DESIDOC Journal of Library & Information Technology, Vol. 43, No. 6, November 2023, pp. 432-440, DOI : 10.14429/djlit.43.6.19412

Does Altmetric Attention Score Correlate with Citations of Articles Published in High CiteScore Journals? Analysis of Three Open Access LIS Journals

Bwsrang Basumatary[1], ManoramaTripathi[2] and Manoj Kumar Verma[1*]

[1]*Department of Library and Information Science, Mizoram University, Aizawl - 796 004, India*

[2]*Dr B.R. Ambedkar Central Library, Jawaharlal Nehru University, New Delhi - 110 067, India*

[*]*E- mail: manojdlis@mzu.edu.in*

ABSTRACT

In the ever-evolving landscape of scholarly communication, research impact assessment has expanded beyond traditional citation metrics. Altmetrics, which encompass a wide range of online indicators like social media mentions, downloads, and blog posts, provide insights into the broader societal engagement with scholarly works. This study explores the relationship between Altmetric Attention Scores (AAS) and traditional citation metrics within the Library and Information Sciences (LIS) domain, focusing on high CiteScore open-access journals. The study collected bibliographic data of top 100 articles from Dimensions.ai database that were published between 2013 and 2022 and assesses the alignment between scholarly recognition and online engagement. The top 100 articles were selected based on highest AAS to focus on the most influential and widely-discussed research in order to provide a comprehensive overview of current trends and impactful findings in the field. The dissemination pattern of research highlights across various social web platforms is examined, shedding light on the diverse channels through which research reaches audiences. Correlation analysis reveals a weak and statistically insignificant connection between AAS and citations for the studied journals, emphasising the nuanced nature of scholarly impact in today's digital landscape. The findings underscore the need to consider both traditional and alternative metrics when evaluating research influence and engagement in the evolving scholarly communication paradigm of the digital age. While this study is confined to specific journals within the LIS domain, its insights contribute to a deeper understanding of the multifaceted nature of research impact assessment.

Keywords: Correlation analysis; Citations; Altmetric attention score; Open access journals; Library and information science

1. INTRODUCTION

In the dynamic landscape of scholarly communication, researchers and academics are constantly seeking innovative ways to gauge the impact and dissemination of their published works. Traditionally, academic impact has been predominantly measured through the number of citations an article receives. However, with the advent of digital media and the rise of alternative metrics (altmetrics), a more comprehensive understanding of research impact is emerging.

Altmetrics considers a diverse range of indicators, including social media mentions, downloads, blog posts, and other online activities related to scholarly outputs[1]. It is an alternate method to the traditional approach for determining the social impact of research papers based on social media platforms. Scholarly communication has shifted dramatically from traditional to electronic as Internet technology has rapidly developed over the past two decades[2]. From that point of view, social networking sites are becoming a primary channel for disseminating research information. The rise of social networking sites and its effects have significantly changed the landscape of research publishing as they make research more visible to larger audiences and have greater impact[2-6]. As we all know, social networking sites have many ways of instantly disseminating information and keeping track of the digital traces of how users access various types of content published on the internet and how they interact with it.

Over the years, the LIS field has used several metric tools to assess library housekeeping operations and evaluate the literature. The tools include- Librametrics, Bibliometrics, Scientometrics, Informetrics, and Webometrics. There is no doubt that Bibliometrics and Scientometrics are commonly used tools for evaluating scholarly publications, impacts

Received : 22 August 2023, Revised : 03 October 2023
Accepted : 17 October 2023, Online published : 29 November 2023

of authors and journals[2,7-8]. In new media, especially social media, these methods are unable to properly measure the performance of these platforms. As a result, Altmetrics have emerged as a complementary technique for assessing the social media impact of research articles. The LIS community has been especially interested in altmetrics as they offer insights into the visibility and engagement of research within the broader digital landscape[9].

The citations of articles and the Altmetric Attention Score (AAS) are crucial aspects of scholarly publishing and scientific research. Citations provide a means for acknowledging the original work of authors and contribute to the validation and recognition of their research[10]. By citing reputable sources, researchers build on existing knowledge and establish the credibility of their work. Moreover, citations facilitate the tracking of scientific influence and the impact of a study within the academic community. As a complementary measure to traditional citation counts, AAS has emerged as one of the most useful sources of information about research in the digital age, capturing the broader reach and attention it has been gaining[11]. This score provides a comprehensive picture of a study's societal impact and helps researchers, institutions, and funders to gauge the broader relevance of their research beyond academic circles[12].

Several studies have explored the relationship between the publication's citations counts and AAS in various domains and revealed the complex patterns of correlations. Some studies have found moderate correlations, some identified only weak connections, and some found no correlation. Qingbin and Shanhong[13] found a positive correlation between AAS and citations of the articles published in "PLOS Genetics", "PLOS Computational Biology", and "PLOS Biology" journals. A study revealed relatively weak positive correlations in the multidisciplinary perspective of research[14]. Likewise, Huang[15], *et al.* reported significant positive correlations between AAS and citations of the six PLOS journals.

Boyd[16], *et al.* reported a weak positive correlation between citations and AAS of the top 10 most cited literature published in the top 15 plastic surgery journals between 2013 and 2016. However, Asaad[17], *et al.* found a strong positive correlation between AAS and citations of the articles published during 2016 in the highest IFs journals of the same discipline (Plastic Surgery). There is a statistically significant positive correlation between all altmetric metrics and citations in Nature's top 1,000 articles[18]. While, Nip and Feng[19] found no correlation between AAS and citations of the dermatology journal articles. Heydari[20], *et al.* reported a poor, negative and significant correlation between the number of citations and the AAS of the highly cited surgery articles.

In the field of LIS, a study revealed, among other media, the Mendeley readers (a form of altmetric) were the only source of altmetrics that had a significant correlation with citations of LIS articles[21]. Similarly, a study found a positive but insignificant connection between citations and AAS in the nine journals indexed inthe Web of Science, Scopus, and Google Scholar[22]. However, AAS and citations of the three Elsevier journals - "International Journal of Information Management (IJIM)", "Journal of Informetrics (JIF)", and "Library and Information Science Research (LISR)"were found to be positively correlated, according to the study of Borgohain[23], *et al.*

The present study explores the correlation between AAS and traditional citation metrics in the context of high CiteScore journals' articles within the LIS category. High-quality journals are known for their rigorous peer-review process, ensuring the credibility and reliability of published articles[24-25]. Consequently, publications in prestigious journals carry significant weight and contribute significantly to the development of the field. Analysing the correlation between AAS and traditional citation metrics is crucial for understanding the relationship between scholarly impact and public engagement with research publications. By examining how often research published in prestigious journals receives attention and discussions on social media, news outlets, blogs, and other online platforms, researchers can gain a comprehensive view of the article's broader impact beyond academic circles, understanding the alignment or divergence between traditional and alternative metrics aids in validating the scholarly influence of high CiteScore journals, acknowledging the growing significance of altmetrics in evaluating research impact in today's digital and interconnected world.

The selection of the top three open-access journals, i.e., "Publications," "College and Research Libraries," and "Journal of the Medical Library Association," for correlation analysis between AAS and citations, is rooted in their prominence within the LIS field. The journal "Publications" covers open-access publishing, peer review processes, research data management, digital scholarship, copyright and intellectual property issues, information ethics, and more. Likewise, "College and Research Libraries" significantly influence academic librarianship and research, offering a valuable perspective on the interplay between citations and altmetrics in the context of scholarly communication. Moreover, the "Journal of the Medical Library Association" provides insights into medical librarianship and healthcare information management, facilitating a unique examination of how citations and altmetrics align in specialized LIS subdomains. These journals collectively represent diverse facets of the LIS discipline, making them an excellent choice for comprehensively analysing the relationship between traditional and contemporary impact measurement in scholarly publishing.

2. OBJECTIVES

- To assess the year-wise and journal-wise distribution of the articles, citations and AAS of high CiteScore open access LIS journals;
- To evaluate the pattern of the dissemination of research highlights and references of top 100 articles in various posts/stories/articles published on social web platforms;

- To investigate the correlation between AAS and citations of the articles published in three selected journals;

3. DATA AND METHODOLOGY

The methodology of this study contains three sections. First, this study identified the top three open-access journals that publish articles primarily related to the Library and Information Sciences (LIS). Journals were searched in the Scopus database on 31-07-2023 and shorted based on CiteScore (2022). Publications of all the top CiteScore journals are scrutinised by visiting the contents of their publications manually. The articles and publications of many top journals listed under the LIS category are primarily multidisciplinary and not focused on the Library and Information Science subject. While scrutinising, it was found that the article publications in three journals, i.e., "Publications", "College and Research Libraries" and "Journal of the Medical Library Association", are primarily focused on libraries and information sciences. Hence, these journals are selected for the study (Table 1).

Based on Cite Score, the journals were selected since it is a widely recognised metric endorsed by reputable institutions like the Scopus. Indeed, the Cite Score fluctuates annually due to new citations and publications, but its annual calculation smooths out these variations, giving a more reliable picture of a journal's impact. For altmetric analysis, this annual perspective aligns with the typical timescales of academic research and scholarly discussion. The three journals are considered to examine the correlation between citations and AAS of articles, as many of the previous similar studies have been conducted based on three journals[23,26-28] two journals[29] and single journal as well[30].

Secondly, a systematic literature search was conducted across the database, Dimensions.ai, focusing on articles published between 2013 and 2022 in the three selected journals (Figure 1). Search results were filtered based on the Altmetric Attention Score (AAS) in the database, and the bibliographic data of the top 100 articles with the highest AAS were extracted.

Thirdly, the AAS of the top articles were collected from the Altmetric.com database through the Dimensions.ai database to accomplish the study's objectives. Collected data were processed using Microsoft Excel for further analysis.

Initially, the study analysed the year-wise distribution of articles, citations and AAS of the top 100 articles, the pattern of research information diffusion, and the correlation analysis was done using SPSS statistical tool based on Pearson Correlation Coefficient (r).

4. ANALYSIS AND RESULTS

4.1 Year-wise and Journal- wise distribution of articles, Citations and AAS

Figure 2 illustrates the year-wise distribution of articles, citations, and AAS of the top 100 research articles with the highest AAS published in three selected journals between 2013 and 2022. The top 100 articles have received 3,386 total citations and 6,036 AAS during the study period. Most articles among the top 100 were published in 2018 (NP= 22), followed by 2019 (NP= 20). In terms of the number of citations, the articles published in 2016 are more dominant (TC= 901), followed by 2018 (TC= 793) and 2019 (TC= 400), as the number of papers was also dominant in 2018 and 2019.

In terms of AAS, the article published in 2018 was the most influential (AAS= 1,574), followed by 2019 (AAS= 1,534) and 2015 (AAS= 602), which are clearly shown in (Figure 2).

Most number of articles among the top 100 articles with highest AAS were published in the journal "Publication" (NP= 49, TC= 852, AAS= 2,983), followed by "College & Research Libraries" (NP= 26, TC= 564, AAS= 1280)

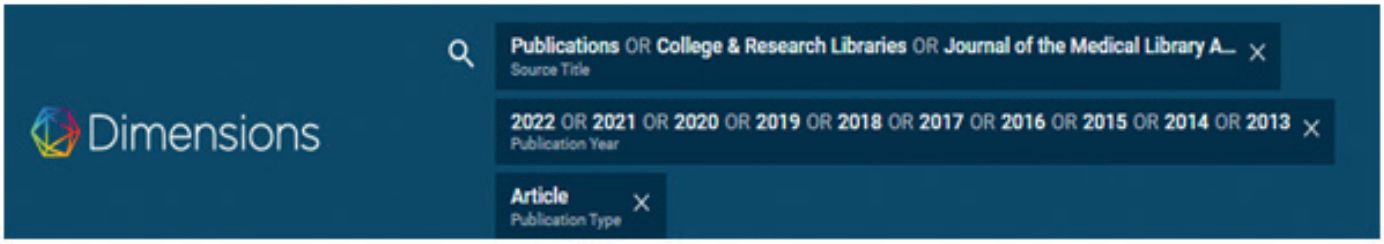
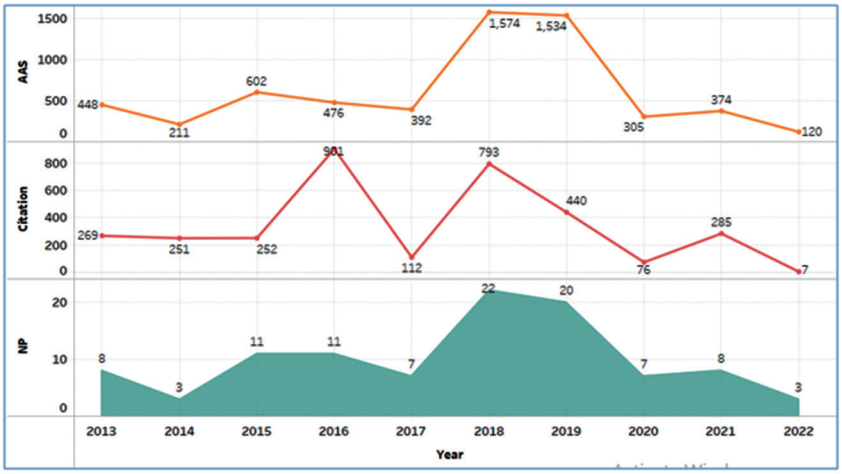


Figure 1. Search strategy in Dimensions.ai.

Table 1. List of selected journals for the study

Rank in scopus	Name of journal	ISSN/E-ISSN	CiteScore (2022)	Publisher
7	Publications	E-ISSN:2304-6775	5.0	Multidisciplinary Digital Publishing Institute (MDPI)
10	College and Research Libraries	ISSN:0010-0870 E-ISSN:2150-6701	3.3	Association of College and Research Libraries
11	Journal of the Medical Library Association	ISSN:1536-5050 E-ISSN:1558-9439	3.3	Medical Library Association



NP = Number of papers, AAS= Altmetric Attention Score

Figure 2. Year-wise distribution of number of paper publications, citations, and AAS.

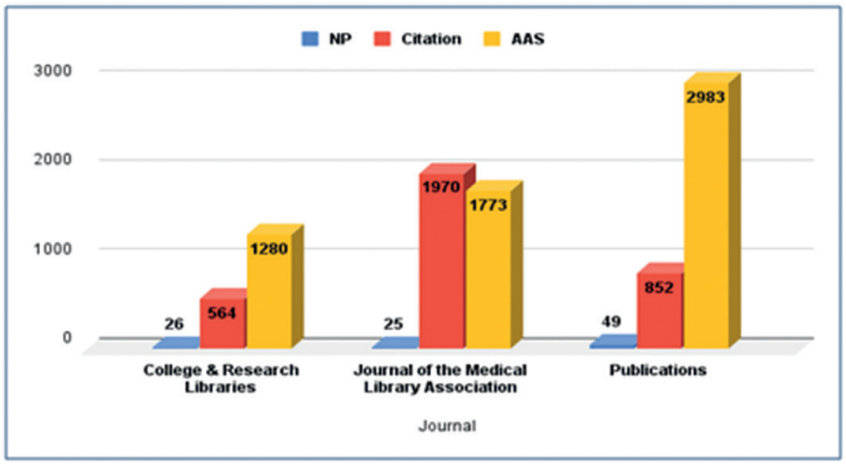


Figure 3. Journal-wise distribution of paper publications, citations, and AAS.

and "Journal of the Medical Library Association" (NP= 25, TC= 1,970, AAS= 1,773). The most influential articles among the top 100 were published in the journal "Journal of the Medical Library Association" as the articles received the most citations. While the articles published in "Publications" have received the most AAS.

4.2 Dissemination Pattern of Research Highlights and Online Engagement

Research highlights of the top 100 articles published in the selected three journals were disseminated through thirteen social web platforms, including social media, blogs, news outlets, peer-reviewed sites and reference manager platforms, i.e., CiteULike and Mendeley (Table 2). The top 100 articles were mentioned or referenced 219 times in various blog posts. Likewise, Wikipedia pages (n= 37), X (formerly Twitter) (n= 5,593), Facebook pages (n= 136), Video uploaders (n= 3), Google+ users (n= 45), Redditor (n= 38), Policy source (n= 9), Q & A thread (n= 1), peer-reviewed site (n= 7), News outlets (n= 80), CiteULike (26), Mendeley (n= 12,104). The overall Altmetric Attention Score (AAS) is 6,036.

It was also found that the social media platform as X (formerly Twitter) was the primary channel for disseminating the research highlights of the top 100 articles, followed by blogs. It is fascinating that there is a significant number of readers on the reference manager platform Mendeley (n= 12,104).

4.3 Correlation Analysis

Analysing the correlation between AAS and citations is essential due to the evolving landscape of scholarly communication. Altmetrics capture online attention and engagement with research outputs through metrics like social media mentions, downloads, and online discussions, offering a broader view of an article's impact beyond traditional citations[1,2,12,31]. By examining the correlation between AAS and citations, researchers can discern whether online engagement translates into scholarly recognition, shedding light on the effectiveness of modern dissemination strategies and the relevance of research in today's digital age. This analysis aids in assessing the broader societal impact of research and informs decisions related to research promotion, funding allocation, and academic evaluation.

Table 2. Pattern of the dissemination of research highlights and referenced in different post/stories/articles published in social web platforms

Year	NP	Blogs	Wikipedia pages	X (formerly Twitter)	Facebook pages	Video uploaders	Google+ users	Redditor	Policy source	Q&A thread	Peer reviewed site	News outlets	CiteULike	Mendeley	AAS
2013	8	32	2	309	22	0	3	0	0	0	2	2	15	789	448
2014	3	6	5	67	8	0	2	0	0	0	0	13	2	628	211
2015	11	20	3	590	22	1	10	0	3	1	0	4	3	1,415	602
2016	11	17	2	447	18	0	6	1	1	0	1	2	5	1,145	476
2017	7	17	0	344	8	0	10	4	0	0	0	6	1	594	392
2018	22	43	7	1,234	27	2	13	4	2	0	1	47	0	3,967	1,574
2019	20	51	14	1,787	22	0	1	22	2	0	3	2	0	2,201	1,534
2020	7	17	4	232	3	0	0	5	1	0	0	3	0	234	305
2021	8	13	0	436	3	0	0	1	0	0	0	1	0	1,054	374
2022	3	3	0	147	3	0	0	1	0	0	0	0	0	77	120
Total	**100**	**219**	**37**	**5,593**	**136**	**3**	**45**	**38**	**9**	**1**	**7**	**80**	**26**	**12,104**	**6,036**

Table 3. Journal-wise pattern of the dissemination of research highlights and referenced in various post/stories/articles published in social web platforms

Journal	Blogs	Wikipedia pages	X (formerly Twitter)	Facebook pages	Video uploaders	Google+ users	Redditor	Policy source	Q&A thread	peer reviewed site	News outlets	CiteULike	Mendeley
College & Research Libraries	58	7	840	55	1	16	0	1	0	0	24	4	2,155
Publications	128	21	3,012	62	1	27	38	5	1	6	15	17	4,215
Journal of the Medical Library Association	33	9	1,741	19	1	2	0	3	0	1	41	5	5,734

To assess the linear correlation between Citations and AAS, a Pearson correlation coefficient (Pearson's R) was calculated. It is the most commonly used method for measuring the strength and direction of a relationship between numerical variable[2,12]. A correlation coefficient ranges from -1.00 to 1.00, where 0 indicates no correlation, -1.00 indicates a total negative correlation, and 1.00 indicates a total positive correlation. These values have also been used by previous researchers (Table 4)[32-35].

The correlation between AAS and citations of articles published in the journal "College & Research Libraries" is found to be weakly positive and statistically insignificant ($r= 0.227$, $p= 0.264$) at conventional significance levels ($p< 0.05$), indicating that AAS may not be a useful predictor of the impact of citations (Table 5A).

While the correlation value between the citations and AAS of the article publications of "Journal of the Medical Library Association" is ($r= -0.044$, $p= 0.835$). The correlation coefficient (r) of -0.044 between citations and AAS, along with a p- value of 0.835, suggests a very weak and statistically insignificant negative relationship between the number of citations a research paper receives and it's AAS (Table 5B). In other words, there is no meaningful connection between the traditional measure of scholarly impact (citations) and the newer measure of online attention and engagement with the research (Altmetrics). This finding implies that factors affecting citations and those influencing Altmetric attention are likely distinct, and one cannot reliably predict the other.

Likewise, the AAS and Citations of the articles published in the journal "Publications" correlates very weakly and are statistically insignificant ($r= 0.151$, $p= 0.301$). The finding indicates that the citations and the AAS are not strongly aligned, potentially reflecting the diverse factors contributing to each metric and their different mechanisms of tracking scholarly influence (Table 5C).

Table 4. Range of Correlation Coefficient Values (CCV)

Range of CCV	Level of correlation	Range of CCV	Level of correlation
0.80 to 1.00	Very strong positive	-1.00 to -0.80	Very strong negative
0.60 to 0.79	Strong positive	-0.79 to -0.60	Strong negative
0.40 to 0.59	Moderate positive	-0.59 to -0.40	Moderate negative
0.20 to 0.39	Weak positive	-0.39 to -0.20	Weak negative
0.00 to 0.19	Very weak positive	-0.19 to -0.01	Very weak negative

Table 5 (a). Correlation between citations and AAS of the Journal, "College & Research Libraries"

		Citations	AAS
Citations	Pearson correlation	1	0.227
	Sig. (2-tailed)		0.264
	N	26	26
AAS	Pearson correlation	0.227	1
	Sig. (2-tailed)	0.264	
	N	26	26

Table 5 (b). Correlation between citations and AAS of "Journal of the Medical Library Association"

		Citations	AAS
Citations	Pearson correlation	1	0.044
	Sig. (2-tailed)		0.835
	N	25	25
AAS	Pearson correlation	-0.004	1
	Sig. (2-tailed)	0.835	
	N	25	25

Table 5 (c). Correlation between citations and AAS of the journal "Publications"

		Citations	AAS
Citations	Pearson correlation	1	0.151
	Sig. (2-tailed)		0.301
	N	49	49
AAS	Pearson correlation	0.151	1
	Sig. (2-tailed)	0.301	
	N	49	49

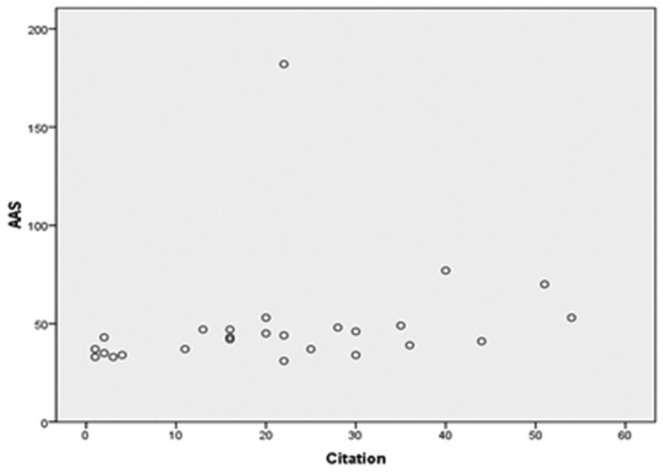


Figure 4 (a). Scattered plot of the correlation between Citations and AAS of the "Journal College & Research Libraries".

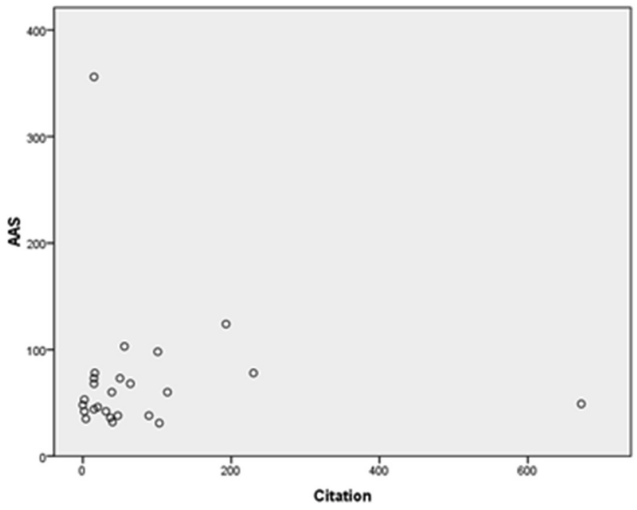


Figure 4 (b). Scattered plot of the correlation between Citations and AAS of the "Journal of the Medical Library Association".

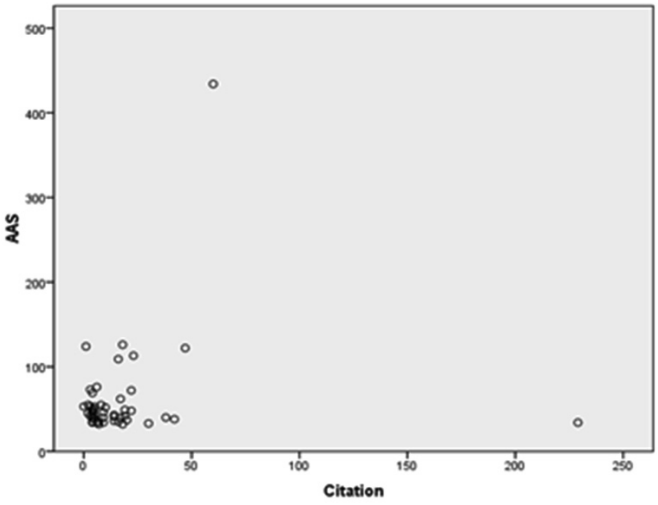


Figure 4 (c). Scattered plot of the correlation between citations and AAS of the journal "Publications".

Figures 4A, 4B and 4C show the scattered plot graph of correlations between citations and AAS of the articles published in three selected journals during the study period (2013-2022). A correlation coefficient indicates how many dots in a scatter plot lie in a straight line.[10] The x-axis depicts the number of citations the publication has received, while the y-axis represents its AAS. A positive correlation would be evident if points cluster upwards and to the right, indicating that papers with more citations also tend to have higher AAS. Conversely, a negative correlation would show a trend of points clustering downwards and to the right, indicating that highly cited papers receive less online attention. In cases where points are spread out without a clear pattern, there might be a weak or no correlation between the two measures, suggesting that different factors influence a paper's citations and its AAS. The figures given below nicely illustrate that point.

5. DISCUSSION

The findings of this study provide valuable insight into the interplay between traditional scholarly recognition and modern online engagement metrics for the top 100 articles with the highest AAS published in selected journals.

There have been a variety of platforms through which the research has been disseminated, including social media, blogs, news outlets, reference management platforms such as Mendeley, and many other channels. X (formerly Twitter) emerges as a primary conduit for dissemination, followed closely by blogs. Interestingly, the reference manager platform Mendeley garnered a significant number of readers, highlighting its role in scholarly engagement beyond citation tracking. This diverse online dissemination underscores the multifaceted ways in which research findings can reach and resonate with audiences. The weak and statistically insignificant relationship between AAS and citations of the articles published in selected three journals indicates that the factors influencing traditional citations and online engagement through altmetrics are not strongly aligned. The relationship between AAS and citations in various research evaluations has been shown to be positive in several earlier investigations[12,36-38]. However, in the context of the publication of selected three journals, i.e., "College & Research Libraries," "Journal of the Medical Library Association," and "Publications," have a weak and statistically insignificant relationship. The findings of this study have significant ramifications for understanding how scholarly communication and research impact assessment are changing over time. The lack of a strong correlation between AAS and citations suggests that these metrics capture different aspects of a research article's influence. While citations reflect academic recognition and relevance within scholarly circles, AAS offers a broader view of how research resonates with online audiences, including the public and practitioners. The study highlights that the rise of altmetrics introduces a more comprehensive perspective on research impact that extends beyond traditional academic boundaries.

6. CONCLUSION

AAS and citation metrics within the LIS field demonstrates a complex relationship. While some studies have found moderate correlations, others have identified only weak connections. The incorporation of altmetrics provides valuable insights into the broader impact and engagement of research beyond the scholarly community. As the research landscape evolves, further studies examining high CiteScore journals under LIS should be conducted to deepen understanding of the relationship between citations and AAS in this specific domain. Researchers and stakeholders in the LIS field can benefit from considering citations-based and altmetric indicators when evaluating the reach and influence of scholarly work. It is important to acknowledge certain limitations of this study. The findings are based on a specific set of journals within the LIS domain, and the correlation between AAS and citations may vary across disciplines and journal types.

Additionally, the study does not explore the underlying factors that might drive the weak correlation, leaving room for future research. By untangling the complex relationship between these metrics, researchers, institutions, and policy makers can better assess and promote research in a way that aligns with the dynamic nature of scholarly communication in the digital age.

REFERENCES

1. Priem, J.; Taraborelli, D.; Groth, P. & Neylon, C. Altmetrics: A manifesto. 2010. http://altmetrics.org/manifes
2. Basumatary, B.; Boro, B.; Verma, M.K. & Mansor, A.N. Influence of social networking sites on scholarly communication: An altmetrics analysis of selected LIS journals. *J. Information and Knowledge Management (JIKM*), 2022, **1**, 75-89. https://ir.uitm.edu.my/id/eprint/70930
3. Kim, Y.; Kim, J.E.; Kim, Y.H.; Yoon, D.Y.; Kim, Y.J. & Bae, J.S. Social attention and scientific articles on stroke: Altmetric analysis of top-50 articles. *Clinical Neurology and Neurosurgery*, 2019, **183**, 105386. Doi: 10.1016/j.clineuro.2019.105386.
4. Bardus, M.; El Rassi, R.; Chahrour, M.; Akl, E.W.; Raslan, A.S.; Meho, L.I. & Akl, E.A. The use of social media to increase the impact of health research: Systematic review. *Journal of Medical Internet Research,* 2020, **22**(7), e15607. Doi: 10.2196/15607.
5. Edakar, M.A.M. & Shehata, A.M.K. Measuring the impact of COVID-19 papers on the social web: an altmetric study. *Global Knowledge, Memory and Communication,* 2022 **71**(1/2), 1-26. Doi: 10.1108/GKMC-11-2020-0179.
6. Özkent, Y. Social media usage to share information in communication journals: An analysis of social media activity and article citations. *PLoS ONE,* 2022, **17**(2), 1–11. Doi: 10.1371/journal.pone.0263725.
7. Piwowar, H.A. Introduction toaltmetrics: What, why and where? *Bulletin of the American Society for*

Information Science and Technology, 2013, **39**(4), 8-9. Doi: 10.1002/bult.2013.1720390404.

8. Dhiman, A. Bibliometrics to altmetrics: Changing trends in assessing research impact. DESIDOC *J. Library & Information Technology,* 2015, **35**(4). Doi: 10.14429/djlit.35.4.8505.
9. Thelwall, M.; Haustein, S.; Larivière, V. & Sugimoto, C.R. Do Altmetrics Work? Twitter and Ten Other Social Web Services. *PLoS ONE,* 2013, **8**(5), e64841. Doi: 10.1371/journal.pone.0064841.
10. Bahadoran, Z.; Mirmiran, P.; Kashfi, K. & Ghasemi, A. The cirnciples of biomedical scientific writing: Citation. *International Journal of Endocrinology and Metabolism,* 2020,**18**(2), e102622. Doi: 10.5812/ijem.102622.
11. Melero R. Altmetrics - A complement to conventional metrics. *Biochemiamedica,* 2015, **25**(2), 152–160. Doi: 10.11613/BM.2015.016.
12. Basumatary, B.; Yunus, M.N. & Verma, M. K. Sparking attention on African swine fever research on social media platform: An altmetric evaluation of top 100 highly cited articles. *Research in Veterinary Science,* 2023, **158**, 26–33. Doi: 10.1016/j.rvsc.2023.02.010.
13. Qingbin, Y. & Shanhong, T. Study on correlation of different article-level metrics. *Library and Information Service,* 2014, **58**(08), 79.
14. Costas, R.; Zahedi, Z. &Wouters, P. Do "altmetrics" correlate with citations? Extensive comparison of altmetric indicators with citations from a multidisciplinary perspective. *J. Association for Information Science and Technology,* 2015, **66**(10), 2003-2019. Doi: 10.1002/asi.23309.
15. Huang, W.; Wang, P. & Wu, Q. A correlation comparison between Altmetric attention scores and citations for six PLOS journals. *PloS one,* 2018, **13**(4), e0194962. Doi: 10.1371/journal.pone.0194962.
16. Boyd, C.J.; Ananthasekar, S.; Kurapati, S. & King, T.W. Examining the correlation between altmetric score and citations in the plastic surgery literature. *Plastic and Reconstructive Surgery,* 2020, **146**(6), 808e-815e. Doi: 10.1097/PRS.0000000000007378.
17. Asaad, M.; Howell, S.M.; Rajesh, A.; Meaike, J. & Tran, N.V. Altmetrics in plastic surgery journals: Does it correlate with citation count? *Aesthetic Surgery J.,* 2020, **40**(11), NP628-NP635. Doi: 10.1093/asj/sjaa158.
18. Ouchi, A.; Saberi, M.K.; Ansari, N.; Hashempour, L. & Isfandyari-Moghaddam, A. Do altmetrics correlate with citations? A study based on the 1,000 most-cited articles. *Information Discovery and Delivery,* 2019, **47**(4), 192-202. Doi: 10.1108/IDD-07-2019-0050.
19. Nip, I. & Feng, H. Examining correlation of altmetric score and citation number in dermatology journal articles. *J. Dermatological Treatment,* 2022, **33**(1), 297-299. Doi: 10.1080/09546634.2020.1750555.
20. Heydari, S., Shekofteh, M. & Kazerani, M. Relationship between altmetrics and citations a study on the highly cited research papers. *DESIDOC Journal of Library & Information Technology*, **39**(4), 169-174. Doi: 10.14429/djlit.39.4.14204.
21. Cho, J. Altmetrics analysis of highly cited academic papers in the field of library and information science. *Scientometrics,* 2021, **126**(9), 7623-7635. Doi: 10.1007/s11192-021-04084-w.
22. Ezema, I.J. & Ugwu, C.I. Correlating research impact of library and information science journals using citation counts and altmetrics attention. *Information Discovery and Delivery,* 2019, **47**(3). 143-153. Doi: 10.1108/IDD-08-2018-0029.
23. Borgohain, D.J.; Yuvaraj, M. & Verma, M.K. Analysing the relationship between altmetric attention score (AAS) and citation: A correlational study. *Information Discovery and Delivery*, 2023, ahead-of-print. Doi: 10.1108/IDD-05-2022-0035.
24. Triaridis, S. & Kyrgidis, A. Peer review and journal impact factor: the two pillars of contemporary medical publishing. *Hippokratia,* 2010, **14**(Suppl 1), 5–12.
25. Roll, S. C. The value and process of high-quality peer review in scientific professional journals. *J. Diagnostic Medical Sonography,* 2019, **35**(5), 359-362. Doi: 10.1177/8756479319853800.
26. Huang, W.; Wang, P. & Wu, Q. A correlation comparison between altmetric attention scores and citations for six PLOS journals. *PloS One,* 2018, **13**(4), e0194962. Doi: 10.1371/journal.pone.0194962.
27. Barakat, A.F.; Nimri, N.; Shokr, M.; Mahtta, D.; Mansoor, H.; Masri, A. & Elgendy, I.Y. Correlation of altmetric attention score and citations for high-impact general medicine journals: A cross-sectional study. *J. General Internal Medicine,* 2019, **34**, 825-827. Doi: 10.1007/s11606-019-04838-6.
28. Djulbegovic, M.; Kalahasty, K.; Watane, A.; Jabori, S.K.; Al-Khersan, H. & Sridhar, J. Correlation between altmetric attention scores and citations for articles published in high–impact factor ophthalmology journals from 2018 to 2019. *JAMA Ophthalmology,* 2022, **140**(6), 623-627. Doi: 10.1001/jamaophthalmol.2022.0858.
29. Richardson, M.A.; Park, W.; Echternacht, S.R. & Bell, D. E.Altmetric attention score: Evaluating the social media impact of burn research. *J. Burn Care & Research,* 2021, **42**(6), 1181-1185. Doi: 10.1093/jbcr/irab026.
30. Grosh, T.; Kim, J.; Graff, V.; Mariano, E.R. & Elkassabany, N.M. Is there a correlation between altmetric attention scores and citation count in Regional Anesthesia and Pain Medicine journal articles? *Regional Anesthesia and Pain Medicine,* 2022. Doi: 10.1136/rapm-2022-103554.
31. Basumatary, B. & Verma, M.K. Social attention sparked on artificial intelligence (ai) applications in the library research: An assessment based on altmetric tools. *In* 8th International Conference of Asian Special Libraries: Advancing Asian Special Libraries towards the Fifth Industrial Revolution, 22-24 February 2023, Cebu City, Philippines. 2023. pp. 83-101.

32. Meghanathan N. Assortativity analysis of real-world network graphs based on centrality metrics. *Computer and Information Science*, 2016, **9**(3), 7-25. Doi: 10.5539/cis.v9n3p7.
33. Liang, Y.; Abbott, D.; Howard, N.; Lim, K.; Ward, R. & Elgendi M. How effective is pulse arrival time for evaluating blood pressure? challenges and recommendations from a study using the MIMIC database. *J. Clinical Medicine,* 2019, **8**(3), 1-14. Doi: 10.3390/jcm8030337.
34. Basumatary, B.; Yunus, M. N. & Verma, M.K. Sparking attention on African swine fever research on social media platform: An altmetric evaluation of top 100 highly cited articles. *Research in Veterinary Sci.,* 2023, **158**, 26-33. Doi: 10.1016/j.rvsc.2023.02.010.
35. Basumatary, B.; Gul, S. & Verma, M.K. Social attention to the scientific publications on mHealth research during Covid-19 outbreak: An altmetric study. *Iberoamerican Journal of Science Measurement and Communication*, 2023, **3**(2). Doi: 10.47909/ijsmc.47.
36. Barakat, A.F.; Nimri, N.; Shokr, M., et al. Correlation of altmetric attention score and citations for high-impact general medicine journals: A cross-sectional study. *J. General Internal Medicine,* 2019, **34**, 825–827. Doi: 10.1007/s11606-019-04838-6.
37. Chi, A.J.; Lopes, A.J.; Rong, L.Q.; Charlson, M.E.; Alvarez, R.D. & Boerner, T. Examining the correlation between altmetric attention score and citation count in the gynecologic oncology literature: Does it have an impact*?*. *Gynecologic Oncology Reports,* 2021*,* **37***,* 100778. Doi: 10.1016/j.gore.2021.100778.
38. Collins, C.S.; Singh, N.P.; Ananthasekar, S.; Boyd, C.J.; Brabston, E. & King, T.W. The correlation between altmetric score and traditional bibliometrics in orthopaedic literature. *J. Surgical Research,* 2021, **268**, 705-711. Doi: 10.1016/j.jss.2021.07.025.

CONTRIBUTORS

Mr Bwsrang Basumatary is a PhD Scholar in the Department of Library and Information Science at Mizoram University, Aizawl, India. He obtained his Master of Library and Information Science from Tata Institute of Social Science (TISS), Mumbai, India. His research area includes: Bibliometrics, Scientometrics, and Altmetrics. He has published 8 papers in various reputed peer-reviewed journals and 8 conference papers including 2 presentation at international conferences held abroad (Malaysia and Philippines).

Dr Manorama Tripathi holds a doctorate in Library and Information Science from Banaras Hindu University, Varanasi. At present, she is working as Librarian at Jawaharlal Nehru University, New Delhi. Prior to joining JNU, she served Indira Gandhi National Open University, New Delhi as Documentation Officer; University of Delhi, Delhi and Banaras Hindu University, Varanasi as a faculty member. She is a recipient of the best paper award from Raja Ram Mohun Library Foundation. She has published over 70 research papers in national, international scholarly journals and conference volumes. She has visited many countries for participating in international conferences. Her areas of research include: Information-seeking behavior of researchers, Innovative library services and Scientometrics.

Dr Manoj Kumar Verma is a Professor in the Department of Library and Information Science at Mizoram University, Aizawl, India. He obtained PhD in Library and Information Science from Guru Ghasidas University (Central University), Bilaspur, India. His area of interest includes: Bibliometrics, Scientometrics, Webometrics, Open-access publications, and Sentiment analysis. He has published 160 papers in various peer-reviewed national and international journals, 9 authored/ edited books, 30 book chapters, and 68 conference papers.