

Chapter-5

The Research Journey

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Introduction

Young health researchers all over the world face challenges when they enter professional lives.¹ Lack of training is already identified as a major barrier limiting the research productivity and consequently health outcomes in developing countries. In this chapter, some tips are provided for novice researchers to build their career as a researcher within their disciplines.

1. Why research?

At a global level, there is an urgent need for strong science and evidence to guide policy makers in decision making processes in government and beyond. This can be only achieved through highly motivated and dedicated researchers with personal integrity who can guide towards charting or redirecting the course of health planning and implementation and of course monitoring of the health programs.

At individual level, no matter whether you are practicing as a general practitioner or as a specialist, you will need some basic research skills to keep yourself updated with the contemporary research. If you are an academic at a higher degree institution, you are expected to contribute to scholarly research. If you are looking for a job, scholarship or fellowship your research experience is definitely one of the critical factors taken into account. One of the rules of thumb is that if there are two applicants for a scholarship and one has got a high distinction academically while the other has distinction but has published

a paper as well, the chances are that the one with research experience will be selected.

2. Gain experience

Most of the health professionals struggle with finding the first research project. One of the best strategies is to get involved as a co-supervisor in one of the undergraduate or postgraduate research projects. This will provide you firsthand experience of being mentored by an experienced supervisor.

Research spider tool allows for a quick scan of your own learning needs in the research area.² Once you have identified the areas for improvement, find out about the workshops and activities that could help you in getting understanding of the research process and/or networking and participate. These activities will stimulate the researcher inside you and to start a research project in no time. A number of online resources are listed in a similar article to assist the research capacity of the health reserachers.¹ Most of the universities worldwide offer online resources for students and are freely available to public.

3. Read, Read and Read

Prepare a list of journals and databases in your area and sign up for regular table of contents to be delivered through email so you know as soon as a new issue is available and what is included in that issue. You also have two other options through different databases. First, if there is a particular article of interest then you can be notified when that article is cited by others or you can have some key words saved in a database and as soon as an article matching those keywords is published you will receive a notification. You can also control the frequency of these notifications so you do not receive frequent emails.

4. Form a Journal Club

This will give you an idea about contemporary research and how you can get involved. New ideas will emerge. In one of the reviews of running a journal club the authors have defined several characteristics which may be helpful in setting guidelines

for your journal club.⁴ Of these, two most important attributes are regular meetings and mandatory attendance. If you cannot physically attend the meeting there are now options available for online participation.

5. Collaborate

Collaboration is the key to success. Start building your team with 3 -4 peers who are interested to embark on this journey. An ideal team would comprise members with expertise in writing and data analysis. Once you have a project to start, delegate the tasks within the team with deadlines. Claiming authorship that is not due is on the spectrum of scientific misconduct and these practices are widespread.⁵ Circulate an email to all team members with the decisions. If one of the members withdraws from the project, it should be documented so there are no issues. At the start of year, if you can come up with few projects, each led by one member of the team, it will be very productive for the whole team in the long run.

6. Do not invent new tools

For your first research project try to find a tool and instrument that can be applied in your setting. If the instrument has been validated in your country, you can think if it needs revalidation in a different setting or institution. If not, then you can validate it within your setting. If the instrument is freely available, it is a plus point otherwise you can always write to the author seeking permission to validate it. There would hardly be anyone who will decline the request because in the current scenario we all are looking for more and more citations for our research studies.

7. Consider resources

Be realistic about the resources both human and physical to assist you in the research. Identify what financial resources are available through your department or institution and if they are enough to support you. How much time will you have in hand with other commitments and negotiate them early in the project with your supervisor.

8. Apply for Ethics Approval

Any research that involves human participants requires compliance with the ethical guidelines. Be aware of the requirements and deadlines of your institution. If your team includes members from other institutions or if the research study is conducted in a hospital, you may need approval from all participating institutions. Sometimes there are reciprocal arrangements between institutions and if ethics approval has been granted by one institution the other institution acknowledges that which is time efficient. There is nothing more disastrous than retracting and questionable research practices are not limited to any geographical region. As mentioned earlier, documentation is important to keep a record of authorship within your ethics approval when you are ready to present or publish.

9. Set time aside

Time and maintaining the momentum are two main factors that prevent academics from publishing their research. Once you have formed a team, set aside time to meet regularly so you can maintain the momentum. The author's suggestion would be to keep Friday as you will have time to work on delegated tasks during weekend.

10. Register at ORCID™

Open Researcher and Contributor iD (ORCID) is a non-profit organization supporting the community of researchers.³ Once you register, a persistent digital identifier is allocated to use with your research activities and is now increasingly becoming a requirement by funding agencies and research journals.

11. Get your toolbox ready

There are several tools that will assist you in your research journey.

11.1: Managing references

Reference management is vital to your research. Gone are the days when researchers use to spend time in libraries

and prepare index cards. With technology at your finger tips, literature search has been easier.

Endnote™ is one of the reference management systems and is available easily. The benefit of using a reference management system is that all references are in one place which comes handy when you are formatting publication for journals requiring different formats for citations.

11.2: Shared space

Google™ drive, One drive™ and Dropbox™ are commonly used where you can work collaboratively on writing a manuscript with your team or a thesis with your supervisors rather than circulating files through emails. Ethics Approvals may not allow you to share the data through these tools as it has to be stored in a secure way so do check the requirements for data storage.

11.3: Analysis

If you are well versed with Microsoft Excel™ program, data analyses can be easily undertaken however for more advanced analysis, you will need access to SPSS™ for quantitative and NVIVO™ for qualitative analysis. There are also some new tools available for analyses which are free to use such as R™.

12. Start Writing

While I can talk for hours about my research, writing is where I always struggle and the best advice I got was to start writing three-hundred words every day. This was easily manageable as I will write in the morning when I arrive at work. For the first few days, it was also much easier because you are really writing about your research proposal and you will soon pick up the flow.

If you are working on your thesis, I will recommend keeping six months for the write up once you have entered your data in the required format. Usually there are six chapters in a thesis. (Box-1)

One month will give you enough time to concentrate on one aspect and you will find that you have finished the chapter well ahead time. If so, enjoy the remaining time as an incentive to relax rather than immediately starting on next chapter. You

Box-1: STRUCTURE OF A THESIS

1. Introduction
2. Literature Review
3. Methodology
4. Results
5. Discussion
6. Conclusion

can also forward the completed chapter to your supervisor for feedback which will be helpful when you finish your next chapter well ahead of time as by that time you will have received feedback on previous chapter to spend time.

The same can be applied to a research paper and instead of six months you can keep six weeks as the deadline among your team members.

13. Disseminate

Research cannot be done in vacuum and needs to be disseminated widely. Informally, you can disseminate your research through already formed journal club, local conferences and international conferences. The other ways to publicize your project and findings are through creating a blog or project website which is regularly updated. If your institution has a newsletter, use that and if you think your research is of a wider interest to the public, get local television and radio channels on board for media exposure. Social media is getting bigger everyday and is freely available so think of more creative ways to engage with wider audience.^{6,7}

Formally, you need to find a journal that publishes in your area of research. Currently there are journals that are available through print and electronic media while some journals are only available online. Read the instructions to authors and format your manuscript accordingly. Few of the journals make reviewer comments publicly available which is a very good starting point for a novice researcher to understand the review

process and how the successful authors have addressed them in the revision.

If for any reason the manuscript gets rejected, read the comments carefully and address them before you send it to next journal. This will maximize your chances of a publication. In one study conducted by the Journal of Academic Emergency Medicine, it was observed that two third of the rejected articles were subsequently published elsewhere.⁸

14. Expand the Horizon

Once you have the research experience with project management and publication, explore opportunities beyond your region. International research collaborations are now more common than ever, supported by internationally minded funding bodies such as the Wellcome Trust, the UK Medical Research Council, the Bill and Melinda Gates Foundation, the US National Institutes of Health, and even the European Union, and fostered by improving transport links and the use of the internet.⁹ You can keep yourself updated with these opportunities through community of Science¹⁰ and there would be many more available electronically. Make the best use of these to develop your research profile.

Conclusion

In this chapter some tips are provided for novice researchers. The metaphor of journey is used as it is in fact a journey which requires planning and resources both at individual and organizational level. Inadvertently one will face bumps and have to apply brakes while at times it will be a smooth journey yet you have to be mindful of signals and know which road to take at appropriate time and speed.

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