentrate as much as possible, which allows the karateka to distinguish important elements on which he or she will focus during training or competitions, and suppress the non-essential elements [26]. All these elements of mental training allow to consciously manage the competitor’s aggressiveness [27] and create pro-health attitudes in him or her by undertaking karate activity [28].

All these factors may change according to the life situation of a karateka on a given day [29]. In each training unit there are difficulties that the athlete must overcome. The way he or she deals with them largely shapes his or her mentality [30]. The key moment comes when the athlete works at a high level of fatigue, usually at the end of a given training unit. Falling out of the physical disposition, the body defends itself against further effort, and there is a desire in the competitor’s mind to let go of the task and give up [31]. It is precisely the overcoming of each one-off physical crisis in training that increases the karateka’s mentality and has a positive effect on their mental preparation [32]. In karate tournaments at the highest level of sports competition, such as the World Championships or the European Championships, karate competitors represent a similar sports level in terms of physical preparation. From the coach’s perspective, it is noticed that in such fights the competitor’s mental preparation often turns out to be decisive. A karateka in whom these skills at

a higher level, usually wins the competition, as he/she is also able to control his/her physical and mental abilities much better.

The aim of this paper was to verify the opinions of kyokushin karatekas on mental training.

MATERIAL AND METHODS

Surveyed persons

The study was conducted on a group of Polish representatives in karate kyokushin ($n = 48$) from the season 2021/2022, affiliated with the Polish Karate Federation. The respondents were juniors (age 16-17; 8 females and 10 males) and seniors (age 18-29; 22 females and 8 males). The average training experience in the entire sample of respondents was 12.7 years. It was 8.9 years among juniors and 14.5 years in the senior group, accordingly. Junior ranks ranged from 4th to 1st kyu, and among seniors they ranged from 1st kyu to 3rd dan. Only 3 people competed in the kata (see glossary) competitions (2 seniors and 1 junior). These individuals had only two appearances in the Polish national team for the 2021/2022 World and European Championships. On the other hand, 45 people competed in kumite (see glossary): 17 juniors (7 females and 10 males) and 28 seniors (20 females and 8 males), who had 3 or more appearances in the Polish national team in the 2021/2022 season at international ranking tournaments up to and including the World Championships. It should be noted that juniors fought in the semi-contact formula while seniors in the knockdown formula.

Study design

The study used the diagnostic survey method. The survey questionnaire developed specifically for the purpose of this study was used as a research tool. The research was carried out in March 2022 in an on-line form due to the pandemic restrictions prevailing at that time.

Procedure

All respondents gave their consent to participate in the study and use the results for scientific purposes. The respondents had unlimited time to give answers.

The project received a positive opinion of the Senate Committee on Ethics of Scientific Research at Wroclaw University of Health and Sport Sciences, number 7/2021.

Statistical analysis

The estimation of empirical data is based on the ratio of declared opinions.

RESULTS

To the questions "is mental training important in your preparations?": 44 (92%) karate athletes answered positively while there were 2 (4%) negative answers and also 2 (4%) karatekas did not have an opinion on this subject. The vast majority (39 competitors, i.e. 81%) did not use professional help in mental preparation; 4 (9%) competitors started cooperation with a psychologist, however, only 2 (4%) cooperated with a mental trainer. Three people (6%) decided to use the help of both a sports psychologist and a mental trainer. Karateka respondents prefer the following methods of mental preparation (the answers do not add up to 100%, because some use several methods): relaxation techniques 23 (47.9%); concentration 22 (45.8%); self-confidence 21 (43.8%); visualization 20 (41.7%); attitudes (understood as working on a positive attitude to competition) 18 (37.5%); mental resilience 14 (29.2%); two (4.2%) practice breathing techniques. Moreover, 2 (4.2%) karatekas did not use any method, and three (6.3%) declared other methods – meditation and wakefulness (Figure 1).

The majority (34, i.e. 70%) of karate athletes declared that "mental training reduce the perceived level of stress"; 4 (8%) indicated that increased mental training did not reduce the stress they felt, although they were better able to manage their emotions. The remaining 10 people (22%) felt no change due to mental training (Table 1).

The highest intensity of stress before the start and experienced first is declared by female seniors (Table 2).

The majority (33, i.e. 69%) declared that they do not pay attention to the training level (colour of belt) of the opponent, since they are mentally strong. For 8 (17%) karatekas it has a negative effect, lowering their mentality, whereas 6 (12%) declared that the colour of the opponent's belt motivated them positively, which puts their mental preparation at a high level. One respondent (2%) tries not to pay attention to it (Figure 2).

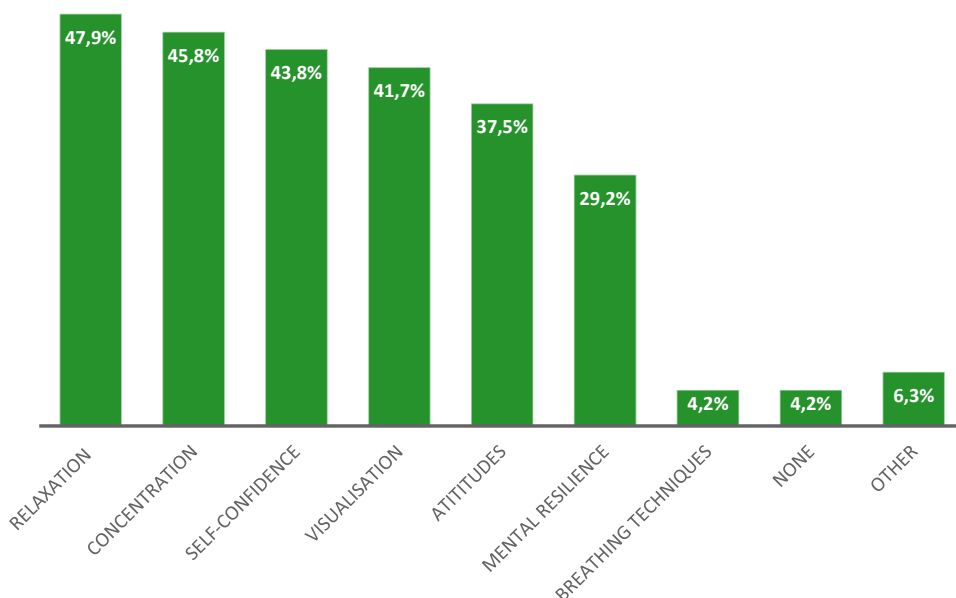


Figure 1. Methods used by the respondents in mental training.

Table 1. Data of karatekas who feel the effects of mental training.

Declaration	Juniors (n = 18)		Seniors (n = 30)	
	female (n = 8)	male (n = 10)	female (n = 22)	male (n = 8)
yes/definitely	5	8	13	8
no/no difference	3	2	5	-
better management of emotions	-	-	4	-

Table 2. The period of time before the start in which karatekas begin to experience stress.

Period of time before the start in which karatekas begin to experience stress	Total	Juniors (n = 18)		Seniors (n = 30)	
		female (n = 8)	male (n = 10)	female (n = 22)	male (n = 8)
on the start day	19	5	5	7	2
1-2 days prior to the start	13	1	1	8	3
up to 7 days prior to the start	11	2	2	5	2
more than 7 days prior to the start	2	-	-	2	-
no answer or ambiguous answer	3	-	2	-	1

DISCUSSION

The results of the research show that the representatives of Polish karate kyokushin team are aware of the importance of mental preparation for the competition. For this purpose, the respondents cooperate with specialists, but there are also people who prepare mentally by

themselves. It is related to karate culture [33], which is based on the philosophy of Budo, bushido code and karate ethics [34] – *dojo kun* and *niju kun* [35]. This is confirmed by the fact that karatekas in mental training, apart from standard methods, use meditation and wakefulness. Meditation is an integral part of any traditional

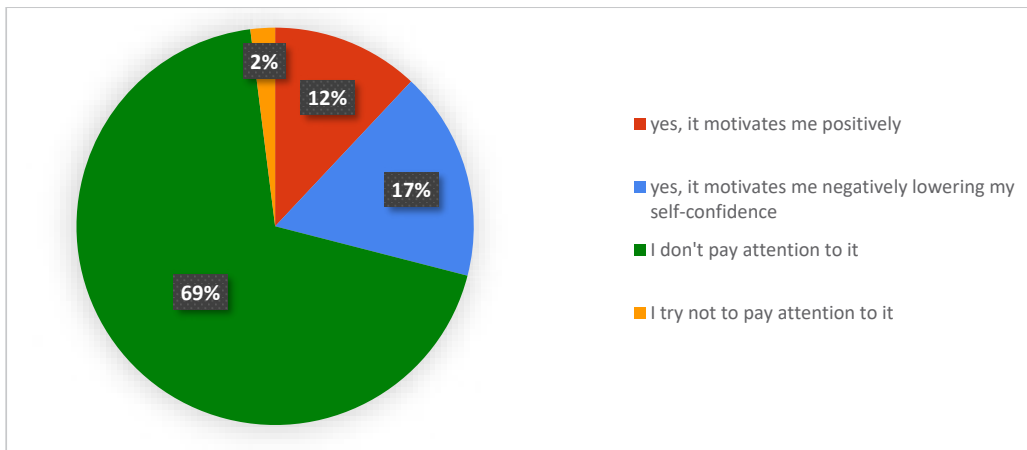


Figure 2. Influence of the opponent's rank on the stress level of the researched karatekas.

karate training. On the other hand, wakefulness is used in kumite exercises as the ability to react to external stimuli [36].

An important opinion of Polish kyokushin karate representatives is that for most of them mental training reduces their stress level. But they do not eliminate stress completely. The vast majority of them feel stress only on the day of the start. Therefore, it should be recognized that karatekas feel the stress associated with the starting situation. At the same time, it is a low level of stress, which allows them to fully manage their technical and tactical skills and stimulates their organisms [37]. Moreover, most of the respondents stated that their opponent's training rank did not influence the experienced stress. Hence, it should be acknowledged that the stress felt by karatekas is not the result of the perception of their opponents, but only the result of being in a starting situation. It follows that the mental burdens of most karatekas are associated with fighting alone [38]. Among the remaining respondents, stress begins to appear before the start for 1-2 days, up to 7 days or more than 7 days. This perspective shows that these karatekas begin to mentally lead their fights long before the start [39]. In these cases, mental training is also justified because it helps to manage emotions in anticipation of competition.

In connection with the above, it should be considered that the opinions of the Polish karate kyokushin team on mental training are positive and confirm the important role of mental preparation. Hence, the legitimacy of using mental training in karate and assigning it an equal value to physical

training [40]. Physical and mental training are the same on the way to karate mastery [41], regardless of the sports level [42]. It should be remembered that mental training does not replace physical training, and vice versa. The task of mental training is to support physical training [43]. Properly organized mental training translates into excellent management of the psychological skills of karatekas [44]. And this significantly increases their physical proficiency. This enables the maximum use of the karateka's potential during training and in situations of sports rivalry and non-sport confrontation [45]. Mental training has this huge advantage: it can be practiced anytime and anywhere. A karateka can do mental exercises even in the event of illness or injury. They do not require equipment or the presence of a sparring partner [46]. Practicing mental skills does not cause physical fatigue, but is dependent on the mental condition of a karateka [47]. At this point, it should be noted that poorly conducted mental training may lead to a reduction in creativity and originality of thinking [48], learning problems [49] and negative perception of karatekas by other people as less attractive in interpersonal contacts [50]. Therefore, independent practice of mental exercises within the framework of karate culture is recommended for people with master degrees (dan) [51]. Moreover, it is advisable to support mental training with modern technologies [52]. This can significantly accelerate the comprehensive development of a karateka [53].

For coaches, not only of the national team and not only karate, but all combat sports (because they are also self-defence art [3, 4]), an important element of mental education is knowledge

about modern possibilities of stimulating these competences. The sources of inspiration are: innovative agonology [28, 54, 55, 39, 56]; multi-dimensional tests [57-59]), fun forms of martial arts [60] and methods of continuous diagnosis of effects based on simple non-apparatus and quasi-apparatus tests [61].

CONCLUSIONS

In the opinion of the Polish kyokushin karate national team, mental training is very important. Karatekas in their mental preparation cooperate with sports psychologists and mental coaches.

In addition, they use the norms of karate culture. The representatives focus their mental training on relaxation, concentration of attention, self-confidence, visualizations, attitudes, mental resistance, breathing techniques, meditation and wakefulness. Practicing mental training by karate people reduces their stress level. Most of the respondents feel stress only on the day of the start and the opponent's training rank has no influence on it, only the starting situation. Thus, the conjunction of these results in conjunction with the directives of the intellectualisation of sports training and personal safety of athletes is proof of the pedagogical competence of the trainers responsible for the preparation of members of the national team.

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