

# How to supervise a medical thesis

**Mohsen Rezaeian**

## Correspondence:

Professor Mohsen Rezaeian  
 PhD, Epidemiologist  
 Social Medicine Department  
 Occupational Environmental Research Center  
 Rafsanjan Medical School  
 Rafsanjan University of Medical Sciences  
 Rafsanjan-Iran  
 Tel: 03915234003  
 Fax: 03915225209  
**Email:** moeygmr2@yahoo.co.uk

## Introduction

Medical students usually need to select a topic for their thesis almost at the end of their study period. They also need to complete the requirements of the chosen topic and to formally defend it. The chief aim of such practices is to make sure that a medical doctor before graduation, gets to know the fundamentals of selecting, conducting and reporting a research topic. This will aid the student in evaluating medical research as Evidence Based Medicine (EBM) in their future practice. Moreover, if the selected topic is categorized as health system research (HSR), the medical students could get to know how research could help them to better understand and respond to a community's health problems.

However, there is a strong barrier to the successful completion of a medical thesis and that is lack of enough time for a medical student to accomplish the task. Usually, medical students should select, conduct and report their thesis at the period of internship, which is the busiest and the most important period in the entire medicine curriculum. Therefore, the roles of supervisors and the supervisory teams are very important to the success of a medical thesis. The chief aim of the present article is therefore to provide some practical guidelines on how to supervise a medical thesis.

## Guidelines

1. The first important issue in supervision of a medical thesis is that a potential supervisor should not accept to be a supervisor unless they devote enough time for this important task.
2. Given the complexity of the selected topic it is highly recommended that a supervisory team be appointed for every medical thesis. One of the members of this team should be familiar with statistics and the methodology of research to make sure that each medical thesis fulfils the necessary standards of a good piece of research.

## Abstract

Most medical students at the end of their study period, should select, conduct and defend a research topic as their thesis. Medical theses could not only provide a training opportunity for medical students to get familiar with the ABC of a research activity, but could also provide an opportunity to scientifically investigate a community's health problems. The chief aim of the present article is to provide some practical guidelines for the supervision of such a thesis.

**Key words:** Medical school, medical thesis, supervision

3. Since it is very difficult in some countries for a medical student to choose their research topic due to lack of time it would be necessary that a supervisor could suggest and provide a range of topics for a student. This could help the student to select the most appropriate topic which is in accordance with their personal interest. It is better to provide students with the topics that are categorized as HSR rather than basic sciences or clinical sciences. This not only helps students to become familiar with the application of research in solving community health issues but also to help the medical school to fulfill its social accountability mission.
4. On very rare occasions when a medical student may suggest a topic for their thesis the potential supervisor should appraise the merit of topic and help the student to further develop the proposed idea to see whether it could be considered as a medical thesis or not.
5. As soon as a topic is selected and the supervisory team is appointed it is time to help students to write down the research proposals. Usually, medical curriculum, especially within developing countries does not contain a research methodology syllabus. In order to remove this shortcoming, some medical schools might conduct research methodology workshops. It is the responsibility of a supervisor to make sure that their student is already attending such a workshop before writing down the research proposal.
6. During writing down the research proposal the supervisor should also make sure that the student is familiar with searching and critically appraising the relevant literature. These two aspects are the most fundamental of any research projects and it is highly important that medical students are familiar with them.
7. There is also another important point that the supervisor should make sure that the student is familiar with during the writing down phase of the research proposal. This important point is related to the ethics of research. The ethics of research encompasses all ethical issues and guidelines that a researcher should take into account in any section of the research cycle, including writing down the research proposal, conducting the research and gathering the data, conducting data analyses and writing down the actual thesis. The medical student will be able to apply these same skills as evidence based medicine in their future practice.
8. As soon as the research proposal is written down and has been approved by the research and ethical committees of the medical school, an action plan should be written based on the timetable of research proposal. The key of this action plan is to establish a regular meeting, for example, once a week between the supervisor and medical student. Similarly, a regular meeting between supervisory team and student should be considered say once a month.
9. In each regular meeting the student should present their progress report and take feedback from the supervisor or other members of the supervisory team. Students should learn to prepare a logbook for their medical theses and should address any feedback they might receive from their supervisor or supervisory team.
10. Given the busy schedule of an intern, the meeting should be arranged in a way that suits medical students. My personal experiences show that usually medical students like to have their meetings arranged during lunchtime. Therefore, the supervisor or other members of the supervisory team should consider the restraints of the timetable of an intern.
11. In addition to regular meetings, any route for communication between student and their supervisor or other members of the supervisory team should be considered. Phone calls and sending emails are two obvious and important routes for communications.
12. While most students do need close supervision a few of them can work more independently after the first face to face meetings. Therefore, the time interval between formal meetings would be changed based on the needs and the abilities of the students.
13. Regular meetings plus other possible communication routes should be continued all through the phases of conducting research, analyzing the results and up to start of the writing down phase.
14. During the period of writing the thesis it is important that the supervisor read any chapters of the thesis early and provide the student with helpful comments. Again, my personal experiences show that medical students do need close supervision during this period before they go down a path with inherent problems or that might innocently breach publication ethics.
15. Conducting a mock viva would help the medical student to get ready for a real viva and it is the responsibility of a supervisor to arrange a mock viva.
16. Besides, students do need to know the guidelines of their medical school in terms of typing, copying and bindings of the medical thesis and the supervisor should make sure that the student is fully aware of such guidelines.
17. Finally, when the student passes the viva it is important that at least one article will be published based on the results of the thesis. Usually time constraints of medical students do not let them publish an article from their thesis before graduation. However, after graduation it might be possible for them to prepare an article. Therefore, it is important that the relation between supervisor and the student is kept intact to make sure that the publication of an article would eventually ensue.

## Conclusion

Medical theses will provide a valuable opportunity for medical students to become familiar with the essence of a research activity and evidence base in medicine. In the present articles seventeen practical guidelines are introduced that might help a potential supervisor to be a good supervisor for a medical thesis.

## Further Reading

- Rezaeian M. How to prepare a thesis for submission. *Middle East J Business*. 2014; 9(2) :41-43.
- Rezaeian M. How to teach medical students to critically appraise a published article in public health domain: An innovative approach reporting from Rafsanjan Medical School. *J Edu Health Promot*. 2013; 2:8.
- Rezaeian M. Some personal thoughts on the advantages and disadvantages of undergraduate students' health research. *South Asia J Fam Med*. 2012; 4 :51-53.
- Rezaeian M, Pocock L. Social accountability - a challenge for global medical schools. *World Family Med J*. 2011; 9 :15-19.
- Lee NJ. Preparing for thesis and viva: some practicalities. *Nurse Res*. 2010;17(3):52-9.
- Collier R. Medical schools' social contract: more than just education and research. *CMAJ*, 2010; 182 (8): E327-8
- Dodani S, LaPorte RE. Ways to strengthen research capacity in developing countries: effectiveness of a research training workshop in Pakistan. *Public Health*. 2008; 122(6): 578-587.
- Benos, DJ, Fabres J, Farm J, Gutierrez JP, Hennessy K, Kosek D, et al. Ethics and scientific Publication. *Adv Physiol Edvc*. 2005; 29: 59-74.
- Aslam, F, Shakir, M, Qayyum, MA. Why Medical Students Are Crucial to the Future of Research in South Asia. *PLoS Med*. 2005; 2: 322.
- Cunningham SJ. How to write a thesis. *J Orthod*. 2004; 31: 144-148.
- Petrak J, Bozikov J. Journal Publications from Zagreb University Medical School in 1995 - 1999. *Croat Med J*. 2003 ; 44(6):681-9.
- O'Brien K, Wright J. How to write a protocol. *J Orthod*. 2002; 29: 58-61.
- Isenberg DA, Salmon M. How to supervise a thesis: best practice. *Hosp Med*. 2000; 61(7):499-501.
- Isenberg DA, Salmon M. How to supervise a thesis-best practice. *Research and Training Committee of the British Society for Rheumatology. Rheumatology*. 2000; 39 (5), 560-562.
- Cursiefen C, Altunbas A. Contribution of medical student research to the Medline-indexed publications of a German medical faculty. *Med Educ*. 1998; 32: 439-440.