

Chapter 2

Directions in Periodontal Research in the Asian Pacific Region

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Introduction

Periodontal research has made great progress in the last two decades. Aside from traditional studies on the etiology, pathogenesis, clinical prevention and treatment of periodontal diseases, new fields, such as the association between periodontal and systemic diseases and the regeneration of periodontal tissues, have been investigated thoroughly. Asian Pacific countries have contributed more and more to these developments in recent years. To investigate periodontal research trends of Asian Pacific countries, the original papers published in three major periodontal journals between 2000 and 2004 were analyzed.

Country of origin analysis

The three major periodontal journals studied were *Journal of Periodontology* (JP), *Journal of Clinical Periodontology* (JCP), and *Journal of Periodontal Research* (JPR). During the period from 2000 to 2004, a total of 2008 original papers were published in these three journals. 879 articles were published in JP, 817 in JCP, and 312 in JPR. We determined which location these papers were from according to the first author's affiliation of each paper. Europe and North America were the most common locations providing

original papers on periodontal research. These two regions published a total of 552 (Europe: 258, North America: 294) original papers in JP, 710 articles (Europe: 571, North America: 139) in JCP, and 129 (Europe: 70, North America: 59) papers in JPR. These papers contributed 62.8%, 86.9%, and 41.3% of the original papers published in JP, JCP and JPR, respectively.

In the last five years from 2000 to 2004, 478 original papers from Asian Pacific countries were published in the three periodontal journals, which accounted for 23.8% of all the original papers. The number of articles published in JP, JCP and JPR was 239 (27.2%), 77 (9.4%), and 162 (51.9%), respectively. Asian countries published most of these articles. The number of papers from Asian and Oceanic regions in JP, JCP and JPR was 228 and 11, 64 and 13, as well as 148 and 14, respectively. More than half of these papers were from Japan. Japanese researchers published 247 articles, accounting for 51.7% of the papers from Asian Pacific countries from 2000 to 2004. Other Asian Pacific countries also published their study results in the three journals during this period. In JP, there were 112 (46.9%) papers from Japan, 42 (17.6%) from Israel, 25 (10.5%) from Korea, 23 (9.6%) from Taiwan, 9 (3.8%) from Australia, 7 (2.9%) from Thailand, 4 (1.7%) from Hong Kong, and 3 (1.3%) from China. In JCP, there were 31

Region	Europe	North America	Asia	South America	Oceania	Africa	Total
2000	47	67	53	12	4	0	183
2001	62	61	41	10	4	0	178
2002	47	50	39	15	3	0	154
2003	46	55	53	20	0	0	174
2004	56	61	42	31	0	0	190
Total	258 (29.4%)	294 (33.5%)	228 (25.9%)	88 (10.0%)	11 (1.3%)	0	879

Table 1. Number of articles from different regions in *Journal of Periodontology* (2000-2004)

Region	Europe	North America	Asia	South America	Oceania	Africa	Total
2000	90	25	14	2	2	2	135
2001	115	29	17	0	4	1	166
2002	131	33	12	5	2	1	184
2003	106	31	9	9	4	0	159
2004	129	21	12	9	1	1	173
Total	571 (69.9%)	139 (17.0%)	64 (7.8%)	25 (3.1%)	13 (1.6%)	5 (0.6%)	817

Table 2. Number of articles from different regions in *Journal of Clinical Periodontology* (2000-2004)

Region	Europe	North America	Asia	South America	Oceania	Africa	Total
2000	12	9	17	2	4	0	44
2001	9	10	27	3	4	0	53
2002	15	16	30	2	2	0	65
2003	21	14	43	7	4	0	89
2004	13	10	31	7	0	0	61
Total	70 (22.4%)	59 (18.9%)	148 (47.4%)	21 (6.7%)	14 (4.5%)	0	312

Table 3. Number of articles from different regions in *Journal of Periodontal Research* (2000-2004)

(40.3%) articles from Japan, 11 (14.3%) from Australia, 7 (9.1%) from Israel, 5 (6.5%) from Taiwan and Jordan, 3 (3.9%) from Hong Kong and Saudi Arabia, and 2 (2.6%) each from Korea, Thailand, China, New Zealand, and Sri Lanka. In JPR, there were 104 (64.2%) papers from Japan, 14 (8.6%) from Australia and Taiwan, 7 (4.3%) from Korea, 6 (3.7%) from Thailand, and 5 (3.1%) from Israel. Israel had a total of 54 articles published in the three journals, including 42 in JP, 7 in JCP and 5 in JPR. Taiwan totalled 42 articles published in the three journals, including 23 in JP, 5 in JCP and 14 in JPR. Both Australia and Korea published a total of 34 papers including 9 and 25 articles in JP, 11 and 2 articles in JCP, as well as 14 and 7 articles in JPR. From other Asian Pacific countries, the total number of articles published in the three journals is 15 from Thailand (JP: 7, JCP: 2, and JPR: 6), 10 from Hong Kong (JP: 4, JCP: 3, and JPR: 3) and 8 from China (JP: 3, JCP: 2, and JPR: 3) and 7 from Jordan (JP: 2, JCP: 5, and JPR: 0).

Impact factors

In the last 5 years, the average impact factors (IF) of JP, JCP and JPR were 1.614 ± 0.358 , 1.606 ± 0.115 , and 1.515 ± 0.289 , respectively. The impact factor of JCP was quite stable, listed as 1.426, 1.641, 1.736, 1.582, and 1.644 from 2000 to 2004 respectively. JP had an impact factor of 1.215 in 2000, and the highest IF of 1.935 in 2001. After that, the impact factor of JP showed a falling tendency as the IF was 1.854 in 2002, 1.499 in 2003, and 1.569 in 2004. On the contrary, the impact factor of JPR has increased steadily during the same period, from 0.946 in 2000 to 1.613 in 2001, 1.776 in 2002, 1.407 in 2003 and 1.831 in 2004. In 2004, the impact factor of JPR was ranked eighth among the journals of dentistry, oral surgery and medicine and was the highest (1.831) among the periodontal journals except *Periodontology 2000* which is a review journal.

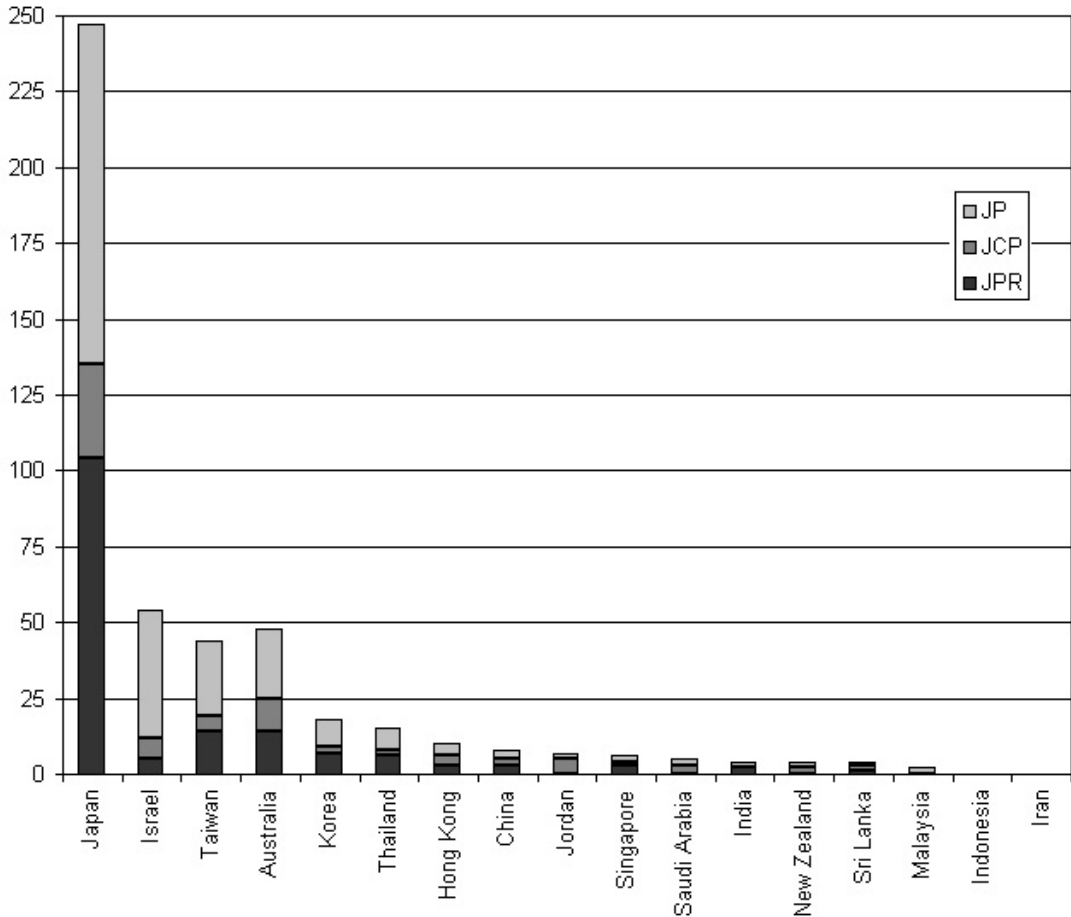


Figure 1. Number of articles published in Journal of Periodontology, Journal of Clinical Periodontology and Journal of Periodontal Research from Asian Pacific Countries (2000-2004)

Keyword analysis

We analyzed the keywords used in the 231 original papers from Asian and Pacific countries, except Japan, from which 247 articles were published in the last five years. The results showed that these papers employed wide variations of keywords and covered a broad range of research fields, including epidemiology, microbiology, immunology, biochemical research, animal studies, and periodontal surgery research.

Conclusions

In comparison to the previous 20 years, the research level and range of the Asian Pacific region has improved considerably. Asian Pacific countries are capable of performing quality periodontal research. Both the quality and quantity of their studies are comparable to those from Europe and USA. The Asian Pacific region has become an important part of the periodontal research community. Since its establishment in Brisbane in 1995, the Asian Pacific Society of Periodontology (APSP) has

played an important role in the mutual understanding and progress on international exchange of scientific and social activities in periodontology. Since its formation, APSP conferences have been held in Seoul, Korea (1997), Bangkok, Thailand (1999), Kuala Lumpur, Malaysia (2001) and Cebu, Philippines (2003). Now an APSP congress is being held in India for the first time with many participants. I hope this conference will have fruitful results and improve the understanding and communication of periodontal researchers from various countries and areas, which will be significant for future progress. In 2007, the next APSP meeting will held in Beijing, China. I hope there will be more researchers to join us and share their research results and new ideas. The APSP will continue to contribute to the future activities of periodontal research not only in Asian Pacific regions, but also globally.

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