H-index scores in 2011 and increases from 2009, School of Public Health, University of Sydney.

Simon Chapman
Director of Research

Susan Martinez
Executive Assistant to Director of Research

May 2012

KEY POINTS SUMMARY: In 57 academic and research staff:

- Zero had H=0
- 15 (26.3%) had H between 2 – 9. These staff had an average of 10 research active years.
- 20 (35.1%) had H between 10-19. These staff had an average of 11.9 research active years.
- 11 (19.3%) had H between 20-39. These staff had an average of 16.6 research active years.
- 11 (19.3%) had H of 40 or over. These staff had an average of 28.7 research active years.
- 1 (1.8%) had H of over 60. This staff was research active for 24 years.

“an h index of 20 after 20 years of scientific activity characterizes a successful scientist”

“an h index of 40 after 20 years of scientific activity characterizes outstanding scientists likely to be found only at the top universities or major research laboratories”

“an h index of 60 .. after 20 years ...characterizes truly unique individuals”

Hirsch JE. An index to quantify and individual’s scientific research output. PNAS 2005;102:16569-72
Background

In November 2011, all categories of staff from the School of Public Health described below were requested to calculate their own H index and to supply the School’s research office with full documentation. Staff were instructed to use Google Scholar’s “My Citation” program. Google Scholar promotes itself as “standing on the shoulders of giants”, implying that its ability to locate citations incorporates those of other databases, and more besides. Commentators have noted its lack of transparency as to how it actually locates citations. Its ability to do so – including finding many citations that WoS and Scopus do not find – nonetheless remains impressive.

Web of Science is considered by some academics to be the authoritative source for H scores. Web of Science does indeed cover >10,000 of the highest impact journals worldwide, including Open Access journals and over 110,000 conference proceedings. However a major limitation of Web of Science is that while it can produce citation of books and reports, it does not produce citations in books and reports, nor of citations in reports published online.

As an increasing number of major scholarly reports are only published online, this is a major limitation of Web of Science, and strength of Google Scholar and to a lesser extent, Scopus. Scopus searches more sources than Web of Science, but as it only covers journals published since 1996, it does not contain citations to papers published before that -- again a major limitation in calculating a researcher's total career H index.

The following categories of staff were requested to calculate their H index:
• Academic and research staff employed by the School of Public Health or any of the 3 institutions formally and administratively affiliated with the School (Menzies Centre for Health Policy; Northern Rivers University Department of Rural Health; the Family Medicine Research Centre at Westmead Hospital), and
• staff employed by the George Institute who have academic appointments in the School of Public Health

Conjoint, adjunct and honorary staff were excluded.

Years of active research were calculated from the date of a person’s first research publication. Research inactive periods were deducted only for periods in which a person was not employed in any health-related workforce for family or illness reasons. Those who had research inactive periods because they were working in clinical, administrative or other health-related employment at any time after publishing the first paper, did not have these years deducted as it was reasoned that many people in such situations nonetheless do continue their research during such times.

Below we report on (a) all eligible School staff employed in 2011 and (b) those staff who were employed in both 2011 and 2009.
Results

1. H index distribution for all staff employed in 2011
57 staff completed their H index producing a range of 2-75 (mean 20; median 14).

- Zero had H=0
- 15 (26.3%) had H between 2 – 9. These staff had an average of 10 research active years.
- 20 (35.1%) had H between 10-19. These staff had an average of 11.9 research active years.
- 11 (19.3%) had H between 20-39. These staff had an average of 16.6 research active years.
- 11 (19.3%) had H of 40 or over. These staff had an average of 28.7 research active years.
- 1 (1.8%) had H of over 60. This staff member was research active for 24 years.
2. H index distribution – comparison of 2011 to 2009

![Graph showing H index distribution comparison between 2009 and 2011.](image)

**2011 vs 2009 Average H Index**

- **Q1**
- **Min**
- **Median**
- **Max**
- **Q3**

Years:
- 2009
- 2011

**H Index - all staff**

![Graph showing H index distribution for all staff in 2009 and 2011.](image)
3. Average H index per research active year

Of the 57 staff with an H index of 1 or more:
- The average H index per research active year was 1.43 (1.19 in 2009)
- The average H index per research active year for those with an H index of 1-9 was 1.43 (range 0.4-3.43)
- The average H index per research active year for those with an H index of 10-19 was 1.23 (range 0.39-2.79)
- The average H index per research active year for those with an H index of 20-39 was 1.41 (range 0.21-3.13)
- The average H index per research active year for those with an H index of 40+ was 1.1 (range 0.95-1.24)
4. H score by staff level

<table>
<thead>
<tr>
<th>Levels</th>
<th>Average of 2011 H Index</th>
<th>Average of 2009 H Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>9.0</td>
<td>4.0</td>
</tr>
<tr>
<td>B</td>
<td>12.3</td>
<td>4.1</td>
</tr>
<tr>
<td>C</td>
<td>15.8</td>
<td>8.6</td>
</tr>
<tr>
<td>D</td>
<td>38.9</td>
<td>15.2</td>
</tr>
<tr>
<td>E</td>
<td></td>
<td>33.2</td>
</tr>
</tbody>
</table>

Average H index by Level

- Blue bars: Average of 2011 H Index
- Red bars: Average of 2009 H Index