

To be or not to BMedSci: that is the research question

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Research has many benefits for medical students; learning to evaluate scientific literature, working in multidisciplinary teams, provide a working knowledge of evidence-based medicine, and developing the skill of academic writing. Research projects also provide an ideal opportunity to meet a mentor and develop professional skills.

Both New Zealand medical schools keenly encourage students to explore the research pathway and provide the opportunity to undertake a one-year long research degree during the undergraduate medical programme. The Faculty of Medical and Health Sciences at the University of Auckland offers students the Bachelor of Human Biology (Honours), a year long research degree that can be taken any time after the third year of the programme and is offered in pre-clinical and clinical disciplines. The Faculty of Medicine at the University of Otago offers medical students the Bachelor of Medical Science (Honours) known as the BMedSci.

The purpose of this article is to present my personal experience of the BMedSci I conducted in 2003 together with accurate information of the nuts-and-bolts of the year.

BMedSci (Hons) – the nuts and bolts

The BMedSci is a research degree examined by thesis. The research is normally carried out in a discipline that has been studied in the medical course. The research topic has to be approved by the Faculty Board. Students are usually supervised by one or two members of the academic staff and students are expected to complete the degree requirements within one year. Examination is by thesis, though some students may be required to take oral, written and/or practical examinations. As the BMedSci is an honours degree, it may be awarded with first, second or third class honours.

The BMedSci year becomes a viable option for medical students after satisfactorily completing at least three years of the MB ChB course, this includes the health science year. Most of those who opt to undertake the year do so after their third year. Those who choose to undertake the degree after their fifth year; however, have the opportunity to do more clinically related research.

My experience of the BMedSci year

A fellow BMedSci-er and myself were chatting about the year towards the end when we were writing up. We were in awe of everything we had achieved in just one year. We had numerous opportunities presented to us during the year; most of which we would not have experienced had we not done the BMedSci year.

For me, one of the highlights of my year was becoming part of a research group. Doing a BMedSci is similar, I think, to what being a post-graduate student might be like - a very different feeling to being one of two hundred pre-clinical med students. I was fortunate because my department made an effort to include me, but I am sure most would. Departmental life is great. Morning teas are a must and there are plenty of 'special' morning teas and other functions for people leaving, achieving something, for special occasions like Christmas and often just because. By the end of the year I couldn't imagine being a med student again without my supportive research group. Though that's not to say I am not looking forward to it - I am.

An important skill for any health professional is the ability to evaluate medical literature. With the ever increasing amount of medical knowledge, it is difficult, if not impossible, to know everything. Often in our practice we will need to refer to scientific literature to help our patients. To do so, developed skills for evaluating evidence based medicine are invaluable. Although the medical course teaches us in this area, a research degree extends and consolidates these skills. With the skills I acquired through completing my BMedSci, I am confident in my skills to search for and evaluate scientific evidence relevant to any research question I might have.

The BMedSci year definitely helped me in the areas of self-directed goal setting, learning and achieving. These are essential skills for the clinical years at medical school and also in future practice.

In general, there is no formal teaching during the BMedSci year, though in some instances a department might recommend a student take a particular paper. Consequently, most BMedSci students do not have the structure present during the pre-clinical and clinical years, which have compulsory attendance components. During my BMedSci year, I predominantly worked on my project and thesis during, at least, usual business hours. After I finished the practical aspects of my project, however, I was able to have more flexi-time. That is, as long as I achieved all that I had to, I could work the hours I wanted. This meant that during the warmer months I could take advantage of warm weather during

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the day and work in the evenings instead. It was a great opportunity to take advantage of services offered by Clubs & Socs, which I wouldn't have been able to do in the medical course. The disadvantage, however, was the discipline required to ensure I was on track. The onus was definitely on myself to set my own goals and deadlines, which I then had to comply with. The BMedSci year definitely helped me in the areas of self-directed goal setting, learning and achieving. These are essential skills for the clinical years at medical school and also in future practice.

We are all aware of the importance of good communication skills in medical practice. We need to present information to patients in a manner they will understand, we need to be capable of presenting our own research or findings from literature review and we need to present patients in our training and in our future practice. All departments have research meetings where members present their material, and being a BMedSci student is no exception. The BMedSci year provides an opportunity to work on your skills in oral presentation, often within the supportive environment of your research team. You may also have the opportunity to present your research at a relevant conference, where you could experience firsthand the forum where researchers and/or clinicians communicate their work to each other.

It is not only your oral communication skills that improve during the BMedSci year. As the year is examined by thesis, a large part of the year involves writing up your own literature review and practical work. Furthermore, completing a BMedSci research project can lead to publishing a paper, or papers, about your research in scientific journals. Both conference proceedings, from presenting at a conference, and publishing in journals will distinguish yourself from other graduates, increasingly important as the medical course moves towards the pass, fail and distinction system of grading.

In closing, I really can't express enough how fantastic the BMedSci year has been for me. I have learnt and developed skills invaluable to my future as a health professional, met some amazing people and will enter my fourth year of medical school with more skill, life experience and confidence than I otherwise would have. Of course, the BMedSci isn't for everyone. It would be a very tough year if you were not certain that you wanted to do it - it was tough enough with motivation. From my experience, however, I wholeheartedly recommend the year for those seriously considering it and encourage you to take up the challenge.

Tips when contemplating the BMedSci year

- The success of your BMedSci is largely dependent on your supervisor(s). Try to choose supervisors that you think you will get along with. Make appointments with several academics that you might like to work with to discuss possible topics.
- It is important that you find your topic interesting. After all, you will need to live and breathe it for an entire year. Be aware that you can have clinical or non-clinical topics. Furthermore, do not be discouraged if potential topics described in the hand-out distributed by the Faculty, which outline the BMedSci year, do not interest you. You might have your own idea, or someone who you would like to supervise you might have an idea for a BMedSci that is not listed. However, the topic must be approved by Faculty.
- Talk to other med students who have done BMedScis. It is such a variable experience since it depends on the student, the topic and the supervisor(s), so it is important to talk to several students.

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