Research Metrics and Citation Analysis Tools
Research Metrics
What are Research Metrics?

• **Quantitative** indicators

• Applied to Journal titles, research papers, books and book chapters, and author’s overall output

• **Bibliometrics**: citation-based indicators

• **Altmetrics**: web-based indicators

• Altmetrics supplements bibliometrics
# Journal Impact Factor

## JIF Calculation

\[
\text{JIF} = \frac{1,707}{349} = 4.891
\]

**How is Journal Impact Factor Calculated?**

- **Citations in 2019 to Items published in 2017 (906) + 2018 (750) = 1,707**
- **Number of citable items in 2017 (198) + 2018 (199) = 349**

## Journal Impact Factor Table

<table>
<thead>
<tr>
<th>Full Journal Title</th>
<th>Total Cites</th>
<th>Journal Impact Factor</th>
<th>Eigenfactor Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. JOURNAL OF CHILD PSYCHOLOGY AND PSYCHIATRY</td>
<td>19,837</td>
<td>7.035</td>
<td>0.02111</td>
</tr>
<tr>
<td>2. JOURNAL OF THE AMERICAN ACADEMY OF CHILD AND ADOLESCENT PSYCHIATRY</td>
<td>19,831</td>
<td>6.936</td>
<td>0.01787</td>
</tr>
<tr>
<td>3. Developmental Cognitive Neuroscience</td>
<td>3,177</td>
<td>4.966</td>
<td>0.01020</td>
</tr>
<tr>
<td>4. CHILD DEVELOPMENT</td>
<td>30,881</td>
<td>4.891</td>
<td>0.02234</td>
</tr>
<tr>
<td>5. Child Development Perspectives</td>
<td>2,999</td>
<td>4.536</td>
<td>0.00613</td>
</tr>
<tr>
<td>6. AUTISM</td>
<td>5,252</td>
<td>4.609</td>
<td>0.00961</td>
</tr>
</tbody>
</table>

**Categories:**
- Psychology, Developmental -- SSCI
- Psychology, Educational -- SSCI
Other Journal Metrics

• immediacy index, Eigenfactor, SJR, CiteScore, SNIP...
• Different formulas and sources produce different results
Citation Counts

- Metric for Article, Books, Book chapters
Altmetrics

- Indicators of interest on social media platforms and various online sites
  “Views”, “mentions”, “downloads”, “likes”
- For any type of research output

Altmetric

PlumX Metrics
Usage, Captures, Mentions, Social Media and Citations beyond Scopus.

Citations
- Citation Indexes: 4556
- Clinical Citations: 39
- Patent Family Citations: 5

Usage
- Abstract Views: 148
- Link-outs: 89
H-index

• Metric for Author

N. of published papers + N. of citations per published paper = h-index
Citation Analysis Tools
Tools for JIF and Journal Ranking

JIF and journal ranking

- Journal Citation Report
- Scopus-Sources tab
  - Scimago Journal Rank
- Google Scholar top 100 Journals
Tools for Citation Counts and Author Index

- Citation Counts for Article, Book, Book chapter and Author Index
- Web of Science
- Scopus
- Google
- Publish or Perish-Harzing.com
- Dimensions
  - Altmetrics
Tool for the Tops

Essential Science Indicators

- Top Journals
- Top Papers
- Top Authors
- Altmetric
- Top 100 articles
- Top Institutions Top Research Fields
Recommendations for Using Metrics
About Author’s Index

- Sign up for ORCID

- Consider publishing in a trusted Open Access Journal
About Journals

• **Compare like with like** in terms of research field, publication type, and time frame

• **Consult several tools** for most suitable and trusted journals

• Journal metrics don’t tell the **quality of individual research articles**

• Smaller but reputable specialised journals are **not always included** in major journal rankings

• Choose an **open access journal**
About High and Low Citation Counts

• Consult several tools
• Depends on publication year, document type and discipline
• Articles in open access journals are more cited
• Good or bad citation depends on the topic of the paper

"Sex Differences in Human Neonatal Social Perception."
Connellan, Jennifer, Simon Baron-Cohen, Sally Wheelwright, Anna Batki, and Jag Ahluwalia.

Further Readings

• The Declaration on Research Assessment (DORA)
  https://sfdora.org/about-dora/

• The Metric Tide: Report of the Independent Review of the Role of Metrics in Research Assessment and Management
  https://re.ukri.org/sector-guidance/publications/metric-tide/

• The Leiden Manifesto for Research Metrics
  https://www.nature.com/news/bibliometrics-the-leiden-manifesto-for-research-metrics-1.17351

• Bibliometrics and Citation Tracking LibGuide
  https://libguides.bodleian.ox.ac.uk/bibliometrics