REVIEW ARTICLE

Although "self-defence" is an individual case of human defensive struggle and the object of research of the specific sciences dedicated to struggle, it also is a term borrowed by other categories of sciences classified by WoS

Authors' Contribution:
A Study Design
B Data Collection
C Statistical Analysis
D Manuscript Preparation
E Funds Collection

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Abstract

Background & Study Aim: This review was inspired by the content of a dialogue conducted by a science of martial arts expert with artificial intelligence on the topic of self-defence (2022) from the perspective of the human right to defend oneself or people at risk of attack by an aggressor. The aim of the paper is to address the question: is the term 'self-defence', used in the field of sciences that do not study the phenomenon of individual defence against human aggression and violence, and if so, how common is this phenomenon?

Material & Methods: The basic criterion of the narrative review was the words 'self-defiance' or 'self-defense' used in the title of the publication evaluated by the Web of Science (WoS) literature database from the earliest date to March 2023. The results of the observations were grouped according to the principle from the general to the specific (at the poles of the continuum are the leader and the non-citation of the work). The second criterion for grouping observation results is the separation of papers belonging to several categories of sciences according to WoS standards (collective) from those qualifying for only one category (separate). A group of works cited in sport science was distinguished independently from the collective or separate categories.

Results: The words 'self-defence' or 'self-defense' were used in WoS from 1902 to March 2023 in 1,568 publications of which 55.5% are cited, while the others (n = 715) are not cited once. The leader in citations (n = 970) are papers published in journals classified in the collective category (psychology experimental and psychology social); 22 papers were found, where the only title is the term 'self-defence' or 'self-defense' of which only 4 papers were cited (leader 248 times). The citation leader of category sport science (n = 43) is paradoxically the paper dedicated to Japan Self-Defence Force. The citation total of the 45 category sport science papers is 382.

Conclusions: Since it is reasonable to accept the year 2010 as the recognition of the science of martial arts as a separate sub-discipline that, among other things, studies self-defence in the context of counteracting aggression and physical violence of people by applying techniques from different cultures, different martial arts and styles, the frequent use of the term 'self-defence' ('self-defense') by authors of works classified in various categories of sciences means, that this term is the most appropriate one to use when dealing with specific issues. It also shows how important this phenomenon is in many other areas of reality. Thus, another challenge is to know about the specifics of these issues in order to formulate implications having to do with the general question: what knowledge about the struggle phenomenon in its broadest sense escapes the perception of researchers of these specific issues, which perhaps determines that many of them still remain unresolved? The probability of giving the right answer to such a question increases with the complementary use of the specific knowledge of the issue being addressed with the methodological categories of the latest of the sciences dedicated to struggle – innovative agonology.

Keywords: complementary approach • innovative agonology • science of martial arts

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INTRODUCTION

The common perception of the meaning of the word self-defence indicates its close association with elements of hand-to-hand combat, combat sports or martial arts. Self-defence – physical defence meaning actions taken to defend oneself or others from physical attack or violence. This can include self-defence techniques (in the sense of physical counteraction) that combat sports and martial arts offer, or other forms of pressure in the praxeological sense (see glossary). The use of force that can lead to bodily harm or even death of the aggressor is considered an acceptable action in this case, as it can be seen as a natural response to a threat or attack. However, the ethics of self-defence should be taken into account in taking such actions, which can be judged by principles such as proportionality, necessity and avoidance of excessive use of force [1].

The year 2010 can be taken as the recognition of the science of martial arts (see glossary) as a separate sub-discipline studying, among other things, the phenomenon of self-defence in the context of countering human aggression and physical violence through the use of techniques from different cultures, different martial arts and styles.

However, such training orientations, taking into account the possibility of responding to the aggressor's actions appropriate to the situation, can be found as far back as ancient Greece. The great philosophers and physicians of that era, Hippocrates, Plato and Aristotle, expressing their views on sports, pointed to the need for moderation, including in the approach to training. They argued that any exaggeration can turn against nature and pointed out that excessive training is always bad. They recognized the dangers of excessive participation in sports training. The ancient doctrine of *metron ariston* and *meden agan* – that is, not to do something out of the ordinary, not to overstep the bounds, show the Greeks' appreciation for moderation and avoidance of excesses. This 'golden mean' in antiquity was the desirability between two extremes, one of excess and the other of deficiency, and was widely known in Aristotle's philosophy. He introduced this doctrine of the mean as a way of thinking into his account of ethical excellence or perfection of character [2-4].

wrestling techniques), was introduced into the Olympic Games program, and pankrats trained to perform throws, overthrows, joint locks and choke holds using specialized techniques. This is why pankration was used on the battlefield by the Spartan hoplites and the Macedonian phalanx in the army commanded by Alexander the Great. It is precisely the possibility of utilitarian application of practice wrestling forms of combat that points to their close connection with elements of self-defence, also with regard to the principles of shaping the warrior in ancient Greece.

Nowadays, numerous methods of self-defence derived from combat sports and martial arts of various cultures are promoted, and a significant increase in interest in this type of physical activity should be linked to the emergence of so-called action cinema. The financial success of films starring Bruce Lee gave rise to the establishment of numerous martial arts schools around the world. The fighting techniques taught there promote various forms of response to an attack from an aggressor, from mild actions leading to the incapacitation of the attacker to very drastic forms like a 'kick in the crotch'. It was the dilemmas over the rules for applying a response to an aggressor's actions that led to the implementation of the criteria in 'honourable self-defence' [5, 6].

Pressure – (pression ***in French***; Druck ***in German***; natisk, narzim ***in Russian***) a cause directed at the subject of action or at a thing outside the subject; insofar as the source of pressure is the subject, pressure is identified in praxeology with free external impulse or internal impulse [83].

Science of martial arts – the name of this new sub-discipline was proposed by RM Kalina [84] at the 2nd World Scientific Congress of Combat Sports and Martial Arts (2010 in Rzeszow, Poland). The most significant reason was the fact that five years after the historical edition of ***Archives of Budo***, the journal was immediately recognized with a five-year ***Impact Factor*** (0.542) and ***2-IF***, 0.488. This ennoblement is certainly one of the few and is important if only because the recognition of the journal guarantees including it in the Web of Science literature database (WoS) and consequently annual monitoring that unique indicator – ***Impact Factor***. The higher it is, it is evidence that papers published in a given journal are more frequently cited in other scientific journals, also indexed by WoS [85].

Combat sports – the group of sports disciplines, in which the gist of the competition is the direct clash of two competing athletes. They are affiliated to the national and international sports organizations in order to carry out official competition, classification, etc. [81].

Martial arts – *plural noun* any of various systems of combat and self-defence, e.g. judo or karate, developed especially in Japan and Korea and now usually practised as a sport [86].

The word 'self-defence', in relation to ongoing scientific research, has several different meanings, depending on the context in which it is used. It is also used in a colloquial sense. Here are some examples of how the term is distinguished by artificial intelligence in dialogue with an expert in science of martial arts including outstanding self-defence competencies: as a social organization referring to the Polish political party called „Samoobrona RP" (in Polish) (1992-2007); in the legal system, to resolve the assessment of the legitimacy of the use of force to repel aggression or violence (it can mean the right of an individual or group to defend its interests, for example, in situations of conflict or dispute, when an individual or group defends its rights or interests, not necessarily in a physical way); in relation to the biological responses of the body are cellular responses, in cases of threats of loss of broadly understood health [1].

The aim of the paper is to address the question: is the term 'self-defence' used in the field of sciences that do not study the phenomenon of individual defence against human aggression and violence, and if so, how common is this phenomenon?

MATERIALS AND METHODS

Search method

The basic criterion of the narrative review was the words 'self-defiance' or 'self-defense' used in the title of the publication evaluated by the Web of Science (WoS) literature database from the earliest date to March 2023. The results of the observations were grouped according to the principle from the general to the specific (at the poles of the continuum are the leader and the non-citation of the work). The second criterion for grouping observation results is the separation of papers belonging to several categories of sciences according to WoS standards (collective) from those qualifying for only one category (separate). A group of works cited in 'sport science' (in Tablets SPORT SCIENCES) was distinguished independently from the collective or separate categories.

Study selection

Two researchers searched the full text of the included literature and extracted relevant data independently. The specific extraction content is as follows. Basic information of included studies: first author, year of publication, country/region.

Analysis of documented data in tables

In the first column of each table, the ranking position (RP) of the empirical variable under analysis (the corresponding WoS categories evaluation) is monitored according to the adopted order variable criterion. With an identical number of citations, the works that occupy a higher position in the WoS are monitored, and in the order of successive equality, the earlier year of publication of the work, then the name of the first author respecting the alphabetical arrangement etc., until the use of the names of WoS categories etc., is used. RP WoS is indicative, that is, according to the ranking on the date of documenting the data, and may vary due to ongoing updates.

Self-defence – *noun* fighting techniques used for defending oneself against physical attack, especially unarmed combat techniques such as those used in many of the martial arts [86].

Innovative self-defence – involves using verbal and/or behavioural methods and means along with available items in counteracting each attack on any good of an individual (honour, dignity, life, health, property, etc.), whereas a defender submits his/her actions to the criteria of prophylactic and therapeutic agonology, considering the most general directive of efficient leading of any struggles [74] and also universal assumption of selfdefence training [79] as absolutely paramount [76].

RESULTS

The words 'self-defence' or 'self-defense' have been used in WoS from 1902 to March 2023 in 1,568 publications, of which 55.5% are cited, while the rest (n = 715) are not cited even once. As a result of the, from the papers in whose titles the words 'self-defence' or 'self-defense' are used, collections were created that occupy 28 ranking positions considering Web of Science categories. The largest number of publications (n = 245) were classified as LAW, which were cited 3189 times. The set of n = 96 publications includes papers qualifying for the accepted standard of 'collective' (cited 1,625 times), while 149 for 'separate' (cited 1,564 times). The next WoS category is INTERNATIONAL RELATIONS (93 publications cited 1,235 times). The SPORT SCIENCES category ranks only 6th (38 publications with a total of 390 citations). Single publications that were categorized under different WoS categories formed as many as 44 collections. Publications categorized under ENERGY & FUELS and ENGINEERING, CHEMICAL were cited 189 times (Table 1).

The term 'self-defence' ('self-defense') was used in the title of the top 21 publications (16 RP) that were cited 100 or more times. According to the evaluative criteria of Web of Science (collective) the highest number of times a paper from the PSYCHOLOGY category was cited (972 citations). There were no publications from the SPORT SCIENCES category in this collection (Table 2).

Table 1. Ranking position according to the Web of Science (WoS) category, including the number of publications and the number of citations.

Citations			WoS Categories	WoS categories			
RP	work	total		collective		Separate	
				number of:		number of:	
	n	n	name	work	citations	work	citations
1	245	3189	LAW	96	1625	149	1564
2	93	1235	INTERNATIONAL RELATIONS	72	1129	21	106
3	49	883	POLITICAL SCIENCE	32	775	17	108
4	48	855	CRIMINOLOGY & PENOLOGY	33	688	15	167
	48	804	PHILOSOPHY	25	649	23	155
5	44	1235	ETHICS	43	1133	1	102
6	38	902	WOMEN'S STUDIES	17	437	21	465
	38	390	SPORT SCIENCES	10	145	28	245
7	35	950	PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH	18	406	17	544
8	26	299	MEDICINE, GENERAL & INTERNAL	9	125	17	174
9	24	1751	BIOCHEMISTRY & MOLECULAR BIOLOGY	15	1173	9	578
	24	364	FAMILY STUDIES	22	319	2	45
10	23	491	PSYCHOLOGY, APPLIED	22	390	1	101
11	22	674	IMMUNOLOGY	13	326	9	348
12	18	505	PSYCHOLOGY, MULTIDISCIPLINARY	13	385	5	120
	18	345	PSYCHOLOGY, SOCIAL	8	120	10	225
13	17	69	HISTORY	5	16	12	53
14	15	117	AREA STUDIES	7	84	8	33
15	14	223	SOCIOLOGY	7	152	7	71
16	13	145	PSYCHOLOGY, CLINICAL	12	142	1	3
17	12	399	MULTIDISCIPLINARY SCIENCES	0	0	12	399
	12	221	ONCOLOGY	4	44	8	177
	12	40	SOCIAL SCIENCES, INTERDISCIPLINARY	6	21	6	19
18	11	243	NEUROSCIENCES	7	97	4	146
	11	210	CELL BIOLOGY	7	116	4	94
	11	108	PSYCHIATRY	8	82	3	26
19	10	57	COMPUTER SCIENCE, ARTIFICIAL INTELLIGENCE	8	43	2	14
	10	39	HOSPITALITY, LEISURE, SPORT & TOURISM	6	26	4	13
	10	30	COMPUTER SCIENCE, THEORY & METHODS	9	21	1	9
20	9	750	PHARMACOLOGY & PHARMACY	6	104	3	646
	9	137	ERGONOMICS	9	137	0	0
	9	41	ENGINEERING, ELECTRICAL & ELECTRONIC	9	41	0	0
	9	32	COMPUTER SCIENCE, INFORMATION SYSTEMS	9	32	0	0
	9	29	RELIGION	3	17	6	12
21	8	256	ENVIRONMENTAL SCIENCES	7	253	1	3
	8	224	MICROBIOLOGY	4	80	4	144
	8	182	CHEMISTRY, ORGANIC	2	95	6	87
	8	173	MEDICINE, RESEARCH & EXPERIMENTAL	4	127	4	46

Citations			WoS Categories	WoS categories			
RP	work	total		collective		Separate	
				number of:		number of:	
	n	n	name	work	citations	work	citations
22	7	166	PSYCHOLOGY	7	166	0	0
	7	138	BIOTECHNOLOGY & APPLIED MICROBIOLOGY	6	123	1	15
	7	38	DERMATOLOGY	4	0	3	38
23	6	394	CHEMISTRY, MULTIDISCIPLINARY	4	391	2	3
	6	308	PLANT SCIENCES	2	45	4	263
	6	166	ZOOLOGY	4	122	2	44
	6	131	ENGINEERING, INDUSTRIAL	6	131	0	0
	6	87	COMMUNICATION	2	37	4	50
	6	75	TOXICOLOGY	6	75	0	0
	6	56	EDUCATION & EDUCATIONAL RESEARCH	2	35	4	21
	6	55	COMPUTER SCIENCE, INTERDISCIPLINARY APPLICATIONS	6	55	0	0
	6	33	SOCIAL ISSUES	6	33	0	0
	6	31	BIOLOGY	2	12	4	19
24	5	849	BIOPHYSICS	5	849	0	0
	5	108	SOCIAL WORK	5	108	0	0
	5	78	FOOD SCIENCE & TECHNOLOGY	4	78	1	0
	5	43	CULTURAL STUDIES	1	26	4	17
	5	27	TRANSPLANTATION	4	22	1	5
	5	22	COMPUTER SCIENCE, HARDWARE & ARCHITECTURE	5	22	0	0
	5	19	TELECOMMUNICATIONS	5	19	0	0
	5	17	ANTHROPOLOGY	3	14	2	3
	5	13	AUTOMATION & CONTROL SYSTEMS	4	10	1	3
	5	13	LITERATURE	1	3	4	10
25	4	78	CHEMISTRY, APPLIED	4	78	0	0
	4	69	GASTROENTEROLOGY & HEPATOLOGY	1	4	3	65
	4	68	MATERIALS SCIENCE, MULTIDISCIPLINARY	3	66	1	2
	4	52	BUSINESS	4	52	0	0
	4	43	ECOLOGY	4	43	0	0
	4	38	DEMOGRAPHY	4	38	0	0
	4	17	CLINICAL NEUROLOGY	4	17	0	0
	4	14	VETERINARY SCIENCES	3	11	1	3
	4	9	HUMANITIES, MULTIDISCIPLINARY	0	0	4	9
	4	6	ETHNIC STUDIES	1	2	3	4
26	3	986	PSYCHOLOGY, PSYCHOANALYSIS	1	972	2	14
	3	984	PSYCHOLOGY, EDUCATIONAL	1	972	2	12
	3	115	BEHAVIORAL SCIENCES	3	115	0	0
	3	104	HEALTH CARE SCIENCES & SERVICES	2	102	1	2
	3	83	INFECTIOUS DISEASES	3	83	0	0
	3	75	MANAGEMENT	3	75	0	0

Citations			WoS Categories	WoS categories			
RP	work	total		collective		Separate	
				number of:		number of:	
	n	n	name	work	citations	work	citations
	3	70	ECONOMICS	2	58	1	12
	3	57	UROLOGY & NEPHROLOGY	2	8	1	49
	3	51	AGRONOMY	3	51	0	0
	3	36	MYCOLOGY	3	36	0	0
	3	36	GENETICS & HEREDITY	1	2	2	34
	3	23	LITERARY THEORY & CRITICISM	3	23	0	0
	3	20	FILM, RADIO, TELEVISION	2	19	1	1
	3	18	REHABILITATION	1	5	2	13
26	3	17	GEOGRAPHY	1	6	2	11
	3	16	COMPUTER SCIENCE, SOFTWARE ENGINEERING	3	16	0	0
	3	15	ENGINEERING, MULTIDISCIPLINARY	1	1	2	14
	3	12	WATER RESOURCES	3	12	0	0
	3	11	MEDICINE, LEGAL	3	11	0	0
	3	10	MATHEMATICS, APPLIED	3	10	0	0
	3	8	OPERATIONS RESEARCH & MANAGEMENT SCIENCE	3	8	0	0
	3	8	ENGINEERING, CIVIL	3	8	0	0
	3	7	PSYCHOLOGY, DEVELOPMENTAL	3	7	0	0
	2	220	BIOCHEMICAL RESEARCH METHODS	2	220	0	348
	2	220	CHEMISTRY, ANALYTICAL	2	220	1	3
	2	109	PSYCHOLOGY, EXPERIMENTAL	1	108	0	0
	2	105	NANOSCIENCE & NANOTECHNOLOGY	2	105	0	0
	2	74	PHYSICS, APPLIED	2	74	0	0
	2	72	PEDIATRICS	1	57	1	1
	2	60	INDUSTRIAL RELATIONS & LABOR	2	60	0	0
	2	53	URBAN STUDIES	2	53	0	2
	2	51	MATERIALS SCIENCE, BIOMATERIALS	1	49	1	0
	2	28	LITERARY REVIEWS	1	26	0	0
	2	27	HEALTH POLICY & SERVICES	2	27	0	0
27	2	26	ENGINEERING, ENVIRONMENTAL	2	26	1	1
	2	24	GERIATRICS & GERONTOLOGY	2	24	0	0
	2	14	MEDICAL ETHICS	2	14	0	0
	2	13	ENTOMOLOGY	2	13	1	15
	2	11	SUBSTANCE ABUSE	0	0	0	0
	2	9	OTORHINOLARYNGOLOGY	1	3	0	0
	2	9	ROBOTICS	2	9	1	2
	2	8	LITERATURE, AMERICAN	0	0	1	2
	2	8	MEDIEVAL & RENAISSANCE STUDIES	2	8	0	0
	2	7	ENVIRONMENTAL STUDIES	1	3	0	0
	2	7	IMAGING SCIENCE & PHOTOGRAPHIC TECHNOLOGY	2	7	0	0

Citations			WoS Categories	WoS categories			
RP	work	total		collective		Separate	
				number of:		number of:	
	n	n	name	work	citations	work	citations
27	2	7	LITERATURE, BRITISH ISLES	1	4	0	0
	2	4	ENGINEERING, MARINE	2	4	0	0
	2	4	FISHERIES	2	4	2	11
	2	4	MARINE & FRESHWATER BIOLOGY	2	4	1	6
	2	4	OCEANOGRAPHY	2	4	0	0
	2	3	EDUCATION, SCIENTIFIC DISCIPLINES	1	2	2	8
	2	3	INFORMATION SCIENCE & LIBRARY SCIENCE	1	2	0	0
28	1	189	ENERGY & FUELS	1	189	0	0
	1	189	ENGINEERING, CHEMICAL	1	189	0	0
	1	31	ASIAN STUDIES	1	31	0	0
	1	31	HEMATOLOGY	1	31	0	0
	1	29	ENDOCRINOLOGY & METABOLISM	0	0	1	29
	1	18	CHEMISTRY, PHYSICAL	1	18	0	0
	1	18	MATERIALS SCIENCE, COATINGS & FILMS	1	18	0	0
	1	18	PHYSICS, CONDENSED MATTER	1	18	0	0
	1	16	INTEGRATIVE & COMPLEMENTARY MEDICINE	0	0	1	16
	1	12	LINGUISTICS	1	12	0	0
	1	11	HISTORY OF SOCIAL SCIENCES	1	11	0	0
	1	9	OPTICS	0	0	1	9
	1	8	REMOTE SENSING	1	8	0	0
	1	7	MEDICAL INFORMATICS	1	7	0	0
	1	6	PERIPHERAL VASCULAR DISEASE	0	0	1	6
	1	6	TRANSPORTATION SCIENCE & TECHNOLOGY	1	6	0	0
	1	6	VIROLOGY	1	6	0	0
	1	5	ARCHAEOLOGY	0	0	1	5
	1	5	OPHTHALMOLOGY	1	5	0	0
	1	3	CARDIAC & CARDIOVASCULAR SYSTEMS	0	0	1	3
	1	3	LITERATURE, ROMANCE	1	3	0	0
	1	3	MATHEMATICAL & COMPUTATIONAL BIOLOGY	0	0	1	3
	1	3	ORNITHOLOGY	0	0	1	3
	1	2	ACOUSTICS	1	2	0	0
	1	2	COMPUTER SCIENCE, CYBERNETICS	1	2	0	0
	1	2	DENTISTRY, ORAL SURGERY & MEDICINE	0	0	1	2
	1	2	ENGINEERING, OCEAN	1	2	0	0
	1	2	INSTRUMENTS & INSTRUMENTATION	1	2	0	0
	1	2	NUTRITION & DIETETICS	1	2	0	0
	1	2	PHYSICS, MULTIDISCIPLINARY	1	2	0	0
	1	2	PHYSIOLOGY	1	2	0	0
	1	2	SOCIAL SCIENCES, BIOMEDICAL	1	2	0	0

Citations			WoS Categories	WoS categories			
RP	work	total		collective		Separate	
				number of:		number of:	
	n	n	name	work	citations	work	citations
28	1	1	BIODIVERSITY CONSERVATION	1	1	0	0
	1	1	EMERGENCY MEDICINE	0	0	1	1
	1	1	ENGINEERING, BIOMEDICAL	0	0	1	1
	1	1	GREEN & SUSTAINABLE SCIENCE & TECHNOLOGY	1	1	0	0
	1	1	LIMNOLOGY	1	1	0	0
	1	1	MATHEMATICS, INTERDISCIPLINARY APPLICATIONS	1	1	0	0
	1	1	PATHOLOGY	1	1	0	0
	1	1	POETRY	0	0	1	1
	1	1	PUBLIC ADMINISTRATION	1	1	0	0
	1	1	SOIL SCIENCE	1	1	0	0
	1	1	STATISTICS & PROBABILITY	1	1	0	0
	1	1	SURGERY	1	1	0	0

Table 2. Publications using the term "self-defence" cited 100 or more times (n = 21).

Ranking position		Citations	Author(s) Date	Web of Science categories evaluation (in 2022 year)	
this one	WoS	N		collective (n = 12)	separate (n = 9)
1	1	972	Sherman& Cohen [7] 2006	PSYCHOLOGY, EXPERIMENTAL	
				PSYCHOLOGY, SOCIAL	
2	2	818	Matsuzaki [8] 1999	BIOCHEMISTRY & MOLECULAR BIOLOGY	
				BIOPHYSICS	
3	3	625	Shen et al. [9] 2012		PHARMACOLOGY & PHARMACY
	4	320	Azoulay-Zohar et al. [10] 2001		BIOCHEMISTRY & MOLECULAR BIOLOGY
4	5	250	Thomson [11] 1991	ETHICS	
				POLITICAL SCIENCE	
5	6	189	Zhang et al. [12] 2016	CHEMISTRY, MULTIDISCIPLINARY	
				ENERGY & FUELS	
				ENGINEERING, CHEMICAL	
				ENVIRONMENTAL SCIENCES	
6	7	177	Randow et al. [13] 2013		MULTIDISCIPLINARY SCIENCES
7	8	145	Duffy at al. [14] 2003		PLANT SCIENSES
8	9	146	Kleck & Gertz [15] 1995	CRIMINOLOGY & PENOLOGY	
				LAW	
9	10	130	Gariboldi et al. [16] 2008		IMMUNOLOGY
10	11	125	Rakwal & Komatsu [17] 2000	BIOCHEMICAL RESEARCH METHODS	
				CHEMISTRY ANALYTICAL	

Ranking position		Citations	Author(s) Date	Web of Science categories evaluation (in 2022 year)	
this one	WoS	N		collective (n = 12)	separate (n = 9)
11	12	114	Otsuka [18] 1994	ETHICS	
				PHILOSOPHY	
				POLITICAL SCIENCE	
12	13	111	Shields [19] 1984	BEHAVIORAL SCIENCES	
				ZOOLOGY	
13	14	109	Bethlehem [20] 2012	INTERNATIONAL RELATIONS	
				LAW	
14	17	108	Maguigan [21] 1991		LAW
	16	108	Orchowski et al. [22] 2008	PSYCHOLOGY MULTIDISCIPLINARY	
				WOMEN'S STUDIES	
	15	108	Song & Ryu [23] 2013	BIOCHEMISTRY & MOLECULAR BIOLOGY	
				CHEMISTRY MULTIDISCIPLINARY	
15	18	102	Jwa et al. [24] 2006		PLANT SCIENCES
	19	102	McMahan [25] 1994		ETHICS
16	20	101	Kono et al. [26] 1991	HEALTH CARE SCIENCES & SERVICES	
				PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH	
	21	101	Sedikides & Green [27] 2004		PSYCHOLOGY SOCJAL

The citation leader of category SPORT SCIENCES (n = 43) is paradoxically the paper dedicated to Japan Self-Defence Force [28]. The citation total of the 45 category SPORT SCIENCES papers is 382. The personal leader (abstracting from Kikugawa et al. [28]), in the sense of specialists science of martial arts including self-defence, is RM Kalina, author or co-author of five papers [29-31, 33, 38], with corresponding citations: 36 + 34 + 33 + 22 + 11 (total 135). Second in this ranking is J. Harasymowicz: papers [29, 39, 1]; citations 36 + 10 + 1 (total 47). The leader among journals is *Archives of Budo* (Table 3).

Table 3. Publications cited in Web of Science (WoS) in the SPORT SCIENCES category (n = 47) – collective (n = 16) or separate (n = 31).

RP		Citations	Author(s) Date	Web of Science categories evaluation (in 2022 year)	
this one	WoS	N		collective (n = 16)	separate (n = 31)
1	1	43	Kikukawa et al. [28] 1995	MEDICINE, GENERAL & INTERNAL	
				PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH	
				SPORT SCIENCES	
2	2	36	Harasymowicz & Kalina [29] 2005		SPORT SCIENCES
3	3	34	Kalina et al. [30] 2015		SPORT SCIENCES

RP		Citations	Author(s) Date	Web of Science categories evaluation (in 2022 year)	
this one	WoS	N		collective (n = 16)	separate (n = 31)
4	4	33	Kalina et al. [31] 2007		SPORT SCIENCES
	5	33	Brown & Johnson [32] 2000	EDUCATION & EDUCATIONAL RESEARCH	
				SPORT SCIENCES	
5	6	22	Kalina & Barczyński [33] 2017		SPORT SCIENCES
6	7	17	Piepiora & Witkowski [34] 2020		SPORT SCIENCES
7	8	13	Bugala et al. [35]2015		SPORT SCIENCES
8	9	12	Nakanishi et al. [36] 2003	PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH	
				MEDICINE, GENERAL & INTERNAL	
				SPORT SCIENCES	
	10	12	Hoffman et al. [37] 2019		SPORT SCIENCES
9	11	11	Kalina et al. [38] 2016		SPORT SCIENCES
10	13	10	Harasymowicz [39] 2007		SPORT SCIENCES
	12	10	Tejero-Gonzalez et al. [40] 2011		SPORT SCIENCES
11	15	9	Tokarski [41] 2007		SPORT SCIENCES
	14	9	Dadelo et al. [42]2015		SPORT SCIENCES
12	16	8	De Cree & Jones [43] 2011		SPORT SCIENCES
13	19	7	Hughes et al. [44] 2003	HOSPITALITY, LEISURE, SPORT & TOURISM	
				PSYCHOLOGY, APPLIED	
				PSYCHOLOGY	
				SPORT SCIENCES	
	18	7	Cihounkova et al. [45] 2015		SPORT SCIENCES
	17	7	Cihounkova et al. [46] 2016		SPORT SCIENCES
14	21	6	Sekiguchi et al. [47] 1986	PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH	
				MEDICINE, GENERAL & INTERNAL	
				SPORT SCIENCES	
	20	6	Reguli [48] 2018		SPORT SCIENCES
15	23	5	Shapie & Elias [49] 2016		SPORT SCIENCES
	22	5	Vit et al. [50] 2019		SPORT SCIENCES
16	24	4	De Cree & Jones [51] 2011		SPORT SCIENCES
17	25	3	Kikukawa et al. [52] 1999	PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH	
				MEDICINE, GENERAL & INTERNAL	
				SPORT SCIENCES	
	26	3	De Cree & Jones [53] 2011		SPORT SCIENCES
	27	3	Shishida et al. [54] 2017		SPORT SCIENCES
	28	3	Wolska et al. [55] 2018		SPORT SCIENCES

RP	Citations		Author(s) Date	Web of Science categories evaluation (in 2022 year)	
this one	WoS	N		collective (n = 16)	separate (n = 31)
	29	2	Hoffman & Klafeld [56] 1998		SPORT SCIENCES
	30	2	Hayashi et al. [57] 2003	PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH	
				MEDICINE, GENERAL & INTERNAL	
				SPORT SCIENCES	
18	31	2	Espartero et al. [58] 2005		SPORT SCIENCES
	32	2	Cynarski [59] 2016	ERGONOMICS	
				HOSPITALITY, LEISURE, SPORT & TOURISM	
				SPORT SCIENCES	
	33	2	Staller et al. [60] 2017		SPORT SCIENCES
	34	2	Maczuga & Cynarski [61] 2021		SPORT SCIENCES
	35	1	Gonzalez et al. [62] 2008		SPORT SCIENCES
19	36	1	Vit et al. [63] 2014	HOSPITALITY, LEISURE, SPORT & TOURISM	
				SPORT SCIENCES	
	37	1	Vit & Reguli [64] 2017		SPORT SCIENCES
	38	1	Harasymowicz [1] 2022		SPORT SCIENCES
	39	0	Sekiguchi et al. [65] 1985	PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH	
				MEDICINE, GENERAL & INTERNAL	
				SPORT SCIENCES	
	40	0	Kaufman [66] 2001	HOSPITALITY, LEISURE, SPORT & TOURISM	
				PSYCHOLOGY, APPLIED	
				PSYCHOLOGY	
				SPORT SCIENCES	
	41	0	Banks [67] 2006	HOSPITALITY, LEISURE, SPORT & TOURISM	
				PSYCHOLOGY, APPLIED	
				PSYCHOLOGY	
				SPORT SCIENCES	
20	42	0	Zhang & Zhang [68] 2012	HOSPITALITY, LEISURE, SPORT & TOURISM	
				SPORT SCIENCES	
	43	0	Vit et al. [69] 2014	REHABILITATION	
				SPORT SCIENCES	
	44	0	Sanders et al. [70] 2015	HOSPITALITY, LEISURE, SPORT & TOURISM	
				PSYCHOLOGY, APPLIED	
				PSYCHOLOGY	
				SPORT SCIENCES	
	45	0	Widiastuti et al. [71] 2018	PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH	
				SPORT SCIENCES	
	46	0	Shegelman & Godinov [72] 2020		SPORT SCIENCES
	47	0	Kruszewski [73] 2023		SPORT SCIENCES

DISCUSSION

In our opinion, the most important finding of this specific review is the number of both scientific publications whose authors used the term 'self-defence' or 'self-defense', in the title, and the number of categories into which these publications are classified by the Web of Science (WoS). The very high level of generality of the data analysis authorizes only hypotheses. Thus, it is reasonable to assume that the leader of the WoS LAW (245 papers and 3189 citations) relates to publications that address the issue of necessary defence. The hypothesis explaining that in the vast majority of disclosed WoS categories the term 'self-defence' is used in a colloquial sense also seems true. If so, two important methodological issues arise.

First, the assumptions of Jaroslaw Rudniański in particular, as well as Roman M. Kalina about the use of the term 'struggle' or synonyms in circumstances where the acting entity or other entities or commonly protected goods are threatened with destruction or otherwise, are true. The first author developing a general theory of struggle, and there appear threads of defence struggle, in his authorship of a complete theory of non-armed struggle as well as the theory of compromise [74]. Kalina on the other hand, initiated and continues to promote innovative agonology [75-77].

Secondly, Kalina first published a theory of defence struggle long with methodological presumption and assumptions of reducing aggressiveness through the competent use of certain types of sports activities (micro scale) and sports at the macro scale [78]. The results of an eight-month experiment positively verified a model based on training sessions consisting of judo, self-defence, relaxation and concentration exercises and specific verbal interactions [79]. Kalina, however, the last of the detailed theories of struggle (counting after Tadeusz Kotarbiński's creation of agonology – that is, general theory of struggle [80]), and thus the fourth, published the theory of combat sports [81]. It is this theory that also takes up the subject of non-sport confrontations, and among such events is the phenomenon of self-defence.

It is rather surprising that so few works (adopting these simple review criteria – the use of the term 'self-defence' in the title of a scientific publication) are dedicated precisely to the phenomenon of self-defence associated with repelling an unauthorized attack (aggression) from anyone. This, in turn, in the motor sense, is the domain of sport sciences (science of martial arts). A much broader treatment of self-defence, not only in the motor sense, is innovative agonology [82, 76]. Other components of knowledge and skills recommended by each of the detailed theory of struggle are also used. Thus, in a cognitive sense, the content of the works of any of the explored categories of WoS is interesting if only because of whether the extensive knowledge of the phenomenon of struggle (in which self-defence, as a particular case of self-defence struggle, falls) is used in a real way (rules, laws, strategies, unique methods and means, etc.), or, on the contrary, the term 'self-defence' is only to emphasize the extreme difficulty of the circumstances (situation). The first step has been taken. Careful study of the content of works that qualify under specific WoS categories may prove to be a fertile area of exploration.

CONCLUSIONS

Since it is reasonable to accept the year 2010 as the recognition of the science of martial arts as a separate sub-discipline that, among other things, studies self-defence in the context of counteracting aggression and physical violence of people by applying techniques from different cultures, different martial arts and styles, the frequent use of the term 'self-defence' ('self-defense') by authors of works classified in various categories of sciences means, that this term is the most appropriate one to use when dealing with specific issues. It also shows how important this phenomenon is in many other areas of reality. Thus, another challenge is to know about the specifics of these issues in order to formulate implications having to do with the general question: what knowledge about the struggle phenomenon in its broadest sense escapes the perception of researchers of these specific issues, which perhaps determines that many of them still remain unresolved? The probability of giving the right answer to such a question increases with the complementary use of the specific knowledge of the issue being addressed with the methodological categories of the latest of the sciences dedicated to struggle – innovative agonology (new applied science, the basic method of which is the complementary approach).

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