

RESEARCH PRODUCTIVITY TRENDS IN PROSTHETICS AND ORTHOTICS IN CANADA

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INTRODUCTION

The Canadian Survey on Disability reported about 3.8 million Canadians between 15 and 64 years lived with a disability in 2012¹, and more than 80% used an assistive device. Innovation, research, and unrestricted access to knowledge in prosthetics and orthotics is vital to improve a person's quality of life, removing barriers, and integrating people with functional and mobility limitations into their society. Therefore, this study examined trends in prosthetics and orthotics research in Canada.

METHODS

Scopus database was searched for prosthetics and orthotics articles with Canadian origin in the last 30 years (1988-1997, 1998-2007, 2008-2017). Publications from Canada and the top ten countries were compared with the highest number of publication in this field, to find publication trends and forecast future trends (2018 to 2027).

RESULTS

The number of prosthetics and orthotics research publications showed a positive trend in the world and Canada (Figure 1). Research productivity was more pronounced in orthotics versus prosthetics. Table 1 compares the top ten countries with the most published articles. The United States ranked first followed by United Kingdom. Canada was third in orthotics and fourth in prosthetics, after Germany. Journals that published the most prosthetics and orthotics research were not open access.

CONCLUSION

Research publication trends in orthotics and prosthetics is promising in Canada. While statistics show a positive

global trend in the number of published articles, the number of journals that specifically publish prosthetics and orthotics research did not change, and few articles in these journals choose the optional open access publishing format. People with disabilities, including amputation, are a main consumer of research and innovations in this field. More publications in unrestricted access (open access) journals may enhance access to new knowledge and research in prosthetics and orthotics.

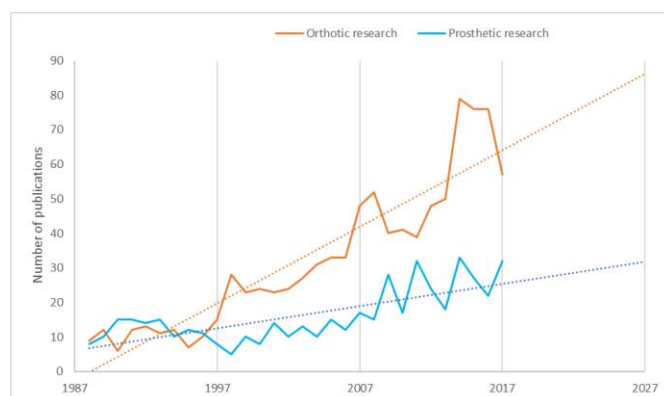
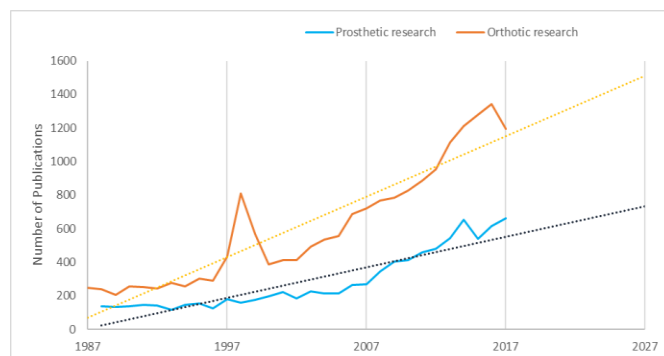


Figure 1: Publication trends in prosthetics and orthotics in the world (top) and Canada (bottom).

Table 1: Top ten countries with the most publications.
 Percentages are change from the previous 10 years.

Prosthetic research	1988-1997	1998-2007	2008-2017
World	1424	2123 (49 %)	5110 (141%)
US	465	589 (27%)	1644 (180%)
UK	181	253 (40%)	510 (99%)
Germany	74	148 (100%)	344 (132%)
Canada	118	114 (-3%)	248 (118%)
Italy	25	82 (228%)	269 (228%)
Netherland	57	87 (53%)	226 (160%)
China	8	73 (812%)	288 (259%)
France	35	98 (180%)	167 (70%)
Australia	30	43 (43%)	186 (333%)
Sweden	27	51 (89%)	126 (147%)
Orthotic research	1988-1997	1998-2007	2008-2017
World	2760	5584 (102%)	10361 (86%)
US	1287	2000 (55%)	3258 (63%)
UK	273	656 (140%)	1005 (53%)
Canada	107	294 (175%)	558 (90%)
Japan	125	319 (155%)	469 (47%)
Australia	50	265 (430%)	503 (90%)
China	14	81 (479%)	687 (748%)
Italy	41	143 (248%)	501 (250%)
Germany	69	202 (193%)	406 (101%)
Netherland	45	196 (336%)	287 (45%)
Iran	5	22 (340%)	412 (1773%)

DISCLOSURE

There is no conflict of interest in this study.

REFERENCES

- 1) Disability in Canada: Initial findings from the Canadian Survey on Disability. <http://www.statcan.gc.ca/pub/89-654-x/89-654-x2013002-eng.pdf> (accessed 31 October 2018).