

# Anatomy of high-impact publications in orthopedics

Kyle N. Kunze  
Evan M. Polce  
Amar Vadhera  
Brady T. Williams  
Benedict U. Nwachukwu  
Shane J. Nho  
Jorge Chahla

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## Video Abstract

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# Abstract

Citation rates and journal impact factor are the most widely used measures of influence in the academic world. But true impact extends well beyond the sphere of research. While quantifying this influence has remained incredibly challenging, social media and the alternative metrics its supplies are beginning to change that. In a new study reported in *The American Journal of Sports Medicine*, researchers looked at how these “altmetrics” correlate with traditional measures of impact in the field of orthopedics. Their findings point to the types of studies and publication venues that attain the greatest reach. The authors of the study analyzed 496 articles published across five high-impact journals in 2016: *The Journal of Bone and Joint Surgery*; *Clinical Orthopaedics and Related Research*; *Acta Orthopaedica*; *Knee Surgery, Sports Traumatology, Arthroscopy*; and *The American Journal of Sports Medicine*. They looked at a mixture of ordinary characteristics such as study subject and design, country of origin, and citations and social media characteristics such as numbers of shares on Twitter and Facebook and Altmetric Attention Score. This score, compiled and tracked by the company Altmetric, captures the spread of research on social media platforms. Articles had an average Altmetric Attention Score of just over 8, with a maximum of 501, and an average citation rate of 15, with a maximum of 178. Regression analysis revealed two important trends: high Altmetric Scores significantly predicted high citation rates, and high citation rates independently predicted greater social media attention on Twitter, Facebook, and the news. The team’s work also indicated the types of orthopedics articles that garnered the most attention. These included studies concerning measure validation or reliability, publications from North America, and articles published in *The American Journal of Sports Medicine*. Of course, more work is needed. Sifting through the many more than five journals that publish on orthopedics could paint a clearer picture of impact across the entire field. And that’s crucial. Understanding the anatomy of high-impact studies could prove instructive to journals and researchers alike.