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WestJEM's Impact Factor, h-index, and i10-index: Where We Stand

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As the *Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health* (WestJEM) continues to grow, it is important to remain aware of where we stand relative to our peers. During all stages WestJEM's growth and maturation as a journal we have strived to become and remain a relevant force in the world of academic publications.

The Journal Impact Factor

The journal impact factor (JIF) is one way to assess a journal's status, and helps to weight the difference between journals. The impact factor is a ratio that was initially started in 1975 to indicate the average reach and importance of articles published by a journal; it has since been additionally applied to indicate similar relevance of authors. The JIF helps shift concern for publishers away from achieving a high total quantity of publications and encourages journals to accept more relevant works that can be used and cited by peers.¹

The Institute for Scientific Information (ISI) in Philadelphia continuously records scientific citations from article reference lists. From this data, the ISI calculates JIF by the following formula:⁴

- 2013 citations to articles published in 2011-2012
- number of articles published in 2011-2012
- $B/A = 2013$ impact factor*

*note that by this formula the JIF changes yearly

The ISI database itself is not perfect as it is dominated by American, English-based articles, does not correct for self-citation, and does not account for types of articles (original research

versus review articles versus case reports etc.) to name a few concerns.^{2,3} However, the JIF numbers calculated each year produce journal rankings that mirror the common consensus of those in each respective field placing the more well-known and revered journals at the top.

While *WestJEM* will not have an official, published impact factor until it is referenced in the Medline index, the current calculated 2012 JIF is 1.234. (374 citations in 2012 to articles published in 2011 and 2010 divided by 303 articles published in 2011 and 2010).

The h-index

The h-index is short for the Hirsch index, which was suggested by Dr. Jorge E. Hirsch as a way to quantify the productivity and impact of an individual author. The h-index was introduced in 2005.⁵ Similar to how the JIF is now be used to measure a journal or an author to their field, the h-index has become

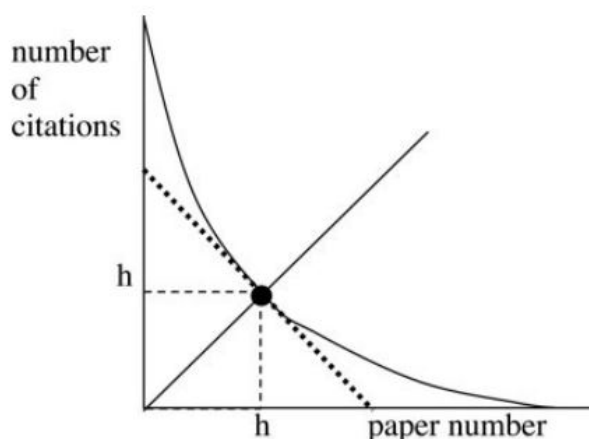


Figure. Curve of number of citations versus paper number with papers numbered in order of decreasing citations. Intersection of the 45° line with the curve gives the h. Total number of citations is the area under the curve.

another measure of relative impact and importance.

Calculating an h-index is less of a calculation and more of a tally. While the JIF is derived from the quotient of total citations and total articles in a two-year span, the h-index is simply a count of the largest number of articles (h) from a journal or author that have at least (h) number of citations. For example, *WestJEM* has an h-index of 15 which indicates that the journal has published 15 articles with at least 15 citations. Figure shows the theoretical calculation for h-index.⁵

i10-index

The i10-index is the newest in the line of journal metrics and was introduced by Google Scholar, the online academic branch of the search engine company Google in 2011. It is a simple and straightforward indexing measure found by tallying a journal's total number of published articles with at

least 10 citations.⁶ *WestJEM* has an i10-index score of 40 according to Google Scholar.

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