Research Letter

Top Skin-of-Color Publications in Dermatology

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(JMIR Dermatol 2022;5(2):e37256) doi: 10.2196/37256

KEYWORDS
skin of color; dermatology; Web of Science; Altmetric; Altmetric Attention Score; decision-making; public attention; media; blogs; skin disorder; dermatologic conditions; online media; publication; citation; impact; health information; information exchange; education

Introduction
Tools such as the Altmetric Attention Score (AAS) and Web of Science (WoS) allow researchers to qualify their work’s impact. WoS uses publication citation counts and is often utilized in academia, while the AAS analyzes online media attention to determine the impact of research [1].

Methods
Using Altmetric Explorer to obtain an article’s AAS and WoS to measure an article’s citation count, the top 50 papers from each search engine were collected using the keywords “skin of color” and “dermatology.” An article’s mention in news outlets and on blogs and Twitter were recorded from Altmetric Explorer as well as whether these mentions came from members of the public or practitioners; this we defined as metrics indicative of online media “attention.” The mean (SD), 95% CI, and P values were determined by comparing the metrics provided by the top 50 papers from Altmetric and WoS.

Results
Table 1 presents a comparison of the top 10 cited articles on WoS and the top 10 articles with the highest AAS.

The mean AAS for the top 50 papers from Altmetric and WoS were 39.1 and 24.2, respectively (P=.02). The P values were statistically significant in several of the categories compared, including the AAS (P=.02), news outlet mentions (P=.008), and Twitter mentions (P=.02) (Table 2). Recurring themes in the top AAS skin-of-color (SoC) papers included skin cancer; cosmetic dermatology, notably pigmentation disorders; and inadequate knowledge among health care practitioners in identifying dermatologic conditions in SoC patients. By contrast, the top-cited SoC papers from WoS involved basic science research of dermatologic conditions and recommendations for assessment tools for clinicians and patients.
<table>
<thead>
<tr>
<th>Article title</th>
<th>Authors</th>
<th>Altmetric Attention Score</th>
<th>Total citations (on Web of Science), n</th>
<th>Publication year</th>
<th>Journal</th>
<th>Country</th>
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</thead>
<tbody>
<tr>
<td><strong>Top 10 Altmetric articles</strong></td>
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<td>features, and treatment options in skin of color</td>
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<tr>
<td>Acne vulgaris in skin of color: Understanding nuances and optimizing</td>
<td>Alexis [3]</td>
<td>179</td>
<td>12</td>
<td>2014</td>
<td>JDD⁵</td>
<td>United States</td>
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<td>treatment outcomes</td>
<td></td>
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<td>Background and room illumination in color identification of skin lesions</td>
<td>Maymone et al [4]</td>
<td>128</td>
<td>6</td>
<td>2017</td>
<td>JAMA ⁶ Dermatology</td>
<td>United States</td>
</tr>
<tr>
<td>Skin cancer and photoprotection in people of color: A review and recommendations for physicians and the public</td>
<td>Agbai et al [5]</td>
<td>122</td>
<td>120</td>
<td>2014</td>
<td>JAAD⁷</td>
<td>United States</td>
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<tr>
<td>UV Exposure and the risk of cutaneous melanoma in skin of color: A systematic review</td>
<td>Lopes et al [6]</td>
<td>102</td>
<td>7</td>
<td>2021</td>
<td>JAMA Dermatology</td>
<td>United States</td>
</tr>
<tr>
<td>Skin color in dermatology textbooks: An updated evaluation and analysis</td>
<td>Adelekun et al [7]</td>
<td>98</td>
<td>17</td>
<td>2021</td>
<td>JAAD</td>
<td>United States</td>
</tr>
<tr>
<td>Gaps in the understanding and treatment of skin cancer in people of color</td>
<td>Kailas et al [10]</td>
<td>54</td>
<td>4</td>
<td>2016</td>
<td>JAAD</td>
<td>United States</td>
</tr>
<tr>
<td>How dermatology is failing melanoma patients with skin of color: Unanswered questions on risk and eye-opening disparities in outcomes are weighing heavily on melanoma patients with darker skin</td>
<td>Nelson [11]</td>
<td>53</td>
<td>3</td>
<td>2020</td>
<td>Cancer Cytopathology</td>
<td>United States</td>
</tr>
<tr>
<td><strong>Top 10 Web of Science articles</strong></td>
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<tr>
<td>Skin cancer in skin of color</td>
<td>Gloster Jr et al [12]</td>
<td>26</td>
<td>301</td>
<td>2006</td>
<td>JAAD</td>
<td>United States</td>
</tr>
<tr>
<td>Skin of color: Biology, structure, function, and implications for dermatologic disease</td>
<td>Taylor [13]</td>
<td>34</td>
<td>220</td>
<td>2002</td>
<td>JAAD</td>
<td>United States</td>
</tr>
<tr>
<td>A mouse model of vitiligo with focused epidermal depigmentation requires IFN-gamma for autoreactive CD8(+) T-cell accumulation in the skin</td>
<td>Harris et al [14]</td>
<td>24</td>
<td>159</td>
<td>2012</td>
<td>JID⁸</td>
<td>United States</td>
</tr>
<tr>
<td>Skin cancer and photoprotection in people of color: A review and recommendations for physicians and the public</td>
<td>Agbai et al [5]</td>
<td>122</td>
<td>120</td>
<td>2014</td>
<td>JAAD</td>
<td>United States</td>
</tr>
<tr>
<td>Acne vulgaris in skin of color</td>
<td>Taylor et al [15]</td>
<td>2</td>
<td>102</td>
<td>2002</td>
<td>JAAD</td>
<td>United States</td>
</tr>
<tr>
<td>The Asian dermatologic patient review of common pigmentary disorders and cutaneous diseases</td>
<td>Ho et al [16]</td>
<td>1</td>
<td>84</td>
<td>2009</td>
<td>American Journal of Clinical Dermatology</td>
<td>China</td>
</tr>
</tbody>
</table>
Table 2. The top 50 Altmetric papers versus the top 50 cited papers in Web of Science.

<table>
<thead>
<tr>
<th>Country</th>
<th>Journal</th>
<th>Total citations (on Web of Science), n</th>
<th>Altmetric Attention Score</th>
<th>Authors</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>Dermatology and Therapy</td>
<td>61</td>
<td>10</td>
<td>Ogbechie-Godec [17]</td>
<td>Melasma: an up-to-date comprehensive review</td>
</tr>
<tr>
<td>United States</td>
<td>JAAD</td>
<td>61</td>
<td>2</td>
<td>Lilly et al [18]</td>
<td>Development and validation of a vitiligo-specific quality-of-life instrument (VitiQoL)</td>
</tr>
</tbody>
</table>

Discussion

Principal Findings

While highly cited publications often guide clinical recommendations and carry substantial influence on practitioners, they may fail to highlight the discussions taking place outside of the scientific community [21]. For SoC patients, their interests and concerns regarding dermatologic conditions must be understood by health care providers as disease processes often manifest differently in this population compared to the general public [13]. With over 70% of the US population using social media, these platforms will allow increased sharing of research topics, supporting the utility of Altmetric scoring compared to citation count alone [22]. Within our study, the difference in recurrent themes between top AAS versus top-cited publications indicated that the clinical mindset and patient-centered topics may not align.

Limitations and Future Work

Limitations to our study include a small sample size, narrow inclusion criteria, and a lack of time constraints. Future studies comparing AAS and WoS should be confined to a short time period to mitigate temporal confounding factors due to the differing accrual rates of citation count and AAS [23]. Medical societies and health care providers can use insights from this study to shape the practice of dermatology to better understand the interests and expectations of SoC patients.

Conclusion

AAS and WoS provide different metrics on the influence of academic research. Factors that may generate greater social media attention include papers with more pictures and an author’s social media presence. Elements that may produce greater citation counts include a journal’s impact factor and an author’s academic reputation and home institution. Altmetric uniquely represents the attention of the general public, which can facilitate patient-centered decision-making.
Conflicts of Interest

RPD is editor-in-chief of JMIR Dermatology, a joint coordinating editor for Cochrane Skin, a dermatology section editor for UpToDate, a social media editor for the Journal of the American Academy of Dermatology, and a podcast editor for the Journal of Investigative Dermatology (JID). He is a coordinating editor representative on Cochrane Council. RPD receives editorial stipends (JID, JMIR Dermatology), royalties (UpToDate), and expense reimbursement from Cochrane Skin.

References


11. Nelson B. How dermatology is failing melanoma patients with skin of color: Unanswered questions on risk and eye-opening disparities in outcomes are weighing heavily on melanoma patients with darker skin. In this article, part 1 of a 2-part series, we explore the deadly consequences of racism and inequality in cancer care. Cancer Cytopathol 2020 Jan;128(1):7-8 [FREE Full text] [Medline: 24048361]


Abbreviations

AAS: Altmetric Attention Score
SoC: skin of color
WoS: Web of Science

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