

Introduction

-Since its publication in 2006, a two-paragraph letter by Handoll H.H. on the need for Cochrane reviews on rehabilitation interventions¹ has been repeatedly cited erroneously in meta-analyses of genetic risk factors as a reference for the Q test for heterogeneity.²

-In order to understand how this error started, evolved and lasted throughout the years, a citation and publication analysis of the citing articles was done.

-Scopus, Web of Science and Google Scholar were used.

Journals

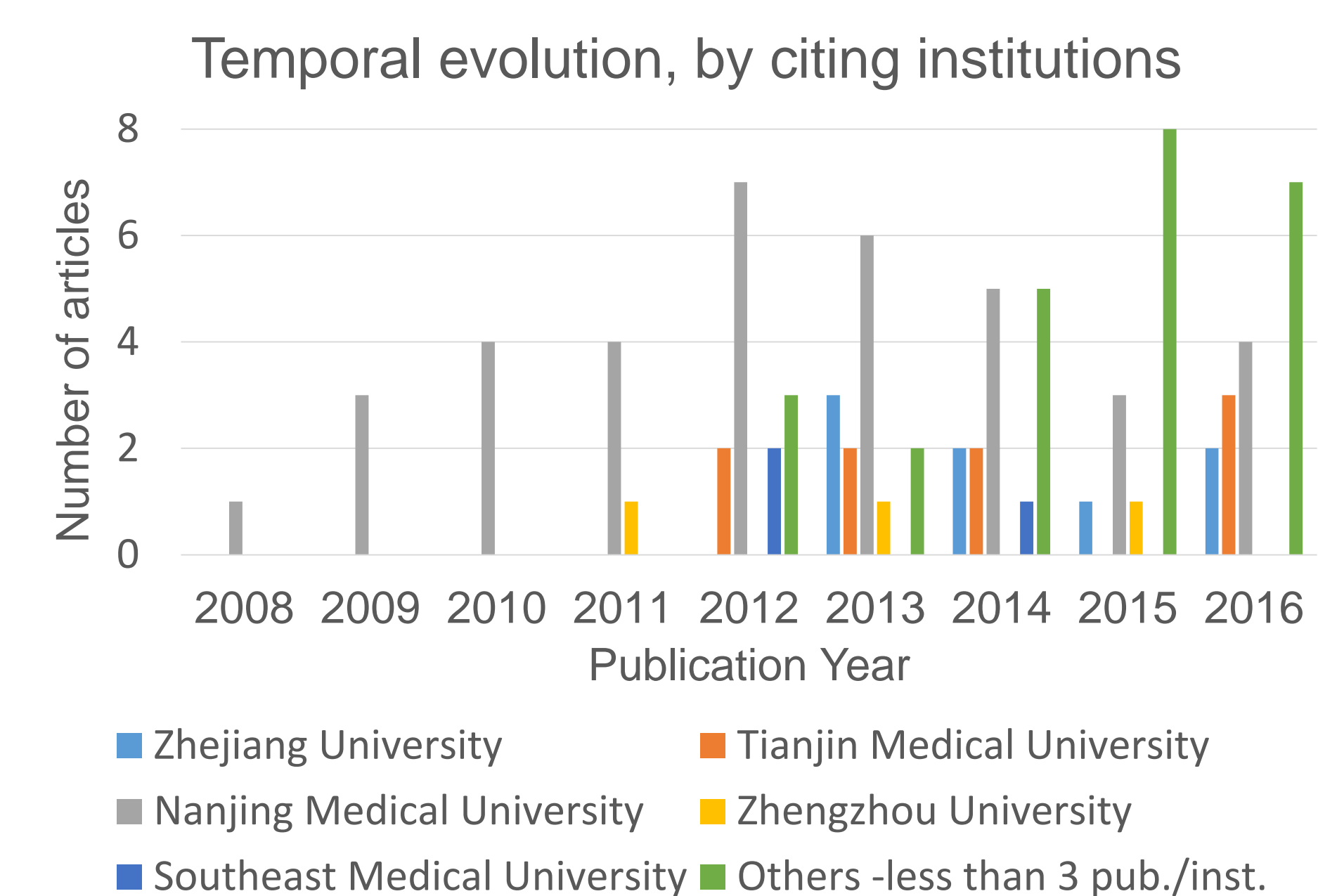
Journals	Publisher	Nb of publications	Peer - reviewed	Medline
Asian Pac J Cancer Prev	APJCP	2	N	Y
BMC Cancer	BMC	3	Y	Y
Breast Cancer Res Treat	Springer	4	Y	Y
Gene	Elsevier	2	Y	Y
Genet Mol Res	Ribeirao	5	Y	Y
Mol Biol Rep	Springer	5	Y	Y
Mutagenesis	Oxford	3	Y	Y
Oncotarget	Impact J	3	Y	Y
Plos ONE	PLOS	19	Y	Y
Sci Rep	Nature	4	Y	Y
Tumour Biol	Springer	3	Y	Y
Others (with one publication)		32	Y (30) / N (2)	Y (28) / N (4)

KEY POINTS

- 97.6 % of articles were peer-reviewed.
- 95.3% of articles were indexed in Medline.
- Those two elements indicate that the scientific content of the meta-analyses is probably of good or acceptable quality.
- Reference verification is usually not done during the peer-review process.
- 83.5 % of articles were published in journals using numbered citation styles. With an author-date citation style, the irrelevant reference might have been noticed by reviewers who were well accustomed to meta-analyses' statistical tests and their sources.

9 YEARS
8 5 META-ANALYSES
5 3 5 AUTHORS
AND 1 IRRELEVANT CITATION

Institutions



KEY POINTS

- Irrelevant citing started in the Dept. of Molecular and Genetic Toxicology and the Dept. of Epidemiology and Biostatistics, Nanjing Medical University, CN (5 publications, 2008-09).
- It expanded to other departments (7 publications, 2010-11) and other institutions in China (2011-2016).
- The highest number of publishing institutions was attained in 2015 and 2016.
- The highest number of publications was attained in 2016.

Countries and Networks

Countries	Lead authors	Authors	Publication years
China	83	520	2008-2016
Morocco	1	7	2016
Iran	1	5	2016
India	0	2	2012
United States	0	1	2016

KEY POINTS

- Publications outside of China are limited to two Chinese institutions' international collaboration (2012, 2016) and two publications by researchers in other countries (2016).
- Collaboration across the five main publishing institutions in China is present only between two of them.

Information Literacy

Researchers should:

- Be aware that one-page references might be inaccurate citations in scientific articles.
- Be aware that a method or a test named for a researcher is usually referenced by a publication by this researcher.
 - 10.6 % of the articles in this case study use the term "Cochran's Q-test" and referenced this with Handoll's citation.
- Import their references from indexed databases.
 - "No abstract available" mention in Handoll's citation in PubMed is a clear indication that it is probably not a research paper. Publication type is "Letter".
- Check the relevance and accuracy of their references before submitting a manuscript.
 - Methods are often learned through a different mean than literature, references are then sometimes used without reading the article. This may lead to an irrelevant citation and mislead other researchers to reproduce the error.

A Final Word

An irrelevant citation used...in reply letters

- Authors of two of the articles in this case study sent letters to the editor in reply to readers' letters suggesting the use of a different *p* value threshold for the Q test.
- In their reply letters, the authors used again the Handoll's irrelevant citation to justify their choice for the *p* value threshold for the Q test.

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