

Supplement 1. Systematic search methods.

The systematic search was performed in accordance with the reporting requirements of the PRISMA statement.¹ The search strategy is described below. The same search was used previously for a query on publicly available data and code.² The search protocol has not been registered. No funding supported the undertaking of the systematic search.

Objective

This review aimed to estimate the proportion of 2019 articles published in quartile one (Q1) sports science journals that included at least one co-author affiliated with a statistics or other methodologically-related department.

Methods

Articles published in Q1 'sports science' journals in 2019 were studied. The list of Q1 journals was taken from Scimago² and all 2019 articles from these 31 journals were exported from Scopus.³ Supplemental Table 1 shows the journal names and number of articles published by these journals in 2019. All original research or meta-analysis articles (data containing) were considered for review. Journal communications, letters to the editor and their responses, editorials and systematic, scoping and narrative reviews were not considered. Of the articles identified for full text screening, 5% were sampled, at random, for survey. Articles were surveyed to determine whether at least one co-author was affiliated with a biostatistics, statistics data science, data analytics, math, computer science, informational science, economics or epidemiology department. For interdisciplinary departments that include epidemiology—such as departments of community health, population health, health, or public health—individual authors were checked to determine if any were epidemiologists or statisticians. We acknowledge that we may have missed staff epidemiologists or statisticians embedded within domain-specific departments, such as departments of orthopedic surgery or sports science. However, when we checked all authors from a random subset of 30 articles, we found only 1 staff biostatistician, so we believe that the total number will be low. Two authors (KLS and DNB) independently extracted the data. Agreement was 95%; discrepancies were resolved by KLS. The findings are reported as the proportion and 95% confidence interval (CI).

Results

The initial extraction included 8,970 articles (Figure 1, Supplemental Table 1). Of the 400 articles selected at random, 299 included were deemed eligible (Figure 1). The proportion of articles including at least one co-author affiliated with a biostatistics, statistics, data science, data analytics, math, computer science, informational science, economics, epidemiology, or epidemiology-related department was 40/299, or 13.3% (95% CI: 9.5% to 17.2%). The breakdown of departments was:

- 16 statistics, biostatistics, data science, or data analytics
- 15 epidemiology or epidemiology-related
- 4 economics
- 3 computer science or informational technology
- 2 math

Summary

A survey of 299 articles showed that only about 13% of papers published in quartile one sports science journals in 2019 included a co-author who was affiliated with a statistics or other methodologically-oriented department.

Supplemental Table 1. Quartile one sports science journals searched, and the number of articles published by these journals in 2019.

Rank	Journal	2019 articles
1	British Journal of Sports Medicine	477
2	American Journal of Sports Medicine	488
3	Sports Medicine	201
4	Exercise Immunology Review	7
5	Bone and Joint Journal	285
6	Arthroscopy - Journal of Arthroscopic and Related Surgery	621
7	Journal of Bone and Joint Surgery - Series A	414
8	Medicine and Science in Sports and Exercise	336
9	Journal of Shoulder and Elbow Surgery	436
10	Journal of Physiology	546
11	International Journal of Sports Physiology and Performance	215
12	Exercise and Sport Sciences Reviews	37
13	Knee Surgery, Sports Traumatology, Arthroscopy	736
14	Sport Management Review	110
15	Spine	483
16	Journal of Science and Medicine in Sport	294
17	Scandinavian Journal of Medicine and Science in Sports	229
18	Clinical Orthopaedics and Related Research	487
19	Journal of Strength and Conditioning Research	420
20	International Review of Sport and Exercise Psychology	18
21	Journal of Sport Management	18
22	Archives of Physical Medicine and Rehabilitation	345
23	Journal of Applied Physiology	364
24	European Sport Management Quarterly	57
25	European Journal of Applied Physiology	253
26	Psychology of Sport and Exercise	160
27	Journal of Athletic Training	168
28	Journal of Orthopaedic and Sports Physical Therapy	73
29	Journal of Sports Sciences	362
30	International Journal of Sports Medicine	128
31	Applied Physiology, Nutrition and Metabolism	202
	Total	8,970

References

1. Moher D. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *Ann Intern Med.* 2009;151(4):264–269. <https://doi.org/10.7326/0003-4819-151-4-200908180-00135>.
2. Borg DN, Bon JJ, Sainani K, Baguley BJ, Tierney NJ, Drovandi C. *Sharing Data and Code: A Comment on the Call for the Adoption of More Transparent Research Practices in Sport and Exercise Science.* SportRxiv; 2020. doi:10.31236/osf.io/ftdgi
3. Journal Rankings on Sports Science. Accessed March 2020. Available from: <https://www.scimagojr.com/journalrank.php?category=3699&year=2018>.

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