Dimensions

Enhancing Your NIH Biosketch With Metrics Using Dimensions

UCSF

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Part of **DIGITAL** science

We capture a broad picture of the research landscape

Publication indicators in Dimensions

Publication citations

The publication citations value is the number of times that a publication has been cited by other publications in the database.

Recent citations

The recent citations value is the number of citations that were received in the last two years. It is currently reset at the beginning of each calendar year.

Field Citation Ratio (FCR)

The Field Citation Ratio (FCR) is an article-level metric that indicates the relative citation performance of an article, when compared to similarly-aged articles in its subject area. A value of more than 1.0 indicates higher than average citation, when defined by Field of Research Subject Code, publishing year and age. The FCR is calculated for all publications in Dimensions which are at least 2 years old and were published in 2000 or later.

Altmetric Attention Score

The Altmetric Attention Score is a weighted count of all of the online attention Altmetric have found for an individual research output. This includes mentions in the mainstream news, social networks, Wikipedia, blogs and more.

Relative Citation Ratio (RCR)

The Relative Citation Ratio (RCR), developed by the National Institutes of Health (US), indicates the relative citation performance of an article when comparing its citation rate to that of other articles in its area of research. A value of more than 1.0 shows a citation rate above average. The article's area of research is defined by the articles that have been cited alongside it. The RCR is calculated for all PubMed publications which are at least 2 years old.

Metrics basics: metrics that are not normalized

Citations: The number of times a publication has been cited.

Recent citations: Number of citations in the last 2 years

Limitations:

- Database coverage—not all databases index the same content
- Differences between fields and their citation rates, e.g. oncology publications tend to receive more citations than radiology publications (this is why field-normalized metrics are useful)
- Age of the publication
- Self-citation
- The context of a citation is difficult to parse out

Metrics basics: field normalized metrics—allow you to compare between fields

Field Citation Ratio (FCR): Compares the citation performance of a publication to similarly aged publications in the same field. An FCR >1 indicates higher than average citation.

Relative Citation Ratio (RCR): Created by the NIH specifically; biomedical focus. Benchmarked against the median RCR for all NIH-funded papers. An RCR >1 indicates higher than average citation. *Only available for articles indexed in PubMed.*

Limitations:

- Database coverage—not all databases index the same content
- A publication has to be **2 years old** in order for both the RCR and FCR to be calculated
- FCR is not calculated for publications published before the year 2000
- RCR has a narrow scope in comparison with other normalized metrics
- Self-citation
- The context of a citation is difficult to parse out

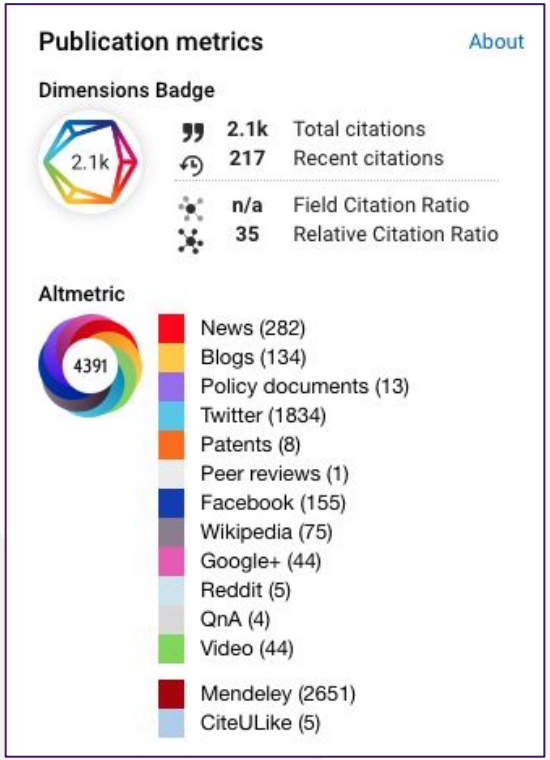
Altmetrics

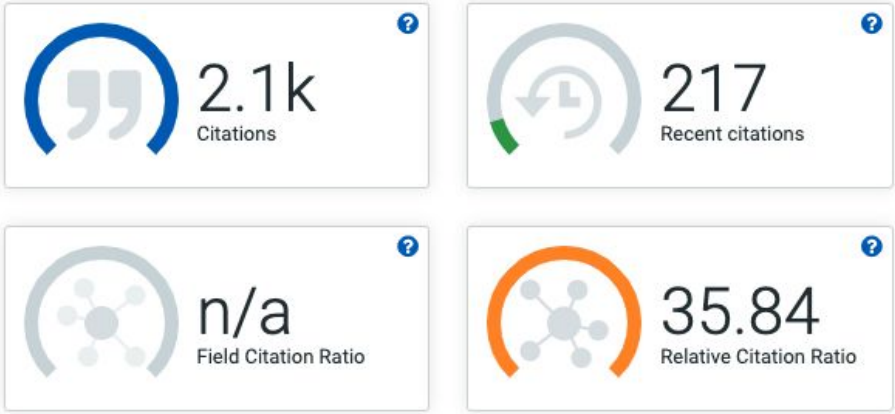
Altmetric Attention Score: A weighted count of all the online attention a publication has received. E.g. a news mention receives more weight than a tweet.

Limitations:

- The score is just an indicator of volume of attention, not whether the attention is positive or negative.
- Not normalized and there is no “expected” amount of attention publications in a given field should receive.
- Relies on unique identifiers like DOIs and PMIDs to track mentions across the internet
- Altmetric can only track mentions in “known” sources and there are limits to tracking on private sites, articles behind paywalls, etc.

Always remember that **metrics are a proxy**; they cannot replace comprehensive evaluation of a researcher's work





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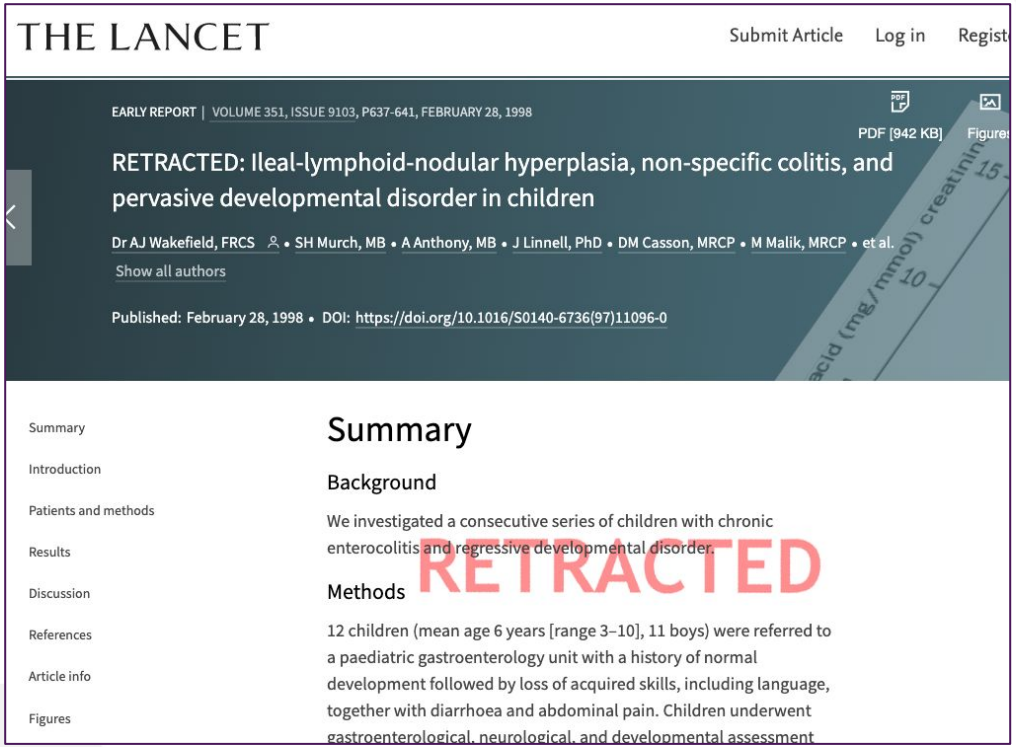

GIDEON LACK

Professor of Paediatric Allergy at King's College London

C. Contributions to Science

1. The prevalence of peanut allergy among children in Western countries has doubled since 2005. I was the PI on the LEAP study…lorem ipsum consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

    a. Randomized Trial of Peanut Consumption in Infants at Risk for Peanut Allergy, NEJM, 10.1056/nejmoa1414850

    b. Early consumption of peanuts in infancy is associated with a low prevalence of peanut allergy, Journal of Allergy and Clinical Immunology, 10.1016/j.jaci.2008.08.039

    c. Factors Associated with the Development of Peanut Allergy in Childhood, NEJM, 10.1056/nejmoa013536

    d. Epidemiologic risks for food allergy, Journal of Allergy and Clinical Immunology, 10.1016/j.jaci.2008.04.032

Dimensions

Finding publication information and metrics **live in platform**

1. How to search for a researcher and see their publications
2. How to search for a limited set using DOIs/PMIDs
3. Dive deeper into a single publication to view citation data and altmetrics

Contributions to Science

- Tailor your contributions to the application.
- **The contributions are a descriptive narrative (“telling a story”) of your research efforts and a means of annotating your research products.**
- Your contributions are about your journey in the field.
    - What did you learn?
    - What were your findings or research products?
    - How did your research lead to this proposal?
- Contributions can be in any order; chronological, career trajectory, funded projects, topic, relevance to the application, etc.
- Assign each of your contributions a title.
- **Use Plain Language.** Plain language is clear, concise, organized, and appropriate for the intended audience.

From: Becker Medical Library NIH Biosketch libguide
https://beckerguides.wustl.edu/NIH_Biosketch

Forming a narrative

“This work has had far-reaching academic impact; these publications have been cumulatively cited over 3,800 times and have a mean RCR of 23, indicating much higher than average citation rates…”

Forming a narrative

"This work has had far-reaching academic impact; these publications have been cumulatively cited over 3,800 times and have a mean RCR of 23, indicating much higher than average citation rates. Publication 1a has been cited by publications in 21 different subject areas and has been cited by researchers in 72 countries, suggesting the broad influence and importance of this work."

Forming a narrative

"...This work has also influenced public discourse on the topic, and the results have been shared widely on X, clinicians' Facebook pages, and mass media outlets including The New York Times and Washington Post, evidencing public awareness of this topic and translation to practice."

Forming a narrative

- These publications all have an RCR >1, indicating higher than average citation rates.
- Publication 1c has been cited 50 times in the last two years, suggesting continued interest in this topic.
- My work has received attention on Twitter, Facebook, and in the mass media, evidencing dissemination to the public.
- My work was mentioned in a news story by XYZ, a local news outlet.
- Publication 1b has been tweeted by 20 people, reaching upwards of 500,000 people.

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Add metrics to the end of references (note: this is not possible with SciENcv)

C. Contributions to Science

1. The prevalence of peanut allergy among children in Western countries has doubled since 2005. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

    a. Randomized Trial of Peanut Consumption in Infants at Risk for Peanut Allergy, NEJM, 10.1056/nejmoa1414850; **Metrics: RCR 52, 429 news mentions.**

    b. Early consumption of peanuts in infancy is associated with a low prevalence of peanut allergy, Journal of Allergy and Clinical Immunology, 10.1016/j.jaci.2008.08.039; **Metrics: 645 citations; 13 patent mentions.**

    c. Factors Associated with the Development of Peanut Allergy in Childhood, NEJM, 10.1056/nejmoa013536

    d. Epidemiologic risks for food allergy, Journal of Allergy and Clinical Immunology, 10.1016/j.jaci.2008.04.032

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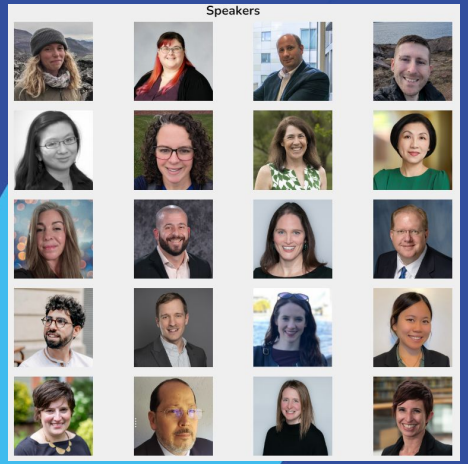
Upcoming Dimensions User Day - Oct. 23

Here are some of the sessions on the agenda:

- Establishing Metrics and Impact Measures for Interdisciplinary Research Institutes *(Emily Hart, Syracuse University)*
- Using Dimensions and VOSViewer to Demonstrate Faculty Cooperation, Interaction, and Collaboration *(Elaine Lee, Boston University)*
- Assessing Impact, Visualising Connectivity, and Benchmarking: New User Experience *(Dr. Nick Riddick, York University)*
- Narratives from numbers: using citations and Altmetric data to drive storytelling *(Neil Byers, Lawrence Berkeley National Lab)*
- Foreign Affiliation Screening at LSUHS using Dimensions Security *(Jarrod Sawyer, LSU Health Shreveport)*
- Dimensions and Altmetric in UNAM Research Libraries: Applications in the Area of Earth Sciences *(Saul Sanchez, National Autonomous University of Mexico)*
- Leveraging Dimensions to Support Pre-Award Proposal Submission: A Case Study of Collaborative Research Analytics *(Fei Yu, UNC Chapel Hill)*
- From Awareness to Action: Leveraging Dimensions and Altmetric through Community Engagement at the University of Florida *(Kevin Hanson, University of Florida)*
- Visualizing Research Impact with Dimensions and Altmetric Data *(Jack Young, McMaster University)*

Free registration for Dimensions User Day



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