

Psychological determinants of motivation in coaches of martial arts

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Summary

Introduction. Motivation is one of the key topics in sport psychology. The majority of researches concerning sport motivation are focused on the motivation of sport competitors. The present study concentrates on the motivation of coaches. The aim of the present study was to investigate the type of sport motivation (based on distinction of types of sport achievement orientation by Gill and Deeter: competitiveness, win orientation, goal orientation) in coaches of martial arts, and to determine temperamental and personality-related determinants of motivation.

Material and methods. The participants comprised 37 male trainers of martial arts (25 boxing coaches, 12 karate coaches). The average age was 36,8 years. The study employed various research tools including: The Sport Orientation Questionnaire (SOQ) by Gill & Deeter in the Polish adaptation by Marcin Krawczyński, EPQ-R – Revised Eysenck Personality Questionnaire in the Polish adaptation by Brzozowski and Drwal, and FCB-TI – Formal Characteristic of Behaviour – Temperament Inventory by Zawadzki and Strelau.

Results. The study has shown statistically significant differences in win orientation between the coaches of boxing and karate. Higher levels of win orientation were observed in the karate coaches. The correlations between goal oriented motivation and neuroticism, and between goal orientation and such temperamental dimensions as emotional reactivity or endurance were also noted in this group. Among the boxing coaches the correlation between sensory sensitivity and goal orientation was found.

Conclusions. The results indicate that most differentiating type of motivation between the coaches is the goal orientation, which shows correlations with temperamental and personality variables.

Introduction

Motivation is one of the key topics in sport psychology. Among the interests of psychologists were various aspects of motivation in sports, including: motivational climate, achievement motivation, extrinsic and intrinsic motivation, ego- and task-oriented motivation, or – enjoying great popularity – self-determination theory [1,2,3,4,5,6,7,8,9,10].

Among the many theories of motivation in sports, Gill's and Deeter's approach seems to be applicable and cognitively interesting. It was based on Atkinson's theory of achievement motivation defined as a "goal-directed interaction between situational and personality factors resulting in a tendency to achieve success" [11, p.34]. Motivation, understood in such a way, encourages goal-orientation, and feelings of joy and pride during the sport competitions. Gill and Deeter focused their approach exclusively on motivation in sports. They have distinguished three dimensions of sport motivation: competitiveness (athlete desires to strive for success in competition), win orientation (person is focused on winning and avoiding losing), goal orientation (athlete is focused on

personal goals) [12]. Gill's and Deeter's [13] approach has been empirically verified in the field of sport psychology.

Gill, Kelley and colleagues [12] have analysed particular dimensions of sport motivation (competitiveness, win and goal orientation) taking into account the factor of sex. They have indicated that men obtain higher scores than women in the competitiveness and win orientation scales. The study has also shown that athletes score higher in all of the scales – as compared to non-athletes. Wartenberg and McCutcheon [14] have observed that athletes obtain higher scores than non-athletes in competitiveness and win orientation scales. The differences in all of the sport motivation dimensions have been also observed in the analysis of the factor of sex in the study conducted among the Japanese athletes [15]. Sex has also constituted a differentiating factor in the results of the study conducted by Evans et al [16] among the basketball players and the participants of marathons. The results obtained have indicated that men have higher levels of competitiveness, whereas women – of goal orientation. No differences have been observed in the levels of win orientation. The fact that men are more competitive than women has also

been discussed by Zoerink and Wilson [11]. Also researches presented in this article rely on Gill's and Deeter's theory.

The majority of researches concerning sport motivation are focused on the motivation of sport competitors. The present study concentrates on the motivation of coaches, specifically – boxing and karate coaches. Trainer's motivation – both the personal motivation for work and the one directed towards athletes – seems to be one of the factors determining sport success. It constitutes one of coach's primary abilities [17] and a factor affecting the work satisfaction [18]. It is assumed that the motivational attitude of the trainer has an influence on competitor's motivational attitude: trainer's autonomy-supportive behaviours inspire self-determined extrinsic and intrinsic motivation in athletes [19]. Motivation is the source of support; it also determines the interpersonal relations between competitors [20]. As the study among football players has shown, the motivational climate created by a coach has an influence on athletes' attitude, their psychological needs of competence, autonomy, and relatedness [21]. Similar correlations between the trainer's influence and the competitors' autonomous motivation, perceived competence and action orientation have been discovered by Halvari et al [10] and Gagne [22] in female gymnasts, and by Gillet et al [23] in judo athletes. As observed in a study by Barić and Bucik [24], the fact whether trainers have preference for higher or lower ego-oriented motivation influences competitors' motivation and behaviour. Trainers' low ego-oriented motivation results in higher levels of athletes' intrinsic motivation, task goal orientation and ego goal orientation. Coaches' motivational influence may, therefore, affect competitors' whole sport career [25].

What type of motivation is characteristic for martial arts coaches and what are its individual determinants? Do contact sport trainers create motivational climate concentrated on goal orientation, win orientation or competitiveness? Does the personality, temperament or the anxiety level have an influence on the type of motivation (goal orientation, win orientation or competitiveness)? The study will discuss the correlations between motivation and the factors of neuroticism, extraversion, introversion, psychoticism, and temperament.

A neurotic (emotionally unstable) person, in general, experiences negative emotions, mood-swings, nervousness, anxiety, stress and often depression. On the contrary, an emotionally stable person is calm, certain, carefree, has leadership skills and experiences positive emotions. Introversion involves such traits as passiveness, unsociability, calmness, quietness and carefulness, whereas extraversion implies being talkative, lively, active, open, sociable and having optimistic approach towards life. Psychoticism is connected with traits such as aggressiveness, ruthlessness, impulsiveness, insensitivity, egocentrism and being anti-social [26,27]. Temperament, as defined by Strelau, has a "biological base which interacts with physical and social environment components to form what we refer to as personality" [28, p.184]. It is described by seven main features: briskness, perseverance, mobility, sensory sensitivity, endurance, activity, emotional reactivity [29].

The aim of the presented study was to establish what psychological factors (motivation, personality, temperament) characterized the coaches of martial arts.

The following problems were formulated:

- What type of motivation is characteristic for the coaches of martial arts (does the type of sport discipline differentiate the motivation)?
- Is there an association between the types of sport motivation and the personality type?
- Is there an association between the types of sport motivation and the temperamental variables?

Material and Methods

Participants

The material of the study comprised the scores of 37 adult males classified within one of the two groups: 1) boxing coaches ($n = 25$; average age = 36.8 ± 10.0); 2) karate coaches ($n = 12$; average age = 34.4 ± 11.2). The participants represented different training centres from the territory of Poland. They were head coaches of Polish national athletes of martial arts. Their experience in sport coaching ranged at least 2 years.

Measures

The Sport Orientation Questionnaire (SOQ) by Gill and Deeter in the Polish adaptation by Marcin Krawczyński was used [30]. It is an accurate and reliable tool for measuring achievement motivation in sports [13]. It consists of 25 statements. Each item is to be rated on a five-point Likert scale from "strongly agree" to "strongly disagree". This tool allows to determine the three dimensions of motivation: dimensions of competitiveness (13 items – for example: "I am a competitive person"), win orientation (6 items – for example: "Winning is important") and goal orientation (6 items – for example: "I set goals for myself when I compete"). SOQ is used in sport psychology in general, and in the psychology of martial arts specifically [31].

Revised Eysenck Personality Questionnaire (EPQ-R) by H.J. Eysenck in the Polish adaptation by Brzozowski and Drwal [32]. It comprises 100 questions to which the participant is required to answer "YES" or "NO". This questionnaire determines the following dimensions: Extraversion – Introversion (E), Neuroticism (N) – Stability, Psychoticism (P), and Susceptibility to public approval (Lie scale – L).

FCB-TI – Formal Characteristic of Behaviour – Temperament Inventory by Zawadzki and Strelau [33]. It is a self-descriptive questionnaire consisting of 120 items. The participant is to answer "YES" or "NO" to each of them. The items create the scales of briskness, perseverance, sensory sensitivity, emotional reactivity, endurance, activity.

Procedures

The study was conducted on 10th of May 2014 in the The University of Physical Education. The participants were asked to fill in a set of tests (FCB-TI; EPQ-R; SOQ). It lasted for approximately 30 minutes. All the participants permitted to use results of the tests in this article.

Table 1. Mean \pm SD for SOQ scales

SOQ	Boxing trainers	Karate trainers	Total
Dimensions of competitiveness	25.64 \pm 7.40	28.92 \pm 9.58	26.70 \pm 8.19
Win orientation*	12.88 \pm 3.85	16.42 \pm 3.89	14.03 \pm 4.17
Goal orientation	11.60 \pm 3.57	14.08 \pm 3.31	12.40 \pm 3.64

* - significant differences between groups ($p < .05$)

Statistical Analysis

Due to the small number of karate coaches the decision was made to use nonparametric statistical tests in the statistical analysis. Spearman's rho test was used for the analysis of correlations, whereas the Mann-Whitney U test was chosen for the comparison of the groups. Effect size was calculated based on r , with its values of > 0.1 , 0.3 and 0.5 corresponding to small, medium and large effect size, respectively [34].

The analyses were conducted with the use of statistical analysis software STATISTICA 10, created by the StatSoft Polska. For all of the comparisons the significance level was set for $p \leq 0.05$. All of the descriptive data were presented as a mean \pm SD format.

Results

Table 1 presents the descriptive statistics of the results of SOQ which tested the achievement motivation in sports.

The Mann-Whitney test indicated statistically significant differences between the groups in question in the scale of *win orientation* ($Z(36) = -2.590$; $p = .010$; $r = .426$). The karate trainers scored higher on this scale (by 27.5%) in comparison with the boxing trainers. There were no statistically significant differences ($p > .05$) on the scales of *dimensions of competitiveness* and *goal orientation* between the groups.

The analysis of the results of correlations between personality traits and motivations showed a significant correlation between *neuroticism* and *goal orientation* in the group of karate trainers ($r_s(10) = .608$; $p = .036$). There were no statistically significant correlations ($p > .05$) between the other scales in the groups in question.

The analysis of the correlation between motivation and temperament in the group of boxing trainers showed a statistically significant correlation between *sensory sensitivity* and *dimensions of competitiveness* ($r_s(10) = .607$; $p = .001$) and *goal orientation* ($r_s(10) = .611$; $p = .001$). In the group of karate trainers a statistically significant correlation was found between the *goal orientation* SOQ scale and the scales of FCB-TI questionnaire: *emotional reactivity* ($r_s(10) = .804$; $p = .002$) and *endurance* ($r_s(10) = -.637$; $p = .026$). There were no statistically significant correlations ($p > .05$) between the rest of the scales.

Discussion

The results obtained showed statistically significant differences between questioned karate and boxing trainers in the win-orientated type of motivation. It indicates being focused on winning and avoiding losing [12]. This means that an indi-

vidual is exclusively concentrated on triumph and achieving success. It might be assumed that this type of motivation would be stronger among boxing coaches as this sport discipline is commercial, promoted in the media and more often perceived by mass audience as a sport focused only on winning. By showing mostly boxers who achieve successes in the ring, the media create the basic measure of their popularity. However, the present study suggests that the stronger win orientation is more characteristic for karate trainers.

One of the possible reasons for this might be a wider range of the possibilities in which karate fighters can achieve success. Apart from the typical sport events, karate training creates new opportunities for achieving success at every (attained) level of proficiency (kyu and dan) and in the tameshiwari tests (breaking hard objects). Among the karate trainers with goal oriented motivation the higher level of neuroticism was also observed. A neurotic person is more likely to experience anxiety and sense of guilt. People with high level of neuroticism have a difficulty in coping with stress and tend to interpret most situations as threatening [35]. Hence, taking part in the competitive events is especially unpleasant for them. Perhaps this is the reason why the neurotic persons prefer the motivation associated with self-improvement (which is the essence of karate) [36] and achieving the established goals, over the direct confrontation with the rival. Moreover, neuroticism – by the means of motivation – may positively influence the performance [37].

The last of the analysed relations concerned motivation and temperamental variables. They suggest that the boxing who are characterized by sensory sensitivity are also characterized by competitiveness and goal orientation. This correlation does not surprise in the case of goal orientation. Individuals who react strongly even for low-level stimuli may tend to avoid too stressful situations. Similarly to neurotic athletes, the persons with sensory sensitivity will also focus more on the task and self-improvement. Interestingly, this will also include competitiveness. However, no correlations with the win orientation have been found. Boxing is a sport discipline which is based on a direct contact with a rival throughout the encounter. It is also characterised by strong public pressure to win and, therefore, by the win orientation motivation. Individuals with high sensibility for stimuli may find it problematic. The associations between the goal orientation and individual variables (emotional reactivity and endurance) were, once again, observed among the karate trainers. As in the case of neuroticism and sensory sensitivity, the association between the goal orientation and emotional reactivity is not surprising. The high level of emotional reactivity is combined with a stronger sense of stress and with negative, depressive moods [38].

This may be caused by a specific for the karate training submissive attitude which is characteristic for the culture of Far East. Individuals with high level of emotional reactivity will prefer working on particular tasks rather than focusing on winning. Achieving goals most certainly will be facilitated by endurance, which is associated with the ability for hard and long-lasting work.

Conclusions

Concluding, it may be observed that the goal orientation was the strongest factor differentiating the groups in question. The presented research indicates that this type of motivation is very important and ought to be developed regardless of sport discipline. Also it is interesting what motivation is characterized of the other sport disciplines trainers. It is issue for future studies.

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