

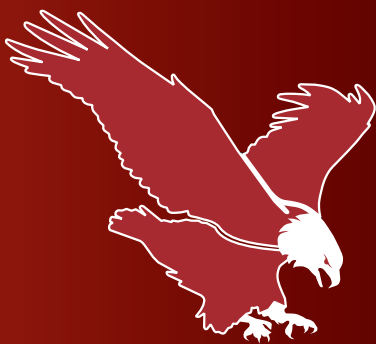


7th
IMACSSS
International
Conference
IMACSSS General Assembly

ABSTRACT BOOK

**October 17-19,
2018**

4th World
Scientific
Congress
of
Combat Sports
and
Martial Arts



IMACSSS



**University
of Rzeszów**

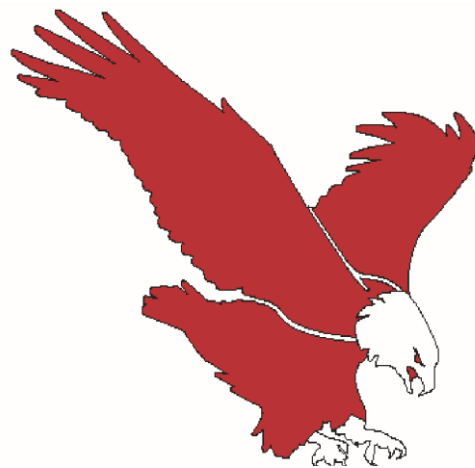
Rzeszów, Poland

4th World Scientific Congress
of Combat Sports and Martial Arts
and 7th IMACSSS International Conference

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October 17–19, 2018, Rzeszów, Poland

Wojciech Jan Cynarski and Gabriel Szajna [Eds.]



International Martial Arts And Combat Sports Scientific Society
Rzeszów 2018

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trajectory of selected parts of the lower limb is similar in both cases, however, there are several variations that may be related to the athlete's individual technique.

Conclusions

The obtained results can be useful and valuable tips while improving the front kicks technique. In addition, the analysis showed significant changes in the kinematic parameters of the kick when the kicking target is introduced. Study describes the kinematic effect of the target.

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SCIENTIFIC PRODUCTION ON KARATE: A BIBLIOMETRIC APPROACH

Keywords: martial arts, combat sports, karate, science, bibliometrics.

Introduction

Karate is a popular martial art and combat sport (MA&CS) worldwide, which started to spread globally following World War II [Mottern 2010]. Nowadays the World Karate Federation has 191 affiliated national federations, and in 2016 the International Olympic Committee accepted karate for the program of the Tokyo 2020 Summer Olympics. The development of karate as a cultural practice, as well as its intrinsic characteristics as a MA&CS, has raised the interest of the scientific community for a long time. Nevertheless, to our knowledge there are no studies assessing the extent and evolution of such interest. The main aim of this study is to provide a general overview on the scientific production on karate.

Methods

Articles, books or book chapters focused on karate, referring to karate on results and/or including karate practitioners in the study sample and published until 2017 were under the scope of this study. Scopus, Web of Science (WoS), SportDiscus, Medline, ERIC and PsycINFO databases were screened for data retrieval. Search terms included "karate*" (i.e., karate, karatedo, karateka) and "kumite". The obtained records ($n=4,166$) were then exported to EndNote reference management software and individually filtered for each database. Finally, all the records accepted for inclusion ($n=2,460$) were again filtered to avoid duplications. After this process, the number of records was 1,209. These were exported to a spreadsheet and descriptively analyzed according to the following variables: (1) *year of publication*; (2) *source*: journal, book or book chapter, and journal name for the case of articles; and (3) *scientific field*, following the UNESCO nomenclature for fields of science and technology.

Results

All the screened databases provided unique records (i.e., not indexed in the other screened databases) for the analysis. Most of the 1,209 selected records were articles (94.7%) while nine were books (0.7%) and 55 were book chapters (4.5%). They were published for 55 years (1963-2017), ranging from zero (years 1964 and 1965) to 99 publications (year 2017) per year. The number of publications per year had an irregular, slow increase from the 1960s to the mid-1990s, then it irregularly developed until mid-2000 and finally it grew exponentially until 2017. Indeed, the last decade (2008-2017) accounted for the 54.3% of total publications. At least 484 different journals published research on karate, ranging from zero to 51 publications per journal, but only 20 journals (4.1%) had published ten or more articles on karate. No journal was specifically focused on the study of karate but up to seven journals were specific to MA&CS, providing the 12.4% of total selected publications. Regarding scientific fields, 15 were identified (62.5% of total fields), ranging from 1 to 437 publications per field. The fields with ten or more records were Life Sciences (36.1%), Medical Sciences (26.6%), Psychology (17.9%), Pedagogy (5.7%), Sociology (5.5%), History (3.1%), Anthropology (2.0%) and Philosophy (0.8%).

Discussion and conclusions

Previous bibliometric studies on other popular MA&CS, such as judo [Peset *et al.* 2013] or taekwondo [Pérez-Gutiérrez *et al.* 2015; Pérez-Gutiérrez *et al.* 2017] focused in just one database (WoS) and comparably retrieved far fewer records than in our research. While Peset *et al.* [2013] found 384 judo articles published until June 2011, our study found a total of 736 in all databases until this year, 262 of them being indexed in the WoS (35.6%). Similarly, Pérez-Gutiérrez *et al.* [2017] found 340 taekwondo articles published until 2016, while our study found 1,123 karate articles until this year, 421 of them being indexed in the WoS (37.5%). These studies also found far fewer journals publishing articles on judo ($n=162$) and taekwondo ($n=83$) than we did for karate ($n=487$). Therefore, and taking into account that all consulted databases provided unique references for this study, it is suggested that researchers screen a wide variety of multidisciplinary and specific databases when searching for information on MA&CS.

Nevertheless, these studies show that there exists a similar pattern in the evolution of the number of publications on judo, taekwondo and karate. Despite the first indexed records on these sports were published in a wide margin of more than 30 years (1956 for judo, 1963 for karate and 1988 for taekwondo), which can be explained by historical reasons [Green, Svinth 2010], the most significant change for all of them happened during the first decade of this century, when scientific publications on these sports grew exponentially. Considering the evolution of these sports as a whole, it is very likely that the increase of publications was more linked to the general development of sport sciences and of the databases coverage than to the specific, social development of these sports. In the same regard, the dominant fields (i.e., Life Sciences, Medical Sciences and Psychology) found in this study reflect the current trends in sports science research (health and sport performance) [Williams, Kendall 2007]. Further studies could explore more bibliometric indicators on the topic in order to complete the picture on the evolution and current state of scientific production on karate.

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A BIBLIOMETRIC REVIEW OF SCIENTIFIC PRODUCTION ON AIKIDO FROM THE 1970S TO TODAY

Keywords: martial arts, combat sports, aikido, science, bibliometrics.

Introduction

Aikido is a Japanese martial art which is now practiced worldwide. It is practiced “for reasons ranging from the strictly martial to the strictly spiritual, with the general maintenance of health and wellbeing occupying the middle ground between these two extremes” [Goldsbury 2010: 132]. Despite having an international sport federation (International Aikido Federation – *IAF*, with 52 member countries to date) and being recognized by the Global Organisation of International Sport Federations – *GAISF*, aikido could be considered as an exception in the sport world as it is usually not practiced for official sport competition: “In contrast, aikido refuses to become a competitive sport and rejects all forms of contests or tournaments, including weight divisions, ranking based on the number of wins and the crowning of champions. Such things are seen as fueling only egotism, self-concern and disregard for others” [Ueshiba 1984: 15]. To our knowledge there are no studies assessing the interest of the scientific community on this unique martial art. The main aim of this study is to provide a general overview on the scientific production on aikido.

Methods

Assuming that scientific production on aikido would be probably lower than that of more popular martial arts and combat sports (MA&CS), we explored a wide variety of global, multidisciplinary and specific databases: Web of Science (WoS), Scopus, DOAJ, Academic Search Complete, ProQuest, JSTOR, SportDiscus, Medline, The Cochrane Library, CINAHL, ERIC, PsycINFO, Psychology & Behavioral Sciences Collection, Science Open, and The Philosopher’s Index. The search term for all databases was “aikido*” (i.e., aikido, aikidoka, aikidoist). The obtained records ($n=901$) were exported to EndNote reference management software and filtered following these inclusion criteria: (1) *Document type*: articles, books or book chapters; (2) *Topic*: focused on aikido, referring to aikido on results and/or including aikido practitioners in the study sample; (3) *Publication date*: published until 2017; (4) *Language*: no language restriction was applied; and (5) Not duplicated. The final number of selected records was 243. They were exported to a spreadsheet and descriptively analyzed according to the following variables: (1) *year of publication*; (2) *source*; and (3) *scientific field*, following the UNESCO nomenclature for fields of science and technology.