

# Relationship between periodontal disease and coronary heart disease: A bibliometric analysis

Xiao-wen Bo<sup>1</sup>Wen-peng Song<sup>2</sup>

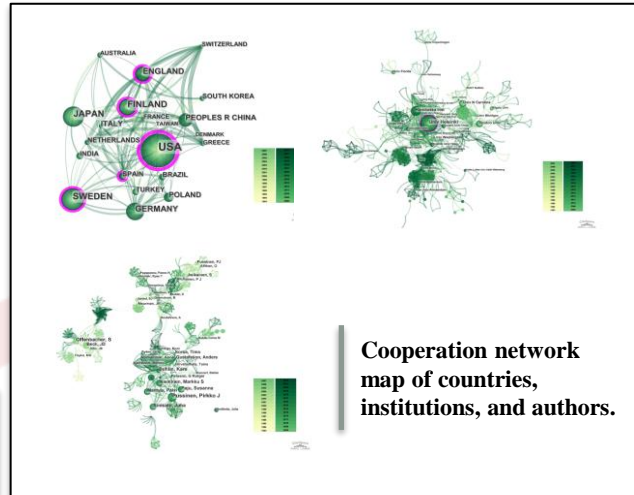
<sup>1</sup>. Department of Cardiology, Beijing An Zhen Hospital, Capital Medical University, Beijing, China.

<sup>2</sup>. Department of Stomatology, Beijing Tiantan Hospital, Capital Medical University, Beijing, China

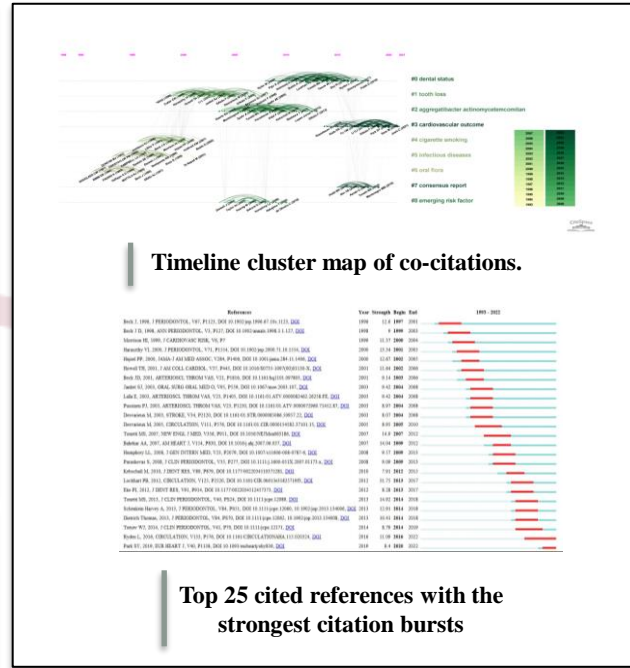
**Background:** Periodontal disease (PD) and coronary heart disease (CHD) are both prevalent diseases worldwide and cause patients physical and mental suffering and a global burden. Recent studies have suggested a link between PD and CHD, but there is less research in this field from the perspective of bibliometrics. This study aimed to quantitatively analyze the literature on PD and CHD to summarize intellectual bases, research hotspots, and emerging trends and pave the way for future research.

**Method:** The Science Citation Index Expanded (SCI-E) database was used to retrieve study records on PD and CHD from 1983 to 2022. After manual screening, the data were used for cooperative network analysis, keyword analysis, and reference co-citation analysis by CiteSpace software.

**Result:** A total of 580 studies were included in the analysis. The number of publications in this field has shown an upward trend over the past 30 years. There was less direct collaboration among authors and institutions in this field but closer collaboration between countries, with the United States being the country with the most published articles in this field (169/580, 29.14%). Based on the results of keyword analysis and literature co-citation analysis, C-reactive protein (CRP), oral flora, atherosclerosis, infection, and inflammation were previous research hotspots, while global burden and cardiovascular outcomes were considered emerging trends in this field.

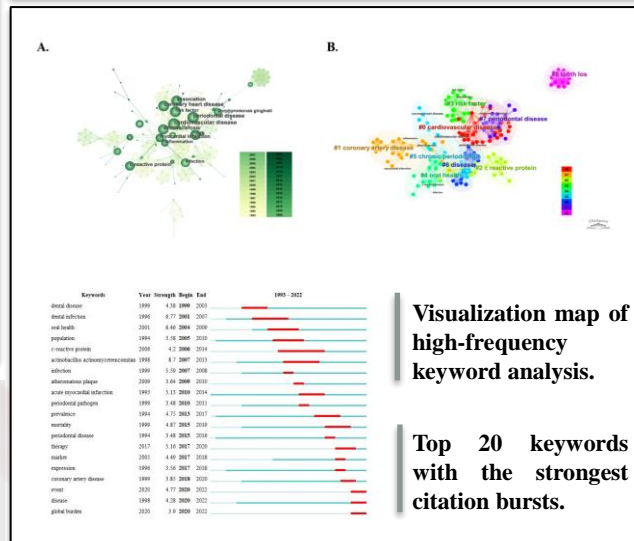


Cooperation network map of countries, institutions, and authors.



Timeline cluster map of co-citations.

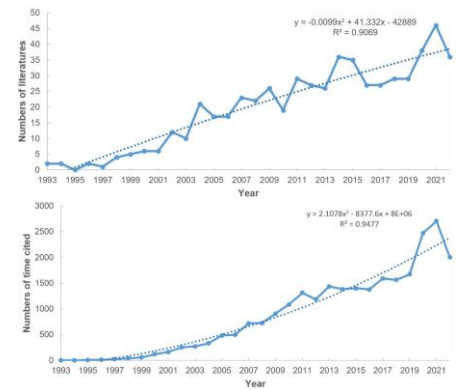
Top 25 cited references with the strongest citation bursts



Visualization map of high-frequency keyword analysis.

Top 20 keywords with the strongest citation bursts.

The annual trends in published studies and citations.



Xiaowen Bo: boxiaowen@126.com  
 Beijing An Zhen Hospital, Capital medical university  
 Wenpeng Song:  
 Beijing Tiantan Hospital, Capital medical university

**Conclusion:** Studies on PD and CHD, which have attracted the attention of an increasing number of researchers, have been successfully systematically analyzed using bibliometrics and visualization techniques. The results presented in this study can provide better ideas and directions for future research in this field.  
**Clinical significance:** This paper presents an overview between periodontal disease and coronary heart disease. Further exploration of the association between the two diseases may affect the diagnosis and treatment in the future. This will aid the work of researchers and specialist doctors, and ultimately benefit patients with both diseases.