Trends and patterns in medical student research and publishing in New Zealand

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The letter by Alamri discussing some of the current international trends in medical student research and publishing raised unanswered questions about our own trends in New Zealand.

Medical student-led research dates back to the mid-17th century; a contribution that resulted in major scientific discoveries and breakthroughs. Since then, medical institutions have continued to encourage student research and publishing through the introduction of mandatory and extra-curricular research activities to their medical programmes (such as intercalated degrees, summer studentships, and research electives/selectives). Preliminary research from New Zealand found that students have contributed significantly to the scientific and medical literature; an encouraging finding that might reflect the increased participation and interest in undergraduate medical research.

Worldwide, several trends in medical student research and publishing have been explored recently. In line with the overall growth in medical publications over the past few decades, an upward trend of student-authored articles has been observed in New Zealand and globally. This could be attributed to the increase in undergraduate research opportunities provided by medical schools. For example, the number of Otago medical students who enrolled in the MBChB/BMedSc(Hons) intercalated programme has gradually increased over the past 20 years (Figure 1).

Despite the witnessed growth in the student-led literature, a number of worrying trends have recently been

Figure 1: Number of students enrolled in MBChB/BMedSc(Hons) intercalated programme at the University of Otago (1995–2014).
LETTER

reported. These include a gradual decline in the number of physician-scientists, \(^7\) a decrease in the ratio of student authors to total authors per publication, and a low citation rate of student-authored publications. \(^7\) To be able to staunch, if not reverse, the above trends, characteristics of research conducted by medical students need to be regularly explored.

Despite the acknowledged importance of student medical publishing, \(^3\) little attention has been paid to the study of student publishing patterns in New Zealand. The only available data on the characteristics of student-led research in New Zealand come from a retrospective review \(^4\) that investigated students’ contributions to the NZMJ. To explore some of the trends in student research and publishing in New Zealand, a further analysis of the study’s data was conducted (a detailed description of the methods used has been published elsewhere). \(^4\) Data from this study showed that the number of authors per publication has increased throughout the study period (mean±SD; 2000–2004 = 3.4±1.9, 2005–2009 = 3.5±2.3, 2010–2014 = 4.4±3.2, Kruskal-Wallis chi-squared = 6.8, df = 2, p=0.03). However, the number of student authors per publication has relatively remained the same (mean ± SD; 2000–2004 = 1.2±0.8, 2005–2009 = 1.2±1.0, 2010–2014 = 1.6±2.3, Kruskal-Wallis chi-squared = 2.3, df = 2, p=0.32).

Findings from this study suggest that although a gradual increase in the number of student-authored publications has been observed in New Zealand, \(^4\) the ratio of student authors to total authors per publication has decreased; a finding which echoes international research. \(^3\) A number of reasons could explain this observed trend. The expanding number of authors per article could be ascribed to (1) an increase in collaborative and multicentre research, \(^6\) (2) a rise in the number of academic staff supervising students, (3) or may represent an extension of the phenomenon of ‘honorary authors’ (naming a person as an author without meeting authorship criteria). \(^8\)

To conclude, studies into student research and publishing are generally lacking in New Zealand. Future studies are needed to better explain the observed trends and characterise the impact (ie, citation rates) and scientific validity of student-led research in New Zealand and worldwide.

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LETTER

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