

Impact Factors and Article Influence Scores for Journals in Sports Medicine and Science in 2013

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Exercise and Immunology Review was the clear winner in this year's race for the highest journal impact factor (7.1) in the sport and exercise disciplines. *Exercise and Sport Sciences Reviews* (5.3) nudged ahead of *Sports Medicine* (5.2) for second place. Other finalists were *Medicine and Science in Sports and Exercise* (4.5), *American Journal of Sports Medicine* (4.4), *British Journal of Sports Medicine* (3.7), *Scandinavian Journal of Medicine and Science in Sports* (3.2), and *Journal of Orthopaedic and Sports Physical Therapy* (3.0). Semi-finalists were *Journal of Science and Medicine in Sport* (2.9), *Journal of Sport and Exercise Psychology* (2.5), *Clinics in Sports Medicine* (2.4), *International Journal of Sports Physiology and Performance* (2.3), *International Journal of Sports Medicine* (2.3), *Journal of Sports Sciences* (2.1), and *Human Movement Science* (2.0). Journals with an impact factor of at least 1.0 and a moderate increase of at least 30% since last year were *Exercise and Immunology Review*, *Clinics in Sports Medicine*, *Current Sports Medicine Reports*, *Physical Therapy in Sport*, *Physician and Sportsmedicine*, and *Sport Education and Society*. The article influence score, a statistic representing the quantity and quality of citations to articles in a journal, had an extremely high correlation (0.93) with the impact factor and therefore does not provide any information additional to that of the impact factor.

KEYWORDS: citation, publication, research.

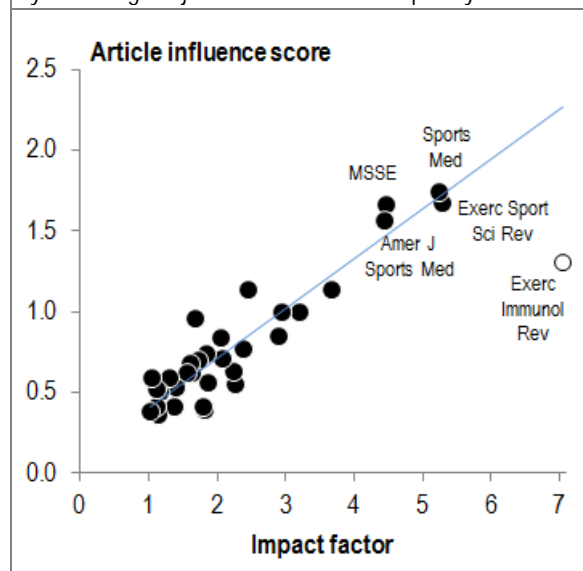
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This article represents my annual summary of the latest impact factors of journals in the disciplines of sport and exercise medicine and science. The Institute for Scientific Information (ISI, a subsidiary of Thomson Reuters) compiles the impact factors and publishes them as Journal Citation Reports each year around June-July. You will need an institutional subscription to access this and other resources at [ISI Web of Knowledge](#).

Table 1 lists the factors of our journals in alphabetical order, while the abstract summarizes the most noteworthy performers in the journals specializing in our disciplines (i.e., excluding the applied biomechanics, physiology and psychology journals). The meaning of the impact factor is summarized in the legend of the table, but for an in-depth explanation and critique of the impact factor, start with an [earlier article](#) in this series.

This year I have also investigated a citation statistic that ISI calls the [article influence score](#):

Figure 1. Article influence scores and impact factors of journals with impact factors of at least 1.0 in sports medicine and science this year. The regression line was drawn by excluding the journal shown with an open symbol.



a number representing "the average influence of a journal's articles over the first five years after publication". Whereas the impact factor of a journal represents how often articles in the journal are cited, the article influence score takes into account the impact factor of the journals doing the citing. In other words, it's a relative measure of quantity and quality of citations. The average influence score across all disciplines is 1.0. Figure 1 shows article influence scores and impact factors of journals in sports medicine and science with impact factors of at least 1.0. One journal is clearly off the trend between these two metrics: *Exercise and Immunology Review* made a huge leap to 7.1 from last year's 2.8, presumably because it featured reviews recently that are of interest to

the wider community of biomedical scientists, and the influence score hasn't caught up yet. When this journal is excluded, the correlation between article influence score and impact factor is an extremely high 0.93 (at worst very high at the lower end of the 90% confidence interval, 0.86 to 0.96). The correlation would presumably be even higher, if the period of citations for the article influence score (5 y) was the same as that of the impact factor (2 y). It follows that for the journals in the exercise and sport disciplines, the article influence score provides little information additional to that provided by the impact factor. I am unlikely to include the article influence score in any future article on impact factors.

Table 1. Impact factors (cites per article per year) for sports medicine and science journals based on articles published in 2010 and 2011 that were cited in 2012. Some impact factors are shown as inequalities, to comply with terms of use set by Thomson Reuters. "?" indicates a possible inadvertent omission of the journal from the databases. "<1.0" implies a value between 0.1 and 1.0. "<0.1" implies a non-zero value less than 0.1. A journal without an impact factor is not in Thomson Reuter's science or social sciences databases, either because the journal is too new or the factor is too low. Color indicates direction and magnitude of change in impact factor since last year, as follows:

New	↑ ≥70%	↑ 30-69%	↑ 10-29%	↑↓ 0-9%	↓ ≥10%
<1.0	ACSM's Health and Fitness Journal				Electromyography and Motor Control
4.4	Acta Physiologica Scandinavica		1.7		Ergonomics
1.1	Adapted Physical Activity Quarterly		2.7		European Journal of Applied Physiology
	American Journal of Medicine and Sports		1.2		European Journal of Sport Science
4.5	American Journal of Physiology - Endo & Metab		<1.0		European Review of Aging and Physical Activity
3.6	American Journal of Physiology - Heart & Circ				European Sports History Review
4.4	American Journal of Sports Medicine		7.1		Exercise and Immunology Review
1.7	Applied Ergonomics		5.3		Exercise and Sport Sciences Reviews
2.0	Applied Physiology Nutrition & Metabolism				Frontiers in Movement Science and Sport Psychology
1.1	Applied Psychological Measurement		2.0		Gait and Posture
1.5	Applied Psychology-International Review		2.1		High Altitude Medicine and Biology
<1.0	Archives of Budo		2.1		Human Movement Science
	Asian Journal of Sports Medicine		0.2		International Journal of Athletic Therapy & Training
<1.0	Aviation Space and Environmental Medicine				International Journal of Coaching Science
1.9	Behavior Research Methods				International Journal of Computer Science in Sport
<1.0	Biology of Sport		7.0		International Journal of Epidemiology
3.7	British Journal of Sports Medicine		<1.0?		International Journal of History of Sport
1.9	Clinical Biomechanics		0.5		International Journal of Performance Analysis in Sport
1.6	Clinical Journal of Sport Medicine		1.9		International J of Sport Nutrition & Exercise Metabolism
2.4	Clinics in Sports Medicine		<1.0		International Journal of Sport Finance
1.5	Current Sports Medicine Reports		<0.1?		International J of Sports Marketing & Sponsorship
<1.0	Deutsche Zeitschrift fur Sportmedizin		<1.0		International Journal of Sport Psychology

2.3	International Journal of Sports Medicine	1.3	Journal of Sport and Social Issues
2.3	International J of Sports Physiology & Performance		Journal of Sport Behavior
<1.0	International J of Sports Science & Coaching	<1.0	Journal of Sport Economics
	International Quarterly of Sport Science		Journal of Sport History
<1.0?	International Review for the Sociology of Sport	<1.0	Journal of Sport Management
<1.0?	International Sportmed Journal	<1.0	Journal of Sport Rehabilitation
	International Sports Journal	<1.0	Journal of Sports Medicine and Physical Fitness
<1.0	Isokinetics and Exercise Science	<1.0	Journal of Sports Science and Medicine
	Japanese Journal of Physical Fitness and Sport	2.1	Journal of Sports Sciences
1.9	Journal of Aging and Physical Activity		Journal of Sports Traumatology
<1.0	Journal of Applied Behavior Analysis	1.8	Journal of Strength and Conditioning Research
1.1	Journal of Applied Behavioral Science		Journal of Swimming Research
1.3	Journal of Applied Biomechanics	<1.0	Journal of Teaching in Physical Education
3.5	Journal of Applied Physiology	<1.0	Kinesiology
4.8	Journal of Applied Psychology	1.0	Leisure Sciences
1.2	Journal of Applied Sport Psychology	<1.0	Leisure Studies
1.7	Journal of Athletic Training		Measurement in Physical Education & Exercise Science
2.7	Journal of Biomechanics	<1.0	Medicina dello Sport
	Journal of Combat Sports and Martial Arts	4.5	Medicine and Science in Sports and Exercise
	Journal of Comparative Physical Education & Sport		Medicine and Sport Science
1.6	Journal of Electromyography and Kinesiology	1.4	Motor Control
3.4	Journal of Epidemiology and Community Health	1.6	Pediatric Exercise Science
	Journal of Exercise Physiology Online		Pediatric Physical Therapy
<1.0	Journal of Exercise Science & Fitness	<1.0	Perceptual and Motor Skills
<1.0	Journal of Human Kinetics	0.8	Physical Education and Sport Pedagogy
	Journal of Human Movement Studies		Physical Educator
	Journal of Human Performance in Extreme Environments	1.4	Physical Therapy in Sport
	Journal of Human Sport and Exercise	1.3	Physician and Sportsmedicine
1.8	Journal of the International Society of Sports Nutrition	1.7	Psychology of Sport and Exercise
	Journal of Motor Learning and Development	<1.0	Quest
<1.0	Journal of Leisure Research	1.1	Research in Sports Medicine
1.0	Journal of Motor Behaviour	1.1	Research Quarterly for Exercise and Sport
1.9	Journal of Occupational & Environmental Medicine	3.2	Scandinavian Journal of Medicine & Science in Sports
3.0	Journal of Orthopaedic & Sports Physical Therapy	<1.0	Science and Sports
<1.0	Journal of the Philosophy of Sport	<1.0	Sociology of Sport Journal
1.9	Journal of Physical Activity and Health		Sport History Review
	Journal of Physical Education, Recreation, & Dance	1.2	Sport, Education, and Society
4.4	Journal of Physiology	1.0	(The) Sport Psychologist
	Journal of Quantitative Analysis in Sports	<1.0	Sports Biomechanics
2.9	Journal of Science and Medicine in Sport		Sports Exercise and Injury
2.5	Journal of Sport and Exercise Psychology	5.2	Sports Medicine

	Sports Technology	<1.0	Strength and Conditioning Journal
<1.0	Sportverletzung-Sportschaden		Women in Sport & Physical Activity Journal

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