

BIBLIOMETRICS

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Topics concerning women practicing fighting systems in the discourse of selected scientific journals – A short bibliometric analysis

Submission: 1.07.2020; acceptance: 13.01.2021

Key words: women, martial arts, scientific journals, discourse

Abstract

Background. This article analyzes the discourse in selected scientific journals on women's participation in all forms of melee combat as they train in these forms of physical culture.

Aim. The aim of the article is to provide knowledge about the thematic categories characteristic of scientific publications about women practicing various fighting arts.

Material, Methods and Results. The subject of the analysis consists of selected journals on the afore-mentioned topic, which are indexed in various scientific databases such as *Sport Discus* and *Scopus & Scimago*. The topics to be analyzed are considered based on a brief description of their discourse in scientific literature, their presentation in scientific journals devoted to various forms of combat, and a presentation, in outline form, of issues relating to training in these forms of physical activity. The cognitive value of this study is strengthened by its bibliometric components involving quantitative and qualitative analysis.

Conclusions. It can be assumed that specialized scientific periodicals collect the most valuable content from the perspective of the preferred research methodology and the adopted thematic profile.

Introduction

Two topics regarding women practicing martial arts and other various forms of combat sports are currently treated as a research area in various scientific disciplines. Specifically, these topics are, “The forms of psychophysical activity linked to a certain tradition of hand-to-hand fighting or using weapons, aimed at personal development and merging educational methods with improvement in the spiritual dimension” and “A competitive contact sport where two combatants fight each other to gain enough points or to achieve a condition to declare a single winner by means of using certain rules of direct engagement” [Cynarski, Skowron 2014: 52]. The need exists to conduct scientific research on these issues, particularly in terms of physical culture, pedagogy, sociology, psychology, and other sciences.

Moreover, the current state of knowledge needs to be supplemented by the results of the analysis carried out using research tools from such disciplines as media studies and cultural studies.

Research is currently being conducted into the psychophysical capabilities of women who actively engage in these physical disciplines, especially in the form of group and/or individual training. Also under investigation there is the relationship between ‘images’ of such women and their actual portrayal as can be determined based on knowledge obtained from anthropometric research. The scholars researchers who have had this literature published in scientific journals work within various disciplines, providing interesting perspectives, confirming or refuting specific theories.

According to the requirement of reliability in the conduct of research, all results obtained on the basis of

empirical research must be verifiable, given the axiomatic assumption that findings must reflect the observed reality. This requirement is also important for situations in which the results obtained differ from those which are expected, especially when in contrast with a stated hypothesis or when a finding contradicts an apparently distorted image as portrayed in the messages prevalent in popular culture. The results of such scientific research are essential in confirming or refuting theories functioning within the framework of so-called “universal” knowledge.

This article focuses on the topic of discourse, as defined in one of the chapters, in various scientific journals covering women’s participation in various forms of martial arts, combat sports and other forms of fighting arts. This discourse will be analyzed only to a limited extent in the present study, given that this discourse is shaped by the complexity of its subject matter, all the while taking into account the broad nature of its scope both thematically and conceptually, as well as the definitive character of its subject matter. Therefore, only the following are included in the present study: a brief discussion of the issue of scientific discourse, a characterization of scientific journals devoted strictly to different methods of fighting, and a presentation, in outline form, of the issue of women’s participation in these disciplines. The value of the present study is enhanced by its incorporating analysis (as a new problem in science).

Background

The literature documenting research into the presented issue is divided into four subtopics: 1) the flow of scientific information, 2) defining scientific discourse, 3) the characteristics of scientific journals devoted to various forms of combat, and 4) the role of these journals in the dissemination of scientific knowledge, and women training in these forms of physical activity. This categorization does not exhaust the subject matter under investigation but rather is shaped by the limited volume of literature forming the framework for this article.

The discourse present in scientific journals is the subject of knowledge transmission from senders to recipients. The shape of this discourse is determined, among other factors, by various scientific journals’ treatment of different knowledge segments only to a limited extent [Pawelec 2016]. Therefore, the discourse under consideration is defined as “characteristic of the scientific sphere of social life, as well as a set of specific discourses occurring in this sphere and in various ways implementing typical features” [Ostrowicka, Spychalska-Stasiak 2017: 106-107; Gajda 1999: 10]. This sphere includes participation by all those involved in ongoing discourse concerning training processes and other forms of the dissemination of knowledge relating to various forms of combat.

As Jolanta Przyłuska [2010] notes, “virtual reality” enables the creation and distribution of information to be searched for by prospective recipients of the said information. This statement complements the assertion of Sharon Dunwoody [2008] indicating that the Internet is the fastest and easiest way for scientists to obtain information; in fact, many researchers use the Internet as their primary medium. In contrast, Massimiano Burchi [1996] shows that many researchers skip some stages of the scientific communication process by addressing recipients directly. Such forms of knowledge transfer are used by scientists in teaching various forms of fighting incorporating both theoretical knowledge and practical skills [Sieber, Pawelec 2016].

The discourse of scientific journals is characterized by the avoidance of communication in circumstances typical of a different segment of mass media. These contrasted circumstances usually involve: 1) presenting a given problem in a fragmentary format when such a presentation is not dictated by the nature of the research itself, 2) strengthening the attractiveness of the publisher in the eyes of authors and readers at the expense of promoting reliable scientific research, 3) suggesting to the recipients what their attitude should be towards the content presented to them, 4) attempting to influence the consumer’s subconscious thoughts, e.g. by creating an unjustified sense of danger in society, 5) repeating without authorization, specific content in an attempt to dominate alternative opinions, and 6) engaging in disinformation or silence, e.g. bypassing information inconvenient for the sponsor, publisher, or other factors related to decision-making with regard to facts established through research [Flensburg 2009].

Claude Sionis [1997] draws attention to the existence of content related to semiotics, mental representation, pragmatics, and cognitive science within scientific discourse. Sionis demonstrates the ways in which verbal materials convey unambiguous information, while non-verbal materials are comparatively more suitable for more ambiguous interpretations. Implied and non-literal elements are inherent in such communication because these features introduce a dimension to scientific discourse, which proves to be an important factor in the evolution of concepts. This dimension is encouraged by the popularization of scientific discourse, as described by M. Angeles Lopez Orellana [2012]. One important aim of this popularization is to transfer knowledge to people without a specialized background of relevant information.

Part of this scientific discourse consists of publications directly related to the topic of martial arts, sports, and other forms of combat. Przemysław Pawelec and Jong-Hoon Yu [2019], referring to magazines covering this subject, emphasize the dominance of scientific discourse in sources other than mass media focused on popularizing the disciplines. In the case of such

media, one of the factors leading to their consumption is the willingness to expand the range of knowledge of the recipients. Magazines with this thematic profile are treated as sources of publications created as part of the specific work of their authors, typically involving scientific cooperation whether local, national, or international, with citations crediting other authors. Alan Pitchard [1969] indicates the possibility of creating statistical studies that fully analyze this issue. By contrast, typical mass media outlets regularly elicit an emotional response on the part of the reader or viewer [Pawelec, Yu 2019].

The subject of this analysis is the range of scientific journals dealing with various forms of fighting. This type of media presents the results of theoretical and practical analyses, reviews of the current state of knowledge or of emerging research, reports, biographical notes, and discourse of similar character. These journals are available on-line, including through internet search engines; some of them also appear in printed versions. Such periodicals reach a wide range of recipients with varying degrees of interest in such topics (e.g. scientists, athletes, etc.)

Scientific journals on this subject present research results using various means and tools designed to popularize knowledge. In terms of coverage, access level, group of recipients and various options of access to content, these publications have become somewhat similar to mass media (commercial and non-commercial): "Surely, publishing in today's language of science (English) and in the electronic version with open access to the full text makes it easier for entering of a work to the global scientific circulation. Commercialization makes this access difficult, both for the authors of works, readers and scientific institutions. On the other hand, journals and publishers, thanks to good creativity, appear to be functioning better than before. New technologies give a chance to enhance scholarly communication. Among criteria for the evaluation of scientific achievements, the scope (local or international) should be taken into account. It is important, where the author publishes. Of course, the language of publication does not prejudge the merits of the work, but it helps or hinders the availability of such content on a global scale" [Gutierrez-Garcia *et al.* 2008: 60].

Dissemination of content that facilitates a scientific understanding of the "image" of women is one of the many tasks undertaken by various scientific journals. This goal is facilitated by the presence of this type of media on the Internet.

Alex Channon and George Jennings [2014] assert that women training for various forms of combat, thus becoming objects of various scientific analyses, are people undergoing changes in their physicality and psychological outlook (e.g. by increasing their self-esteem). In emergency situations, they may even successfully employ the

fighting skills they develop. In turn, Dariusz Boguszewski, Jakub G. Adamczyk, Katarzyna Kerbaum, Bartłomiej Antoniak, Anna Obszynska-Litwiniec and Dariusz Białoszewski [2015] claim that topics related to women practicing such forms of physical activity can be analyzed from various angles (e.g. motor skills, combat safety, or the elimination of hazardous factors in training).

Helena Ostrowicka and Justyna Spsychalska-Stasiak claim that the pronunciation of discourse consists of, among other features, the identification of concepts and leading topics, as well as the rules for forming and profiling a specific piece of knowledge. In this conceptualization, these authors concur with Waldemar Czachur, to whom they refer, in designating "actors" and "actresses" within the discourse, cultural and social contexts with expanded ranges, and so-called "discursive moments" (e.g. in "Elements of a certain whole and cultural continuity and discourse characteristic of a given community") [2017: 108; Czachur 2011: 81]. In keeping with this approach, the "actresses" are women training in various forms of combat, who through their activity, are "located" in a cultural context functioning in a certain social space with its participants using clearly defined codes.

The presence of women in various forms of fighting is a topic that requires an exploration into and documentation of the state of existing knowledge, owing to the multitude of scientific disciplines that, to a greater or lesser degree, undertake an analysis of the above-mentioned issues. For the present study, the main problem is the scope of topics concerning women's participation in martial arts, combat sports, and other combat systems from the perspective of physical culture and, to a lesser extent, presented in cultural terms. This problem is based on the assumption that the first of these perspectives dominate the discourse.

In the case of martial arts, women's activity in this area manifests itself in performing physical exercises as a means to acquire further skills. It is hypothesized that knowledge of and competence in applying the principles of fighting gives women a greater sense of security and self-esteem, improves their emotional self-control, teaches them concentration and perseverance, and enables them to acquire a high level of mental and physical fitness, in addition to positively affecting their individual health potential [Cynarski, Lee-Barron 2014]: "Perfection in controlling the body and richness of movement in combat techniques translate into the specific axiology of martial arts... General ethical and functional values are here complemented by a deeper sense of long-term training. This can be explained by the concepts of humanistic psychology (self-determination, self-realization) or as a modern manifestation of the ascetic pattern of physical culture... which means that practicing martial arts is a way to develop morality and spirituality" [Cynarski 2019: 288].

Apart from various cultural approaches to the subject, participation of women in various forms of activity within the so-called “hard” martial arts, combat sports, and other forms of combat is of particular interest to the present study. According to some authors, such fighting styles can be considered to include those that allow the combatant to use his or her blows in full-contact, focusing on knocking down the opponent. These styles include, among others, *Muay Thai* and Mixed Martial Arts [Mierzwiński, Philips 2015].

These “hard” forms of “struggle” have been contrasted with those “suitable for women.” This dichotomous thinking is what has inspired some martial arts disciplines to develop parallel forms ostensibly suitable specifically for women. To this end, said martial art forms have been adapted, as have other fitness programs that directly contribute to increasing women’s heterosexual attractiveness [Channon 2013]. Promoting such forms of “struggle” is usually criticized by authors studying this issue, who generally hold points of view congruent with feminist ideology.

Participation by women in various fighting disciplines is viewed by some authors as one possible path leading to counteracting women’s perceived disadvantage in any aggressor-victim relationship. To this end, they engage in training processes, the goals of which are to increase awareness of personal safety, prepare for defense, promote self-control and non-violence, and strengthen the mind and body: “Women who are martial artists and devote themselves to martial arts are equally dangerous like a weapon for men because martial arts are meant to make everyone, man, woman, child... capable of defense” [Noel 2009: 18].

One of the reasons for women’s interest in various forms of fighting can be considered their innate sensitivity to the effects of crime and a need for protection, which is deeply rooted in their consciousness. Therefore, women undertake self-defense training because it enables them to prevent and react to violence. This empowerment helps them not only to take responsibility for their own safety, but also for that of others close to them [Noel 2009].

Problem and aim

The analysis related to the subject of this paper will concern the presence of content concerning women practicing forms of fighting in selected scientific journals. All types of publications have been considered whenever the above-mentioned subjects have appeared at least once, during the period from 2015 to 2019, the latter limitation serving as a logical test, adjusted due to the characteristics of the study. The research will include publications containing in the title and/or keywords expressions that clearly refer to women, such as: woman/women, feminine, female, sex (or gender).

The aim of the article is to provide knowledge about the thematic categories characteristic of scientific publications about women practicing various fighting styles. Probably the results of the study will contribute to broadening the knowledge about the images of women (in popular and scientific mass media) and their activity in the mentioned forms of physical activity. A distinguishing element (as a novelty) of this study is an attempt to determine the number of publications on women practicing martial arts not only in the context of bibliometric analysis but also linking it with the probable shapes of discourses present in various types of mass media.

Based on the theoretical assumptions presented in this paper, the following research questions have been posed: 1) Did the subjects examined in the journals concern women practicing different fighting styles and if so, with what intensity were these women practicing?, 2) What thematic categories devoted to these women appeared in these journals? and 3) What fighting styles were represented by women, considered either individually or collectively, and furthermore, who were the characters whether primary or secondary of each article or feature?

Material and Methods

The inclusion of work by Carlos Gutierrez-Garcia, Wojciech J. Cynarski, Carl De Cree, Raquel Escobar-Molina, Abel Figueiredo, Emerson Franchini, Thomas Green, Guodong Zhang, Mikel Perez-Gutierrez, Sergio Raimondo, Zdenko Reguli, Robertin Ruiz-Bariz, Luis Santos, Joseph Svinth and Michal Vit in the database, *Web of Science*, in 2018 indicates that the scientific journals on this subject are covered by one of the most important scientific databases extant. Moreover, at the time of this survey (June 2020), other journals have also been indexed in various databases of scientific publishing houses [2018]. Meanwhile, W. J. Cynarski and Zdenko Reguli [2014] have prepared a list of journals that had been indexed in the *Scopus* database by the end of 2013.

With this indexing as a foundation, the data originally obtained by Cynarski and Reguli has been updated, the results of which are presented in Table 1. It should be noted, however, that only those journals that were subject to further study have been included.

These journals present scientific research that popularizes researchers’ achievements in recognizing various elements of general and specific knowledge. An example of this perspective would be the content of journals focusing on various approaches to the subject studied. To this end, various forms of fighting are characterized in terms of their: 1) genesis (e.g. historicity, social reception, evolution in theoretical and practical aspects); 2) interdisciplinary nature of utilitarianism (i.e. their subject of analysis, such as the conduct of duels for

Table 1. Scientific periodicals focused on martial arts science in the *Web of Science i Scopus* databases on April 2020

JOURNAL	ISSN	EDITOR, PUBLISHER, COUNTRY	INDEXATION
Ido Movement for Culture. Journal of Martial Arts Anthropology	2082-7571, 2084-3763	Wojciech J. Cynarski; Idokan Poland Association/Poland	ABCD
Archives of Budo	1643-8698	Roman M. Kalina; Archives of Budo Bartłomiej Barczyński/ Poland	ACDE
Research Journal of Budo	2185-8519, 0287-9700	Masasuke Kuwamori, JAB/Japan	
Revista de Artes Marciales Asiaticas	2174-0747	Carlos Gutierrez-Garcia, University de León/Spain	
Institute of Martial Arts & Sciences Quarterly	2049-3649	James Lee-Barron, IMAS/ England	
Archives of Budo: Science of Martial Arts and Extreme Sports	2300-8822	Roman M. Kalina, Archives of Budo Bartłomiej Barczyński/ Poland	
International Journal of Martial Arts Research	1479-6538, 1479-652X	Eugene de Silva, The Society of Martial Arts/England	
Martial Arts Studies	2057-5696	Paul Bowman, Cardiff University Press/ England	

Source: W.J. Cynarski, Z. Reguli (2014), *Martial arts science institutionalization: specialized scientific periodicals*, “Ido Movement for Culture. Journal of Martial Arts Anthropology”, vol. 14, no. 1, pp. 54-62; authors’ research. (A) Emerging Sources Citations Index, Web of Science, (B) EBSCO/Sport Discuss, (C) Elsevier/Scopus & Scimago, (D) ERIH Plus, (E) Science Citation Index Exp, Web of Science.

self-defense or sporting combat); 3) philosophical foundations (e.g. the influence of foreign ideologies on the traditional understanding of martial arts disciplines); 4) cultural components (e.g. forms of cultural dialogue and inculturation); 5) pedagogy (e.g. strategies for teaching children or youth); and 6) sports (e.g. the use of elements necessary to achieve success in various dimensions of competition) [Cynarski 2004; Pawelec 2016].

The research methods used in the present study will include: 1) qualitative content analysis, and 2) selected elements of bibliometric analysis. The first method will be applied to Questions 2 and 3, in connection with the designation of specific research categories, their definition, and categorization based on uniform texts and keywords, as well as on other indicators whenever present. On the other hand, the answers to Question 1 will come from the corpus of bibliometric data and the resulting percentage calculations derived from it.

Qualitative content analysis will allow the scope of variations within the topic under examination to be defined and a narrative constructed with its accompanying intertextuality. Hence, “The aim of the analysis is to systematically and reliably indicate which the topics were, and how they were addressed in the research material. The basic unit is therefore a single text, and, by taking a broader view with a set of texts which, can act as a whole, can complement each other or refer to each other, only in the group constituting a semantic whole. Therefore, it is not the individual words that are relevant to the planned results, but the general meaning of the statement and its context” [Szczepaniak 2012: 84]. By taking into account a qualitative analysis of accompanying illustrative material, this research may serve to

verify the general assumption that photography is an actual reflection of reality. Thus, the resultant analysis will yield clearer, more definitive conclusions than would text analysis alone [Taylor, Willis 1999].

Mikel Perez-Gutierrez, C. Gutierrez-Garcia and R. Escobar-Molina have used the bibliographic method in reference to the thematic profiles of the journals they have analyzed: “Two classifications were made, the first based on the same term used for each search... and the second grouping the different names of a specific MA or CS in the same category... This latter categorization was based on Gutierrez-Garcia, Perez-Gutierrez and Calderon-Tuero’s work, although <<Generic>> category was adapted for the present research purpose” [2011: 180].

Two analyses, the subjects of which are aspects characteristic of scientific journals, consist of: 1) the impact of possible thematic diversity, and 2) the functioning of the media, which can be combined with other publications on research topics addressing the problem of the coverage of issues: “Therefore, it is easier for publishers and editors to avoid a narrow-minded approach to specific knowledge segments. Of course, the aforementioned scope should not be too wide, so that a given periodical would not be perceived by the authors as too thematically specialized” [Pawelec 2006: 216].

Results

The results obtained in the present study are presented in four tables, having been derived, as mentioned above, based on elements of quantitative and bibliometric analysis.

Table 2. Number of publications about women practicing different fighting styles as discussed in the examined journals

JOURNALS	NUMBER OF PUBLICATIONS
Ido Movement for Culture. Journal of Martial Arts Anthropology	15(25.1%)
Archives of Budo	135(71.3%)
Research Journal of Budo	69(13.3%)
Revista de Artes Marciales Asiaticas	24(21.1%)
Institute of Martial Arts & Sciences Quarterly	10(18.4%)
Archives of Budo: Science of Martial Arts and Extreme Sports	18(14.5%)
International Journal of Martial Arts Research	3(19%)
Martial Arts Studies	9(11.3%)
	\bar{x} 36,38(24.0%)

Source: Authors' research.

Table 3. Number of publications with thematic categories related to women practicing different fighting styles as discussed in the examined journals

JOURNALS	NUMBER OF PUBLICATIONS			
	CULTURAL EXPRESSION	NON-CULTURAL CONTENT		
		PHYSICALITY	RIVALRY	OTHER
Ido Movement for Culture. Journal of Martial Arts Anthropology	3(19.1%)	10(70.2%)	1(8.6%)	1(2.1%)
Archives of Budo	15(11.2%)	96(70.9%)	23(16.8%)	1(1.1%)
Research Journal of Budo	15(21.4%)	41(59.2%)	12(19.2%)	1(0.2%)
Revista de Artes Marciales Asiaticas	2(9.8%)	14(57.3%)	8(32.9%)	0
Institute of Martial Arts & Sciences Quarterly	2(17.4%)	7(73.9%)	1(8.7%)	0
Archives of Budo. Science of Martial Arts and Extreme Sports	0	17(92.8%)	1(7.2%)	0
International Journal of Martial Arts Research	1(49.4%)	1(40.7%)	1(9.9%)	0
Martial Arts Studies	2(22.3%)	5(59.4%)	2(18.3%)	0
	\bar{x} 5(18.8%)	24(66.5%)	6(14.3%)	3(0.4%)

Source: Authors' research.

Table 2 contains the results related to answering the first research question. It concerns the extent to which topics relating to women's practice of different fighting styles, as they are present in the media under consideration in the present study.

The data in Table 2 indicate the presence of topics relating to women (in each question as previously highlighted categories) in each of the surveyed journals. The entries contained in them most frequently referred to the analysis of women's activity as a collective category albeit with short, infrequent reference to specific cases. The highest result of materials on this subject appeared in the "Archives of Budo" (135; 71.3%) while the lowest was in "International Journal of Martial Arts Research" (3; 19%). The average was 36,38 (24%).

The second research question concerned the identification of thematic categories devoted to women. The data obtained on the basis of qualitative analysis is presented in Table 3 (i.e, percentage data, which incorporates the values contained in Table 2). For this question, the topic has been subcategorized into content related to cultural issues (e.g, tradition, popular culture, historical issues, and women as authorities), which were further

subdivided into such issues as those concerning the physicality of women or their rivalry.

The results obtained indicate the occurrence of content on a variety of topics in all surveyed journals. It should be noted, however, that this result did not apply to all publications appearing in the analyzed scientific journals, but only to those specifically related to women.

"Forms of cultural expression of women" ("Forms which result from the creativity of individuals, groups and societies and which contain cultural content") [UNESCO 2005: 4] appeared most often in the "International Journal of Martial Arts Research" (49.4%), while in "Archives of Budo: Science of Martial Arts and Extreme Sports" it did not occur at all but only in percentage. In terms of numerical frequency, this category is presented most often in "Archives of Budo" and "Research Journal of Budo" (each at 15), and least presented – in "Archives of Budo: Science of Martial Arts and Extreme Sports".

In terms of percentages, the subject of "physicality" (The result of behavior "in the field of care for physical development, mobility and human health, following the patterns adopted in a given community") [Nosal 2015: 25] has appeared the most times (92.8%) in the "Archives of Budo: Science of Martial Arts and Extreme Sports" and

Table 4. Fighting styles represented by the characters in the publications

JOURNAL	CATEGORIES CONNECTED WITH WOMEN		
	MARTIAL ARTS	COMBAT SPORTS	OTHER
Ido Movement for Culture. Journal of Martial Arts Anthropology	7(43.9%)	7(50.8%)	1(5.3%)
Archives of Budo	54(40.2%)	78(57.7%)	3(2.1%)
Research Journal of Budo	41(59.3%)	27(39.6%)	1(1.1%)
Revista de Artes Marciales Asiáticas	13(55.4%)	10(42.4%)	1(2.2%)
Institute of Martial Arts & Sciences Quarterly	7(73.4%)	2(23.4%)	1(3.2%)
Archives of Budo: Science of Martial Arts and Extreme Sports	9(48.8%)	9(51.2%)	0
International Journal of Martial Arts Research	2(67%)	1(34%)	0
Martial Arts Studies	6(69.9%)	2(25.9%)	1(4.2%)
\bar{x}	17(48.6%)	17(48.6%)	1(2.8%)

Source: Authors' research.

least often in the “International Journal of Martial Arts Research” (40.7%). In terms of numerical frequency, this category is presented most often in “Archives of Budo: Science of Martial Arts and Extreme Sports” (96), and least often in the “International Journal of Martial Arts Research” (1).

On the other hand, issues relating to “rivalry” (“Very formula of competition coming from martial arts or ritual practice connected with the direct or symbolic fight with institutionalized rules, where sport regulations preserve health and dignity of the competitors”) [Cynarski 2009: 252] were analyzed to the largest extent in “Revista de Artes Marciales Asiáticas” (32.9%), and to the smallest extent in the “Archives of Budo: Science of Martial Arts and Extreme Sports” (7.2%). In terms of numerical frequency, this category is presented most often in “Archives of Budo” (23) and least often in the “Ido Movement for Culture. Journal of Martial Arts Anthropology”, “Institute of Martial Arts & Sciences Quarterly”, “Archives of Budo. Science of Martial Arts and Extreme Sports” and “International Journal of Martial Arts Research” (1).

Also noteworthy is the lack of scientific articles assigned to the category “other” in “Ido Movement for Culture. Journal of Martial Arts Anthropology” (2.1%) and to the smallest extent in the “Revista de Artes Marciales Asiáticas”, “Institute of Martial Arts & Sciences Quarterly”, “Archives of Budo. Science of Martial Arts and Extreme Sports”, “International Journal of Martial Arts Research” and “Martial Arts Studies” (0%). In terms of numerical frequency, this category is presented only in “Ido Movement for Culture. Journal of Martial Arts Anthropology”, “Archives of Budo” and “Research Journal of Budo” (1). As already mentioned, there were no entries in other journals covering this category.

The standard deviation value for this analysis was also calculated at 11.9 (when $\alpha = 0.001$). This indicates that the aggregation of the percentages for each category differed from their average percentages by 11.9% overall.

The third research question referred to the highlighted combat styles represented by women presented from the perspective of the subjects being studied. Table 4 presents a list of topics devoted to women on the basis of their fighting styles. In this case, not all publications were examined, only those which include entries concerning women practicing martial arts and other forms of combat.

Martial arts and combat sports appeared in all these journals. By percentage, the first form of activity (“The forms of psychophysical activity linked to a certain tradition of hand-to-hand fighting or using weapons, aimed at personal development and merging educational methods with improvement in the spiritual dimension”) [Cynarski, Skowron 2014: 53] appeared most often in the “Institute of Martial Arts & Sciences Quarterly” (73.4%) while least frequently in the “Archives of Budo” (40.2%). In terms of numerical frequency, this category is presented most often in “Archives of Budo” (54) and least often in the “International Journal of Martial Arts Research” (2).

By percentage, the second form (“A competitive contact sport where two combatants fight each other to gain enough points or to achieve a condition to declare a single winner using certain rules of direct engagement”) [Cynarski, Skowron 2014: 52] appeared most frequently in the “Archives of Budo” (57.7%) but least often in the “Institute of Martial Arts & Sciences Quarterly” (23.4%). In terms of numerical frequency, combat sports are presented most often in “Archives of Budo” (78) and least often in the “International Journal of Martial Arts Research” (1).

The category “Other” is represented most frequently in terms of percentage in “Ido Movement for Culture. Journal of Martial Arts Anthropology” (5.3%), in comparison to its total absence in the “Archives of Budo: Science of Martial Arts and Extreme Sports” and “International Journal of Martial Arts Research.” In terms of numerical frequency, this category is presented most often in “Archives of Budo” (3) while it does not appear

in either the “Archives of Budo: Science of Martial Arts and Extreme Sports” or “International Journal of Martial Arts Research”.

The standard deviation value for the analysis above was 9.2 (when $\alpha=0.001$). This indicates that the percentages of women’s styles of combat differed from their average percentages by an overall mean of 9.2%.

Discussion

The subject of martial arts and combat sports is present in many scientific journals. Carlos Gutierrez-García and his co-authors point out that journals exist in a common scientific space. Therefore, it is appropriate to retain all compilations and classifications of the mass media with scientific profiles that treat martial arts and combat sports as the main issues for investigation [2018].

Any analysis of women’s participation in the fighting arts primarily concerns their training for sports, while to a lesser extent focusing on self-defense, biology (e.g. sexual dimorphism), culture, or psychological conditioning. The latter group of foci are frequently concerned with various archetypes of fighting women, four of which (i.e. the “warrior,” the “dancer,” the “princess” and what is alternatively labeled the “archer” or the “witch”) are popular targets in radically feminist discourse [Nower 1993; Cynarski, Sieber 2015; Cynarski 2019]. Very rarely, however, do these analyses relate to philosophical issues, such as female corporeality or ideological considerations of attitudes towards one’s body [cf. Cynarski, Obodyski 2011a, b]. The aesthetic and self-expression dimensions of martial arts practiced by women are noticed, especially in the technical systems of Chinese *wushu* [Klens-Bigman 2002; Cynarski 2015; Pfister 2017]. Most women choose to practice “soft” martial arts, related to dance (*aikido*, *capoeira*, *qigong* and *taijiquan*), where they can show their grace and harmony of movement [Anderson 2001; Moegling 2006; Cynarski 2019]. Meanwhile, however, many young women do compete in sports traditionally considered “male” or “hard,” which are seen as involving a more significant degree of risk. This category includes, in particular, strength and contact martial arts, such as wrestling, *judo*, kickboxing, boxing and *MuayThai*.

Conclusions

Literature on women’s activity in the field of fighting arts is scattered throughout many journals, magazines, and other mass media platforms [Follo 2012]. It can be assumed that specialized scientific periodicals collect the most valuable content from the perspective of the preferred research methodology and the adopted thematic profile. This body of literature represents a relatively objective discourse, implemented on principles commonly accepted in the scientific community.

Participation is understood in the journals being studied, e.g. as a socio-cultural phenomenon; these women’s activities are viewed in diachronic and synchronous contexts [Klens-Bigman 2010; Rodriguez-Rodriguez, Perrino-Pena 2019; Johnson *et al.* 2020].

The content of the various disciplines already visible in the literature on the subject were reflected in mass media discourse, which popularized the subject of “woman and martial arts/ combat sports.” Scientific journals played a role in this aspect. It is assumed that both the subject of this study and its method of analysis can be considered as a viable approach for further research in this area. These studies could concern, inter alia, characteristics of the discourse both in terms of the subject of physical culture and the specificity of the concepts (also in scientific language).

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Tematyka kobiet uprawiających systemy walki w dyskursie wybranych czasopism naukowych - krótka analiza bibliometryczna

Słowa kluczowe: kobiety, sztuki walki, czasopisma naukowe, dyskurs

Streszczenie

Tłó. W artykule podjęto temat dyskursu wybranych czasopism naukowych dotyczących wszelkich form walki wręcz kobiet trenujących te formy kultury fizycznej.

Cel. Celem artykułu jest dostarczenie wiedzy odnośnie kategorii tematycznych

charakterystycznych dla publikacji naukowych dotyczących kobiet uprawiających różne style walki.

Materiały, metody i wyniki. Przedmiotem analizy były wyselekcjonowane czasopisma na powyższy temat, które są indeksowane w różnych bazach naukowych, takich jak *Sport Discus*, *Scopus* i *Scimago*. Analizowane tematy rozważane są na podstawie 1) krótkiego opisu ich dyskursu w literaturze naukowej, 2) ich prezentacji w czasopismach naukowych poświęconych różnym formom zmagania oraz 3) przedstawienia w zarysie zagadnień związanych z kształceniem te formy aktywności fizycznej. Wartość poznawczą tego badania wzmocniają bibliometryczne komponenty obejmujące analizę ilościową i jakościową. Wnioski. Można przypuszczać, że specjalistyczne periodyki naukowe gromadzą najcenniejsze treści z punktu widzenia preferowanej metodyki badań i przyjętego profilu tematycznego.