

INVITED EDITORIAL

Celebrating two decades of inspiring medical student research and innovation: the New Zealand Medical Student Journal

Ibrahim S Al-Busaidi

This year marks a significant milestone for the New Zealand Medical Student Journal (NZMSJ) as it celebrates 20 years of empowering medical students to actively engage with academic medicine. Having witnessed the transformative impact of medical student journals (MSJs) in fostering academic growth and innovation, I am honoured to reflect on the pivotal role the NZMSJ — and MSJs more broadly — have played, and continue to play, in shaping the next generation of clinicians, researchers, and leaders in healthcare.^{1,3}

The value of medical student journals

MSJs are “student-led and edited peer-reviewed periodicals that primarily publish student-authored scholarly work”.⁴ As of 2020, at least 23 MSJs published in English have been established globally (Figure 1).⁶ They play a crucial role in fostering academic and professional growth among future physicians and clinical academics.³ By providing an accessible platform for emerging researchers, these journals empower students to share their scholarly work, often for the first time. MSJs offer students a unique opportunity to gain experience in academic writing, peer-review, and research dissemination, areas often overlooked in traditional medical education curricula.^{4,7} This experience not only helps students refine their communication skills but also instils confidence in their ability to contribute meaningfully to the medical literature.

Beyond serving as publishing venues, MSJs encourage the development of critical thinking and peer review expertise. MSJs are an important avenue where students, as editors and peer-reviewers, are involved in the peer review process, where they engage directly with the principles of scientific rigor and constructive critique.^{2,8,9} These

skills are foundational for future clinical practice and academic pursuits, equipping students with the ability to assess research critically and apply evidence-based approaches in their careers. Such experiences also foster a culture of accountability and collaboration, bridging the gap between students and established researchers.

Moreover, the documented professional development advantages of contributing to MSJs are significant.^{4,10,11} Research has consistently shown that publication in MSJs during medical school is strongly associated with future academic success. For example, a matched-cohort study demonstrated that students who published in the NZMSJ were more likely to publish peer-reviewed articles indexed in PubMed, complete higher academic degrees, and secure faculty positions post-graduation, compared to their non-publishing peers.¹⁰ Similar trends have been observed across other settings,¹¹ further validating these findings. These results underscore the importance of early research engagement in fostering academic productivity, positioning MSJs as critical platforms for inspiring confidence, ambition, and the development of future clinician-scientists.

Through these mechanisms, MSJs not only contribute to the academic development of individual students but also advance the broader mission of cultivating a generation of physician-scientists committed to evidence-based practice and innovation.

Two decades of supporting scholarly activities

The NZMSJ has charted an inspiring journey since its inception in 2004 as a student-led initiative, founded by a group of Otago medical students completing studentships in Dunedin in 2002/2003.¹² Over the past two decades, the journal has become a vital platform for



Figure 1: Examples of medical student journals worldwide.⁵

nurturing academic and professional growth among medical students. Its evolution reflects the increasing sophistication of medical student research, transitioning from a publication mix of primarily non-academic contributions, such as reflective pieces, opinion articles, and book reviews, to an increasing focus on original research and academic reviews. Key milestones include the journal's indexing in Google Scholar, which has significantly enhanced its visibility and accessibility as a trusted academic resource.¹²

Since its establishment, the NZMSJ has published 37 issues¹³ and has consistently served as a medium for fostering a culture of curiosity, critical thinking, and collaboration among medical students both nationally and internationally. An analysis of 309 articles published in the journal between 2004 and 2017 across 24 issues revealed that two-thirds (66%) were authored by students, with no evident gender disparity in authorship or editorial board membership. Notably, most student-authored articles were written by a single author, and articles were significantly more likely to be authored by clinical medical students. These findings underscore the journal's inclusivity and its role in empowering diverse voices within the medical student community.

The NZMSJ operates as a national, student-led, double-blinded peer-reviewed medical student journal dedicated to publishing both original and non-original works authored primarily by medical students.¹⁴ It adheres to an open-access model, publishing two issues annually, entirely free of charge. The journal is governed by an editorial board that has evolved over time to include an Editor-in-Chief, a Deputy Editor, several editors, sub-editors, and managers. Additional support is provided by a commercial board and an advisory board comprising past Editors-in-Chief and senior faculty members. Its robust peer-review policy is a cornerstone of its success, employing a double-blinded review process supported by student peer reviewers for all submissions and expert peer reviewers (established researchers and clinicians) for academic contributions.¹⁴

The NZMSJ's mission extends beyond publication. It aims to support medical students in transitioning to publishing quality academic work by providing constructive peer-review feedback, promoting research and academia, and serving as a professional platform for engaging, educational, and thought-provoking discussions at both national and international levels.¹⁴ By fostering these opportunities, the journal continues to play a critical role in shaping the next generation of clinician-researchers and leaders in healthcare.

Benefits of early research participation

Early participation in scholarly activities during medical school education equips students with critical skills necessary for evidence-based practice and fosters a deeper understanding of scientific inquiry. Studies have consistently shown that early involvement in research not only enhances analytical and problem-solving abilities but also lays the groundwork for future career trajectories in academia and clinical practice. Brancati et al. identified research engagement as an early predictor of career achievement in academic medicine,¹⁵ while Solomon and colleagues¹⁶ highlighted its role in nurturing physician-scientists. Moreover, extracurricular research experiences have been associated with increased scientific output after graduation,¹⁷ and participation in supportive programs has been shown to boost students' research productivity and interest in pursuing research careers.¹⁸ Additionally, early research participation can positively influence career choices, with students more likely to transition into research-intensive roles in both academic and clinical settings.^{19,20,21} These findings emphasize the broader role of research in medical education, not only in enhancing immediate learning outcomes but also in shaping the long-term development of future leaders in healthcare.

Despite these benefits, over two-thirds of medical student research in New Zealand remains unpublished, a trend observed across various research activities such as intercalated research degrees and summer research projects. For instance, Al-Busaidi and Alamri²² highlight that the publication rate for undergraduate medical theses

in New Zealand is relatively low (33%), with many students not advancing their work beyond the academic requirements of their degree. Similarly, summer research projects, despite being structured to encourage scholarly output, also show limited publication success. Wells et al.²³ report that a minority (32%) of the research undertaken by medical and health science summer students at the University of Auckland over 14 years resulted in publications. This observation aligns with findings by Alamri et al. who noted that while summer research projects are a valuable educational tool, publication rates (24%) remain suboptimal,²⁴ indicating a gap in translating student research into academic outputs.

MSJs offer a potential solution to this challenge by providing a 'friendly' and supportive environment for students to submit and publish their research. These journals cater specifically to student authors, helping them navigate the academic publishing process while maintaining rigorous peer-review standards. By fostering a welcoming platform, MSJs encourage students to engage in scholarly communication and contribute to the medical literature, bridging the gap between research completion and dissemination.⁴

Next steps for the NZMSJ: enhancing reach, quality, and impact

To further its impact and support the academic growth of medical students, the NZMSJ should prioritise several key initiatives. First, the journal should aim to increase the volume of original research articles by actively encouraging submissions from intercalated degree projects, summer research programs, and other curricular and extra-curricular student-led research. Collaborations with medical schools to promote the value of publishing student research could be instrumental in achieving this goal.

Secondly, the NZMSJ should strive to secure indexation in major bibliometric databases, including PubMed, to enhance the visibility and credibility of its publications. This will not only increase its readership but also encourage more students and mentors to submit their work. Additionally, the NZMSJ should seek to establish an official impact factor or alternative metrics of quality. Doing so would position the journal among recognized academic platforms and attract higher-quality submissions.

Third, maintaining and continuously improving the transparent peer-review standards of the NZMSJ is also critical.⁸ The journal could consider introducing mentorship programs where seasoned researchers provide feedback to student authors alongside peer reviews, fostering a deeper understanding of academic publishing. Finally, expanding international collaboration with other MSJs and leveraging digital tools for wider dissemination could strengthen the journal's reputation and broaden its reach within the global medical student community.

Conclusion

As the NZMSJ celebrates 20 years of publication, it stands as a testament to the immense potential and talent of medical students. Over the past two decades, the NZMSJ has provided a vital platform for students to explore, refine, and showcase their academic contributions, paving the way for a legacy of innovation and collaboration. This milestone reflects not only the dedication of its contributors and editorial teams but also the enduring value of student-led initiatives in shaping the future of healthcare and medical research.

I encourage current and future medical students to engage with and support the journal, whether this is through contributing their own research, participating in the editorial process, or championing its mission. With gratitude for the foundation laid and optimism for its future, I look forward to seeing the NZMSJ continue to inspire and nurture the next generation of clinician-scientists and healthcare leaders.

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About the author

> Dr. Ibrahim S. Al-Busaidi is employed at the Department of Primary Care and Clinical Simulation, University of Otago Christchurch, where he serves as a lecturer in General Practice and convenor of the Quality and Safety ALM module. His research and teaching interests include fostering health professional student and trainee engagement in scholarly activities, with a particular focus on medical student journals.

Correspondance

Ibrahim S Al-Busaidi: ibrahim.al-busaidi@otago.ac.nz