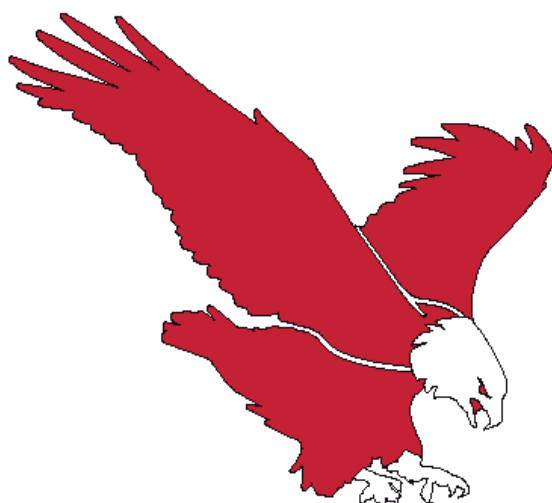


**3rd World Scientific Congress
of Combat Sports and Martial Arts
and 3rd IMACSSS International Conference**

ABSTRACT BOOK

October 15–17, 2014, Rzeszów, Poland

Wojciech Jan Cynarski and Anna Nizioł [Eds.]



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models of behaviour for children and young peoples [Chunlei Lu 2008]. As results of research often present opposite, the aim of this study was to determine aggression of combat sports in comparison with their non-training peers.

Material and methods

The study was conducted on a group of 160 and covered athletes practicing Brazilian ju-jitsu, boxing and shotokan karate. The control group consisted of randomly selected non-training peers. The Buss-Perry Questionnaire was used .

Results

The obtained results of the study show existing discrepancies in the levels of aggression in athletes covered by the study. Among three groups of athletes covered by the analysis, the highest level of aggression was observed in Brazilian ju-jitsu fighters and then in the group of boxers. The lowest level of aggression characterized shotokan karate fighters.

Conclusions

On the basis of results of the study, we can state that the practice of combat sports has a favourable impact on fighters; even though ju-jitsu achieved the highest level of physical and verbal aggression, the general level of their aggression was lower than in the case of non-training persons.

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ANGER IN ADULT MALE MARTIAL ARTS AND COMBAT SPORTS PRACTITIONERS: A COMPARATIVE STUDY ACCORDING TO AGE, EXPERIENCE AND STYLE

Key words: sport psychology; emotions; trait anger; STAXI-2.

Introduction

Martial Arts & Combat Sports (MA&CS) practitioners employ different sets of potentially dangerous techniques, depending on the MA&CS style, the current contest regulations and their own characteristics [for an overlook of many MA&CS styles, see: Green, Svinth 2010, vol. 1]. The high damage these techniques can inflict to the opponents demand for the practitioners, both in training and in competition, high degrees of self-regulation, respect for the others, and control of negative emotions such as anger, which in the long term is commonly believed to positively build character [Becker 1982; Lakes, Hoyt 2004]. Nevertheless

and in contrast with these popular conceptions, scientific research is not conclusive regarding the effects of martial arts practice. The main purpose of this study was to describe and compare the levels of trait anger in male adults engaged in MA&CS training.

Methods

One hundred ninety-five male MA&CS practitioners aged between 20 and 58 years ($M = 33.55$, $SD = 9.35$) participated in this study. Two age groups were considered: 20 to 29 years ($n = 72$), and 30 years and over ($n = 123$). Their main MA&CS was judo ($n = 35$), Brazilian jiu-jitsu ($n = 35$), mixed martial arts ($n = 34$), aikido ($n = 32$), muay Thai ($n = 35$) and karate ($n = 29$). Participants had between 1 month and 44 years and 2 months of experience in practicing one of these styles ($M = 7.83$ years, $SD = 9.17$). We considered a group of novices (up to 4 years of experience, $n = 99$) and a group of veterans (more than 4 years of experience, $n = 96$). Anger was measured using a Spanish version of the State-Trait Anger Expression Inventory-2 (STAXI-2) [Miguel-Tobal *et al.* 2009]. Practitioners filled out the questionnaire during the first twenty minutes of a regular training session. Descriptive statistics as well as Mann-Whitney and Kruskal-Wallis nonparametric tests were used for the data analysis.

Results

According to age, we found significant differences in AX-O scale ($Z_{M-W} = -2.145$; $p = 0.032$) and a tendency to statistical significance in T-Ang scale ($Z_{M-W} = -1.779$; $p = 0.075$) and T-Ang/T subscale ($Z_{M-W} = -1.952$; $p = 0.051$). With regard to years of experience in practicing his MA&CS style, a tendency to statistical significance was found in T-Ang scale ($Z_{M-W} = -1.722$; $p = 0.085$), AX-I scale ($Z_{M-W} = -1.766$; $p = 0.077$) and AX Index ($Z_{M-W} = -1.683$; $p = 0.092$). For the comparison of the six MA&CS styles, we found significant differences in T-Ang scale and T-Ang/R subscale, while AX-I scale and AX Index showed a tendency to statistical significance. Post-hoc analysis revealed several differences between the practitioners of the styles, with aikido group being globally less prone to anger and, on the other hand, mixed martial arts group achieving the highest global scores.

Discussion and conclusions

Although we found some differences according to age and MA&CS style, most of the anger factors tested did not reveal differences among groups, and there were no differences according to experience. This provides support for Vertonghen and Theeboom [2010], who concluded in their review that the mere martial arts participation does not guarantee the achievement of positive social-psychological outcomes. Nevertheless, the differences found according to MA&CS style suggest that some styles such as aikido attract and/or develop practitioners less prone to anger, while others such as MMA do the contrary. More studies including wider samples are needed to clarify the effects of MA&CS participation on anger.

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