Determinants of the attitude towards combat sports and martial arts

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Summary

Introduction. The aim of practicing martial art has always been self-recognition, the achievement of a specific state of mind and awareness, and the integration of the body and the mind. The aim of this study is to analyse attitudes towards combat sports and martial arts in non-training persons and to separate factors that might affect these attitudes.

Material and methods. The study covered a group of 192 persons, 53% of whom were women, from three age groups: middle-school students (13-16 years), secondary-school students (16-19 years) and adults. The questionnaire of the attitude towards martial arts and combat sports consisted of three components: the cognitive component, the emotional component and the behavioural component.

Results. The intention of practicing martial arts and combat sports significantly differentiates respondents in terms of attitude, particularly with regard to the cognitive component. Perceived as the dominant feature of martial arts and combat sports, brutality is the predictor of the negative attitude towards them.

Conclusions. The popularisation of combat sports and martial arts should be based on the dissemination of knowledge, the encouragement of young people to participate in these sports and arts in various ways and the breaking of the stereotype of brutality of combat sports.

Introduction

The development of combat sports and martial arts occurred in Poland at the beginning of the 1980s, mainly thanks to the mass media, which stimulated social interest in Eastern martial arts by presenting the unusual physical fitness of training persons and hand-to-hand fighting skills. Martial arts with a centuries-long tradition are regarded in social opinions as a carrier of many desired values and function as an education system for young people in Eastern societies. Apart from health benefits, they have supported moral education, have decreased social brutality and have provided positive models of behaviour, being a source of self-satisfaction at the same time [1,2,3,4,5,6]. According to ideological principles, on the basis of the tradition of warrior cultures, training persons try to achieve psychophysical improvement and self-fulfilment by practicing combat techniques [7]. Positive asceticism combines body exercises with conscious self-discipline and is oriented towards moral and spiritual development [8]. When describing advantages brought by this type of exercises, Herigel [9] mentions the aggression prevention skill, the skill in controlling one's own emotions and the ability to react calmly in emergency situations. It must be noticed, however, that studies conducted in Central Europe indicate different specific ways of perception of martial arts, which may be influenced by different cultural traditions, mentalities and ideologies [10,11]. The following question arises: what is the social reception of combat sports and martial arts after more than 30 years from the moment of dynamic development of many combat styles in Poland?

The aim of this study is to analyse the attitude towards combat sports and martial arts and to separate factors that might affect this attitude. This problem is of vital importance for the popularisation of hand-to-hand fighting. According to the definition of Eagly & Chaiken [12], the attitude is “a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor” (p. 1). As suggested by the classic conception by William McGuire, the attitude consists of three components: the cognitive component, the emotional component and the behavioural component [13].

The attitude influences the behaviour of an individual. The theory of reasoned action (TRA) assumes that the separation of behavioural intention from behaviour itself helps to predict and explain more effectively the impact of the attitude on behaviour [14]. As suggested by numerous studies [14], if people evaluate a given behaviour favourably, i.e. they express a high intensity of attitude towards a certain phenomenon (e.g., an object, an event and a person) and if other persons of importance to them expect such behaviour from them (sub-
jectve norms), this causes an increase of the level of intention (motivation) and these persons are more inclined to undertake the behaviour that is consistent with the attitude.

In this study, the attitude towards martial arts and combat sports was analysed in the context of intention concerning future participation in combat sports and martial arts, and other determinants were also taken into account, including sex, age and subjective evaluation of the dominant characteristic feature of combat sports and martial arts. The following research questions were formulated:

1. Are there any differences between women and men in terms of attitude to combat sports and martial arts?
2. Is the attitude towards combat sports and martial arts different for middle-school students, secondary-school students and adults?
3. Is the intention concerning future participation in hand-to-hand fighting exercises connected with the attitude to these types of sports?
4. Which of the aforementioned factors are predictors of the attitude towards combat sports and martial arts?

Material and methods

Participants

The study covered a group of 192 persons who do not practice hand-to-hand fighting and represent three groups: adults \((n = 60, \text{including 30 women and 30 men})\), secondary-school students \((n = 67, \text{including 37 girls and 30 boys})\) and middle-school students \((n = 65, \text{including 35 girls and 30 boys})\). The average age of respondents in various groups was: 15 years in the group of middle-school students, 17 years in the group of secondary-school students and 26 years in the group of adults.

Measurement

The study was carried out using the modified self-assessment questionnaire referring to attitudes towards combat sports and martial arts [15]. The Attitude Scale consisted of three components: the cognitive component, the behavioural component and the affective component. The cognitive component consisted of 8 questions concerning the self-assessment of the level of knowledge of the following combat sports and martial arts: boxing, kickboxing, karate shotokan, karate kyokushinkay, judo, taekwondo, ju-jitsu and aikido. Respondents marked the level of knowledge referring to individual combat styles on a five-level scale (from "absolutely no knowledge" = 0 to "very good knowledge" = 4).

The behavioural component consisted of 2 questions. In the first question, the respondent marked the advantages of martial arts and combat sports selected by him/her out of the following set: physical fitness, sporting success, self-defence skill, social attractiveness, health improvement and self-discipline. For each choice, 1 point was given. In the second question, the respondent assessed on a five-level scale (from "absolutely not" = 0 to "definitely yes" = 4) to what extent each of the 10 features characterises athletes practicing martial arts and combat sports. This question encompassed the following features: life philosophy, self-discipline, healthy and hygienic lifestyle, physical fitness, reinforcement of character, intellectual development, spiritual development, brutality, generosity and help to others, aspect of education of children and young people.

The affective component referred to the assessment of influence of particular combat sports and martial arts (including boxing, kickboxing, karate, judo, taekwondo, ju-jitsu and aikido) on the psychophysical sphere of athletes. Respondents marked the level of influence on a five-level scale (from "absolutely negative" = 0 to "definitely positive" = 4). The total score (Attitude Total) was the sum of scores from scales representing individual components: the cognitive component, the behavioural component and the affective component. The high score indicated the highly positive attitude towards combat sports and martial arts.

The Attitude Scale Questionnaire included also questions concerning predicted participation in combat sports or martial arts in the future. Respondents were assigned to 3 groups on the basis of their answers: 1) 41 persons (21%) who would like to practice martial arts or combat sports professionally or for recreation purposes were allocated to the group of active participants (Active Participation; AP); 2) 65 persons (34%) who declared their will to become a supporter were allocated to the group of passive participants (Passive Participation; PP); 3.) 77 persons (45%) did not show interest in martial arts and combat sports, thus forming the third group of non-participants (None Participation; NP). The last question referred to the choice of one dominant feature of combat sports and martial arts. The percentage distribution of choices for particular variants was as follows: self-discipline – 18%, fair competition – 15%, respect towards the opponent – 23%, extraordinary fitness – 23%, self-defence skill – 15% and brutality – 5%.

Procedure

The study conducted on a group of middle-school students and secondary-school students took place in the Complex of Secondary Schools of General Education no. 4 in Gliwice (the Middle School no. 7 and the Secondary School of General Education no. 7). It covered classes with general, mathematical, language and sport profiles. Adults were surveyed in the Sport and Recreation Centre in Gliwice and in the workplace and the fitness club in Piekary Śląskie. The selection of persons for the study was random. Participants had been informed about the purpose of the study and participated voluntarily in it.

Respondents’ answers on the Attitude Scale were subjected to statistical analyses using the STATISTICA 8 program. Descriptive statistics (mean, standard deviation, range), the Pearson correlation analysis, the t-Student test, the single-factor analysis of variance (Anova) and the multiple regression analysis were carried out.
Results

An analysis of descriptive statistics was carried out, including the arithmetic mean, the standard deviation, the range of scores in the given scale, the distribution normality analysis and the reliability analysis (Table 1). Both the total score of the Attitude Scale and individual scales (the cognitive component, the behavioural component and the affective component) presented a normal distribution (Kolmogorov-Smirnov test) and were characterised by satisfactory reliability (Cronbach’s α) in the group under analysis (N = 192). The Pearson correlation analysis was also carried out between individual scales of the Attitude Scale (Table 1).

The t-Student test analysis for independent groups did not show statistically important intersexual differences in terms of the Attitude Scale regarding combat sports and martial arts, both for the total score and for particular components of the attitude. The single-factor analysis of variance (Anova) did not show any significant differences between groups representing adults, secondary-school students and middle-school students in the total score and particular components of the Attitude Scale. The results of the single-factor analysis of variance (Anova) indicate statistically important differences in the total score of the Attitude Scale between groups representing predicted participation in sport activities related to combat sports and martial arts [F (2, 189) = 9.21; p = 0.0002]. The Tukey’s post-hoc (RIR) test for uneven sizes showed that the AP group differs significantly from the NP group (Fig. 1). The variance analysis and the Tukey’s post-hoc (RIR) test for uneven sizes also showed that the AP group differs significantly in terms of statistics from the two remaining groups: PP and NP with regard to the cognitive component of the Attitude Scale [F (2, 189) = 14.36; p = 0.000002], which is presented in detail on Fig. 2.

The following variables were included in the multiple regression model: sex (male, female), social status (middle-school student, secondary-school student, adult), predicted participation in combat sports and martial arts (AP, PP, NP) and the choice of the dominant feature of combat sports and martial arts (self-discipline, fair competition, respect towards the opponent, extraordinary fitness, self-defence skill and brutality). The multiple regression analysis showed that predictors of the high score of the attitude towards martial arts and combat sports are the lack of predicted participation in the PP group (supporters) [β = -.37; t(180) = -2.37; p = .02] and in the NP group [β = -.56; t(180) = -3.39; p = .001] and the lack of choice of brutality as the dominant feature of martial arts and combat sports [β = -.19; t(180) = -2.61; p = .01], which is indicated by negative correlations. The regression model explains 21% of total variance, R = .45; R² = .21; F (11. 180) = 4.24; p < .00001.

Table 1. Descriptive statistics for the scale of attitudes towards combat sports and martial arts (N = 192; p*** < 0.001)

<table>
<thead>
<tr>
<th>Attitude Scales</th>
<th>M</th>
<th>SD</th>
<th>Range (min-max)</th>
<th>K-S d</th>
<th>Cronbach's α</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total Score</td>
<td>57.45</td>
<td>11.57</td>
<td>26 - 91</td>
<td>.06</td>
<td>.81</td>
<td>.68***</td>
<td>.70***</td>
<td>.68***</td>
</tr>
<tr>
<td>2. Cognitive Component</td>
<td>11.43</td>
<td>6.63</td>
<td>0 - 32</td>
<td>.07</td>
<td>.88</td>
<td>.10</td>
<td></td>
<td>.14</td>
</tr>
<tr>
<td>3. Behavioural Component</td>
<td>28.44</td>
<td>5.52</td>
<td>3 - 39</td>
<td>.08</td>
<td>.79</td>
<td>.40***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Affective Component</td>
<td>17.58</td>
<td>4.76</td>
<td>0 - 28</td>
<td>.08</td>
<td>.57</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fig. 1. Differences between three groups representing various predictions as to future participation in combat sports and martial arts (active participation, passive participation or no participation) in terms of the total score of the Attitude Scale (p***<0.001)
Discussion

Results obtained from studies indicate that sex and age do not have any influence on the attitude towards combat sports and martial arts. Similar results were obtained by Cynarski et al. [16] in studies conducted for the southern part of Poland. According to the theory of reasoned action (TRA) [14], the intention of participation in combat sports and martial arts, as well as the stereotype concerning the brutality of martial arts and combat sports, turned out to have a significant influence on the attitude. The negative or weak attitude towards combat sports and martial arts was expressed by the persons who associated combat sports and martial arts mainly with brutality and did not plan to practice these sports and arts in the future. These tendencies concerned primarily the cognitive component of the attitude towards combat sports and martial arts.

Combat sports and martial arts are associated with brutality and a high level of aggression. However, this stereotype is contradicted by numerous research findings presented by Kavour et al. [17]. Long-term practicing of martial arts and combat sports reduces aggression to a large extent [e.g., 18, 19,20,21], particularly when it concerns traditional martial arts containing kata elements [22]. Furthermore, the effect of the decrease of the level of aggression caused by the practicing of martial arts is not dependent on sex [2]. Similar results of the reduction of the level of aggression in relation to the gaining of experience in these sports and arts were obtained by Polish researchers. When comparing various combat styles, Graczyk et al. [23] showed that the highest level of aggression control was presented by athletes practicing karate and aikido in comparison to athletes practicing taekwondo and boxing. Studies conducted by Mroczkowska et al. [24] also indicate that karate fighters present a considerably lower level of aggression in comparison to judo fighters and wrestlers. It must also be noticed that injuries occur most frequently during participation in team sports, such as basketball, volleyball or football, and in individual sports such as cycling, skating and skiing. Among 21 most dangerous sports listed in 2012 by the National Electronic Injury Surveillance System (NEISS) in the USA, only boxing ranked 5th (after various types of basketball, volleyball and cycling). Martial arts were not listed in any ranking of this kind, which is evidence of a very low risk of injury for persons practicing these arts [25].

We can conclude that the popularisation of combat sports and martial arts requires broad education on this subject. Knowledge as the basic constituent of the attitude can be a motivating factor stimulating the intention to participate actively in combat sports and martial arts. In addition, studies by Cynarski et al. [16] suggest that knowledge is the essential determinant of attitudes towards martial arts. At the same time, the author states that the level of knowledge is low both among middle-school students and secondary-school students. Studies by Hoff [26] indicate that martial arts themselves are not sufficient to ensure a valuable educational influence. It is necessary to communicate them properly in accordance with the ideology, and to teach and educate young trainees in a competent and consistent manner. It is also necessary to have a proper understanding of specific characteristics of martial arts, which involves the need to possess specific knowledge. It seems that these factors can significantly influence the social reception of combat sports and martial arts. Hoff [26] quotes after Masutatsu Oyama that karate is not a game or sport, but a partly physical and spiritual discipline. Hand-to-hand fighting as the way of life is not typical of mass culture, where material goods are prevalent in systems of values.

According to the survey results, only 6% of physical education students are interested in combat sports, whereas as
many as 23% are football fans. For comparison, the interest in Self Defense sports was expressed by as many as 42% of American middle-school students [28]. Studies confirm [28, 29] that the important role in the formation of sport interests is played by environmental factors (such as, for example, the socioeconomic status, social position or education) or cultural factors (e.g., the ethnic origin, nationality or traditions). Nevertheless, the attitude changes along with the gaining of successive experiences. According to R. Zajonc’s conception of the mere-exposure effect [30], the more frequently we come across a given phenomenon, the more favourable attitude we have towards it. Organising hand-to-hand fighting competitions in schools, encouraging young people to support fighters frequently during such competitions and introducing elements of martial arts to the school physical education system seems to be a good way to popularise such sports and arts.

The three-component structure of the attitude analysed here does not exhaust all possibilities of analysing this phenomenon. Contemporary theories include strength-related attributes such as importance, confidence, availability and attitude-related knowledge in the measurement of the strength of the attitude [31]. This perspective could be included in the analysis in future studies concerning the attitude towards combat sports and martial arts.

Conclusions

Studies conducted in groups of non-training persons allow us to obtain important information connected with the perception of combat sports and martial arts by bystanders. They are an expression of both gained knowledge and interest in specific forms of physical activity. Any changes occurring in the field of physical culture of Polish society, a growing interest in physical activity mainly among adults and a wide offer of competitive sports activities for school-age children and young people constitute important challenges for martial arts. Their attractiveness and popularisation in school environments form an essential opportunity to continue the cultivation of centuries-long traditions and development. It must be stressed that the interest in hand-to-hand fighting is small in comparison to the popularity of team games, particularly football. This situation can be changed through education and the stimulation of children’s interests in valuable forms of combat exercises.

The conducted study brought the following findings:

1. The sex and age of respondents do not affect significantly attitudes towards combat sports and martial arts.
2. Giving the attributes of brutality to combat sports and martial arts does not help to shape the favourable attitude to them.
3. The knowledge of particular styles of combat is significantly related to the favourable attitude towards combat sports and martial arts.
4. Persons who intend to practice combat sports and martial arts in the future present a considerably higher level of knowledge on that subject (the cognitive component of the attitude) and express a generally more favourable attitude.
5. The popularisation of combat sports and martial arts must be combined with the dissemination of reliable knowledge on that subject that breaks the stereotype of brutality of these sports and arts.

Acknowledgment

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References

10. Saldern von M, editor, Budo in heutiger Zeit [In Germany] [Budo of the present day] Luneburg: Verlag der Universitat Luneburg; 1998.

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