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Social network analysis of international collaboration in emergency medicine researches

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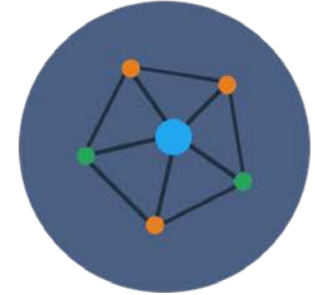
Introduction



International
collaboration
facilitate
development



Impact on
EM
Researches?



Cited times
and
Social Network
Analysis

Materials and Methods



SciVerse
Scopus
database



Publications in
EM journals
before 2015



Author's
country,
publication
year, cited
times



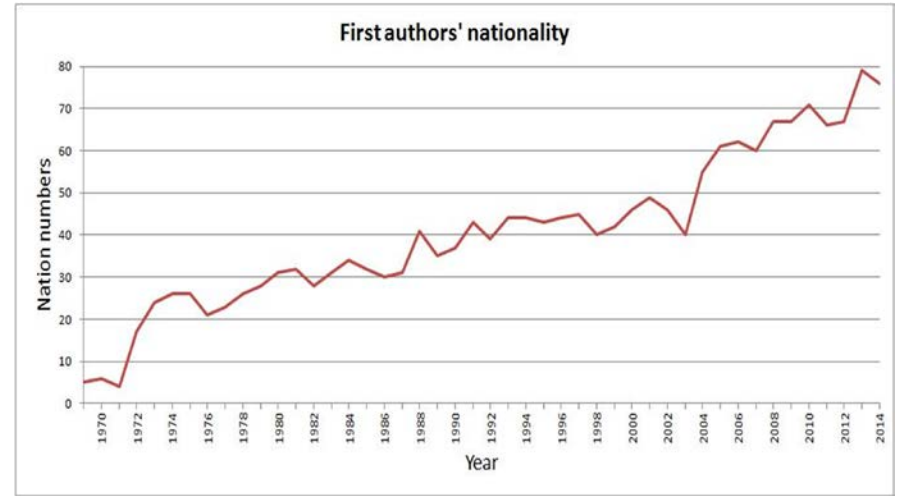
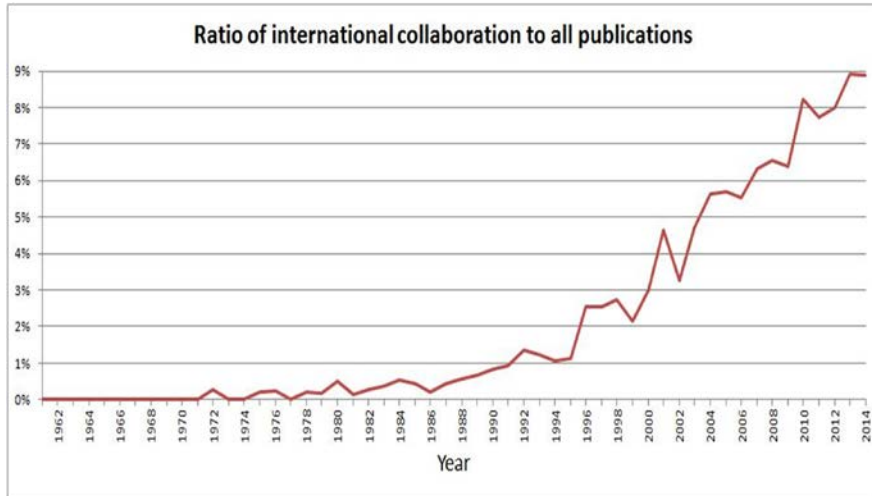
Single or
intern'l
publication



Data Analysis: descriptive statistics, linear regression, Wilcoxon rank-sum test, SNA metrics

Results

- 94925 publications, 4480 (4.72%) international collaborated
- International collaboration: 0 in 1961 to 511 (8.92%) out of 5734 in 2014



Results

- The median of cited times of single v.s. international collaborative publications were 3 and 5 ($p < 0.001$)

	Single Nation	International Collaborated
Maximum	3836	503
75 percentile	10	14
Median	3	5
25 percentile	0	1
Mode	0	0
Average*	9.61	12.42
Total publications	90445	4480

Country	In-Degree	Out-Degree	Betweenness Centrality	Eigenvector Centrality
United States	1469	1841	1.000	0.177
United Kingdom	923	778	0.324	0.154
Canada	680	565	0.154	0.130
Germany	589	748	0.140	0.154
Australia	483	539	0.122	0.162
Switzerland	378	307	0.043	0.137
Italy	273	478	0.092	0.171
Austria	271	337	0.016	0.112
France	245	257	0.181	0.164
Netherlands	234	335	0.033	0.154

Conclusions

1. International collaboration in EM researches was increasing
2. The impact of international collaborative researches was greater than single nation ones
3. Hub countries were in North America and Europe
4. Implement strategies that strengthening international collaboration may enhance academic excellence in EM