

Measuring the online attention of the Rehabilitation Web of Science category: an Altmetrics-based analysis



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Introduction

Social media has supposed a revolution in the information dissemination → New ways for measuring the impact of scientific publications in social media (Costas, Zahedi, & Wouters, 2015).

Different groups reading science (practitioners, undergraduate students, lecturers, etc.)

New types of academic outputs (dataset, posters, blogs, online teaching, etc.) (Bornmann & Williams, 2013)

Rehabilitation research field is composed of different professional areas that have a high impact on the general population well-being (Shadgan et al., 2010).

Objectives

Primary aim: Determine the online attention of the Rehabilitation related scientific output in social media, in other words, through Altmetrics.

Subgoals: 1) To show the relation between the Web of Science (WoS) citations and the Altmetric score at the journal level, 2) To know the differences between Top 10 papers ranked by WoS citations and Altmetric score, and 3) To analyze the existent correlation among the different ways to mention the scientific output through the different platforms.

Methods

Dataset

The list of the DOIs of the articles and reviews published, in the period 2013-2017, in the 113 journals within the Rehabilitation Web of Science (WoS) category was downloaded in March 2018.

A total of 24,701 records were finally downloaded, after matching DOIs with Altmetrics records. Only the 67% of the documents indexed in WoS were retrieved from Altmetrics.

Altmetrics analysis

- Descriptive approach:** a) the number of documents with at least 1 mention/citation and those with 10 or more, b) the relation between WoS citations and Altmetric score of the Top 20 journals ranked by the number of WoS citations, and c) the Top 10 documents ranked by WoS citations and Altmetric score.
- Statistical analysis:** Analysis of the correlations to show the relationships between mentions/citations.

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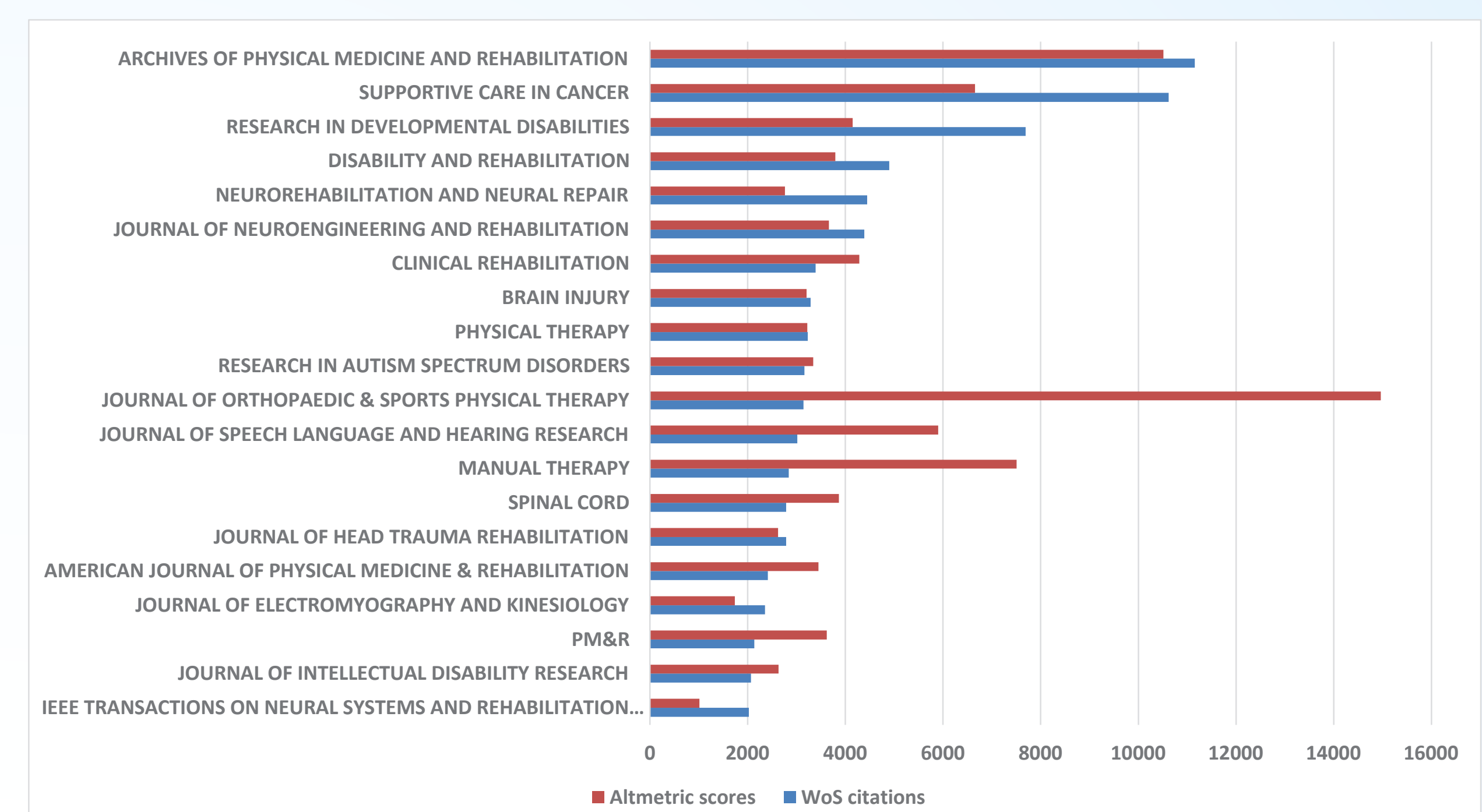
Results

Table 1. Documents with at least 1 mentions/citations and those with 10 or more.

Media	m/c>0	% of Total	m/c>10	% of Total
Twitter	20,712	83.85%	3,722	15,07%
WoS	19,060	77.16%	3,448	13.96%
Facebook	8,555	34,63%	269	1,09%
Google +	1,649	6,68%	4	0,02%
Blog	1,017	4,12%	1	≈0,00%
Wikipedia	213	0,86%	0	0,00%
LinkedIn	10	0,04%	0	0,00%

Twitter is the media in which the Rehabilitation research production has a higher impact. LinkedIn is the media in which the Rehabilitation area has a fewer impact.

Figure 1. WoS citations and Altmetric scores of the Top 20 journals ranked by WoS citation.



There is a high disbalance between Altmetrics score and WoS citations in some of the journals.

According to the Top 10 papers ranked by WoS citations and Altmetric scores, both Top 1 papers, Maciejasz et al. (2014) by WoS ranking and King et al. (2015) by Altmetrics ranking, belong to the same journal, *Journal of NeuroEngineering and Rehabilitation*, but none of them appear in both rankings. The first one is in the 14972nd position of the Altmetrics ranking and the second one in the 2003rd position of the WoS ranking.

Table 2. Spearman correlation coefficients of the different variables.

	WoS	Blogs	Twitter	Facebook	Wikipedia	Google +	LinkedIn
WoS Citations	1	0,051 (p=0.000)	0,027 (p=0.000)	0,018 (p=0.006)	0,066 (p=0.000)	0,146 (p=0.000)	0,021 (p=0.001)
Blog	0,051 (p=0.000)	1	0,084 (p=0.000)	0,068 (p=0.000)	0,032 (p=0.000)	0,038 (p=0.000)	-0,004 (p=0.512)
Twitter	0,027 (p=0.000)	0,084 (p=0.000)	1	0,334 (p=0.000)	0,006 (p=0.337)	0,143 (p=0.000)	-0,004 (p=0.492)
Facebook	0,018 (p=0.006)	0,068 (p=0.000)	0,334 (p=0.000)	1	0,007 (p=0.270)	0,230 (p=0.000)	0,018 (p=0.006)
Wikipedia	0,066 (p=0.000)	0,032 (p=0.000)	0,006 (p=0.337)	0,007 (p=0.270)	1	0,010 (p=0.108)	-0,002 (p=0.768)
Google +	0,146 (p=0.000)	0,038 (p=0.000)	0,143 (p=0.000)	0,230 (p=0.000)	0,010 (p=0.108)	1	0,067 (p=0.000)
LinkedIn	0,021 (p=0.001)	-0,004 (p=0.512)	-0,004 (p=0.492)	0,018 (p=0.006)	-0,002 (p=0.768)	0,067 (p=0.000)	1

**The correlation is significant at the 0.01 level (bilateral). Significant results are highlighted in bold.

WoS citations are correlated with all the variables measured. Conversely, LinkedIn and Wikipedia are those less correlated, but it seems to depend on the distribution type; LinkedIn is related to those more social platforms, Facebook and Google+, and Wikipedia is more related to Blogs.

Conclusions

- Twitter is the social media in which the production attracts the highest attention.
- Not all types of documents and journals obtain the same social and scientific recognition, it seems to be related with the professional area and type of study.
- Further analysis about the online attention of the Rehabilitation research area and how the variables are correlated, dividing the dataset by different characteristics, is still needed.