Chapter 6
Research

ABSTRACT

The purpose of this chapter is to explore why for any subject of study to move forward, research is absolutely necessary. Without it, one must only follow what others have previously decided, without question or concern. Medical professionals are always open to scrutiny, so they must make research one of their principal concerns. Research thus constitutes a key component of medical professionalism in the current era of patient centered and evidence based medicine. Resident doctors must especially be equipped with the skills of critical appraisal.

KEY POINTS

• to acknowledge the meaning and importance of undertaking research work
• to appreciate the methodologies of engaging in research studies
• to understand the concept of evidence based medicine and its pros and cons
• to learn the method of critical appraisal of a research study
• to know the ethical considerations of being involved as well as involving others in research studies

INTRODUCTION

My Work is About Service, I Have No Time for Research!

At an annual meeting of ENT surgeons which the author was attending once, one dynamic young surgeon started his presentation with an account of an overseas trip for which he had been invited to demonstrate his surgical skills and operative prowess. While waxing eloquent about the various cases he was asked to operate on, all of which were extremely challenging, he also tried to explain, in a way, why the surgeons there were not so proficient in the same things that he had been called upon to perform; the reason, he said, was because they were more occupied doing “research” on very basic problems, and concluded by saying “well, it suits me (us) fine- they doing research and we doing the surgeries!”

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It is not surprising to note that the speaker was from a country that has overwhelming volumes of patients requiring medical care, sometimes urgent, and government policies have been tailored to take care of the need to provide medical services to this vast population, thus not making way for either the climate or culture for research to develop, believing that it is resource intensive and relatively wasteful when current knowledge appears to be sufficient for providing good quality clinical services at an affordable cost.

“Research is to see what everybody else has seen, and to think what nobody else has thought.”

No one else could have put it more succinctly than Hungarian scientist Albert Szent-Gyorgyi, who in 1937 was awarded the Nobel Prize in Physiology and Medicine.

It is clear to see why some would consider research an unnecessary exercise when so many others have already looked at the problem, but it is often so easy to miss the rest of the message which drives home the point that it is in fact a very essential enterprise, something without which there would not be any innovation......and no way to move forward.

And while one would wish to be like Steve Jobs, it would be well worth remembering his simple words- “Innovation distinguishes between a leader and a follower.”

It is only by innovation that one contributes one’s mite to the expansion of knowledge and gains a rightful place in history as a distinguished man (or woman) of science. Public memory of someone who treated countless patients and performed numerous surgeries is usually short, a lifetime at the most, but who has forgotten great discoverers and inventors? Innovation is the gift one leaves behind for posterity, the legacy by which one ensures the future welfare of mankind.

Michael Porter, Professor at Harvard Business School and an authority on business economics, further emphasized why less prosperous nations should also take research seriously, and that is because “Innovation is the central issue in economic prosperity.”

The Ropes of Research- A Glimpse into Research Methodology

Research is less about state of the art laboratories, sophisticated instruments and costly equipment but more about developing a spirit and culture of scientific inquiry. It is not only about reading a whole lot of books and journals or treating a certain number of patients or performing a certain number of surgeries, but to always ask in the end: ‘Am I doing something better and newer, in a way that can positively impact my service and those of others?’

Doctors would argue that their clinical experience with patients is in itself a test of efficiency and effectiveness- that they get better with time- and then their distinctive approach or technique becomes the benchmark for others to follow, and this obviously is their contribution towards the furtherance of medical science. This is not altogether untrue, and in the history of medicine there have been individuals who might not have discovered or invented something, but have certainly stood out by virtue of a huge patient following and have been held in high esteem as teachers par excellence by students of medicine.

A part of medicine continues to be abstract art, and to justify the above phenomenon one might say that such doctors and teachers of medicine were actually exploring a new and innovative way to reach out to the sick and needy, and also paving the path for coming generations of doctors, not by mechanically doing the same thing day in and day out but by actually trying to make a difference. What else is this, if not research?