

South Africa is maintaining supremacy in orthopaedic and sports medicine publications in Africa

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We wish to highlight the contribution of South Africa (SA) in Orthopaedics and Sports Medicine (OSM) over three decades and compare it with all nations of the African continent, from curated data on the SCImago website.¹ The website uses Scopus data and currently has the data, on country and journal rankings, available from 1996 to 2022. We noticed that SA has maintained the topmost rank among all African nations from 1996 to 2022, followed by Egypt, Tunisia, Nigeria and Ethiopia, currently in 2022 (*Table 1*).

There were a total of 2 908 publications between 1996 and 2022, with a global contribution of 0.4%, and 35% contribution among all the African nations. The publications in OSM from SA have increased 9.2-fold from 37 (in 1996) to 339 (in 2022). The quality of SA publications was better than most of the other African countries, with the important quality metrics (H-index, and citations per document or CPD) comparatively higher. The H-index of SA was the highest at 111, and the CPD were 0.91 (*Table 1*). There has been an increasing trend in OSM publications across the globe, and SA was found as the leading nation among all African countries.² Hohmann et al. reported from a study of the top 15 highest-impact orthopaedic journals, between 2010 and 2014, that SA was ranked in the lower third of all countries that published in these top 15 journals. Further, in Africa, Egypt was the leading country for the publications and impact factor, even after adjusting for the population size, gross domestic product (GDP), and research funding in the percentage of GDP.³

We found only two OSM journals listed from SA in the SCImago, viz. South African Journal of Sports Medicine (SAJSM) and the South African Orthopaedic Journal (SAOJ); in 2022, these were ranked 219 and 296 out of a total of 306 OSM global journals.¹ Gelbart et al. found 161 publications in SAJSM (from 1982 to 2021) and 41 in SAOJ (from 2008 to 2021). The SAJSM published 44.61% of articles by the local authors.⁴

Although SA is a pioneer among African nations in OSM publications, its current global standing is comparatively low, ranking 27th.¹ We feel there is plenty of scope for further improvement in SA's global ranking, with more publications, and research collaboration between authors and institutions of SA, and other nations will help the cause.⁵

References

1. SCImago, (n.d.). SJR – SCImago Journal & Country Rank [Portal]. Retrieval date: 11 December 2023, from <http://www.scimagojr.com>
2. Vaishya R, Vaish A. Global trend of publications in orthopaedics and sports medicine: 1996–2021. *Chin J Traumatol*. Published online November 15, 2023. doi:10.1016/j.cjtee.2023.10.006
3. Hohmann E, Glatz V, Tetsworth K. Worldwide orthopaedic research activity 2010–2014: Publication rates in the top 15 orthopaedic journals related to population size and gross domestic product. *World J Orthop*. 2017;8(6):514-23. Published 2017 Jun 18. <https://doi.org/10.5312/wjo.v8.i6.514>
4. Gelbart BR, Schapkaite E, Levitt D. The profile of orthopaedic sports medicine publishing in South Africa. *S Afr J Sports Med*. 2022 Jan 1;34(1):v34i1a14413. <https://doi.org/10.17159/2078-516X/2022/v34i1a14413>. PMID: 36815931; PMCID: PMC9924608.
5. Vaishya R, Gupta BM, Misra A, et al. Top 100 highly cited papers from India on COVID-19 research: A bibliometric analysis of the core literature. *Diabetes Metab Syndr*. 2023 Nov 7;17(11):102898. <https://doi.org/10.1016/j.dsx.2023.102898>. Epub ahead of print. PMID: 37952296.

Table 1: Publication metrics of African nations in Orthopaedics and Sports Medicine in 2022 (Data source: SCImago¹)

Rank	Country	Documents	Citations	Citations per document (CPD)	H-index
1	South Africa	339	309	0.91	111
2	Egypt	276	158	0.57	54
3	Tunisia	102	168	1.65	73
4	Nigeria	39	47	1.21	30
5	Ethiopia	25	2	0.08	19
6	Morocco	23	3	0.13	27
7	Ghana	18	48	2.67	20
8	Algeria	11	37	3.36	16
9	Uganda	11	3	0.27	15
10	Tanzania	11	6	0.55	11
11	Kenya	9	7	0.78	28
12	Cameroon	7	2	0.29	17
13	Malawi	7	2	0.29	24
14	Liberia	7	2	0.29	2
15	Botswana	6	42	7	13
16	Zimbabwe	6	11	1.83	12
17	Libya	3	1	0.33	4
18	Rwanda	3	0	0	4
19	Sudan	3	2	0.67	11
20	Senegal	3	0	0	10
21	Côte d'Ivoire	2	0	0	8
22	Burkina Faso	2	1	0.5	6
23	Benin	2	1	0.5	6
24	Guinea	2	0	0	0
25	Zambia	2	0	0	7
26	Reunion	2	5	2.5	8
27	Eswatini	1	0	0	1
28	Congo	1	1	1	9
29	Angola	1	2	2	2
30	Mauritius	1	7	7	2
31	Gambia	1	0	0	5
32	Gabon	1	1	1	1
33	Cape Verde	1	0	0	0
34	Burundi	1	0	0	2
35	Sierra Leone	1	0	0	3
36	Somalia	1	1	1	1