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Choosing and Publishing A Research Project

Yasodha Maheshi Rohanachandra[1], Raviteja Innamuri[2], Amit Singh[3], Anoop. G[4], Guru S Gowda[5], Harita Mathur[6], Jayant Mahadevan[7], Lochana Samarasinghe[8], Naga V S S Gorthi[9], Pratikchya Tulachan[10], Rajesh Shrestha[11], Rajitha Dinushini Marcellin[12], Samindi T. Samarawickrama[13], Shanali Iresha Mallawaarachchi[14] and Shreeram Upadhyaya[15], Shreeram Upadhyay[16] and Sharad Philip [16]

[1]Senior Lecturer, Department of Psychiatry, University of Sri Jayewardenepura, Sri Lanka, yasodha@sjp.ac.lk

[2]Assistant Professor, Department of Psychiatry, Christian Medical College, Vellore, India, drravitejainnamuri@gmail.com

[3]Assistant Professor, Department of Psychiatry, King George's Medical University, Lucknow, U. P.

[4]Assistant Surgeon, Kerala Government Health Services, Community Health Centre, Arookutty, dranoopg@gmail.com

[5]Assistant Professor, National Institute of Mental Health And Neuro Sciences, Bengaluru, India, drgsgowda@gmail.com

[6]Senior Resident, V.M.M.C and Safdarjung Hospital, haritamathur@gmail.com

[7]Assistant Professor of Psychiatry, National Institute of Mental Health and Neurosciences, Bengaluru, India jayantmahadevan@gmail.com

[8]Senior registrar in Psychiatry, North Western Mental Health, The Royal Melbourne Hospital, Australia, lnpsamarasinghe@gmail.com

[9] Psychiatry fellowship doctor, old age psychiatry liaison team, Cumbria, Northumberland Tyne and Wear NHS foundation trust, Newcastle , nvsaisudhagorthi@gmail.com

[10]Associate Professor, Maharajgunj Medical Campus, Institute of Medicine, Nepal, prats38@gmail.com

[11]Lecturer, Department of Psychiatry and Mental Health, Lumbini Medical College and Teaching Hospital(LMCTH), Kathmandu University (K.U), Nepal, rajesh694111@gmail.com

[12]Consultant Psychiatrist, National Institute of Mental Health, Sri Lanka, rajithadinushini@yahoo.co.in

[13]Senior Registrar in Child and Adolescent Psychiatry, Lady Ridgeway Hospital for Children, Colombo, Sri Lanka samindi1982@gmail.com

[14] Senior Registrar in Psychiatry, Ministry of Health Sri Lanka, Sri Lanka, shani2400@yahoo.com

[15] Senior Resident, Department of Psychiatry and Mental Health, Institute of Medicine, Tribhuvan University Teaching Hospital, Nepal, upadhyayashreeram@gmail.com

[16] Senior Resident in Psychiatry, National Institute of Mental Health And Neuro Sciences [NIMHANS], Bengaluru, India

ABSTRACT

Early Career Psychiatrists (ECP) may need to undertake research as part of their training, institutional expectations or for their academic advancement. Choosing a research project, deciding on the appropriate study design, applying for funding and writing up their findings may all be challenging to an ECP due to inadequate formal training in research and lack of experience. In this article, the authors have examined the relevant literature sources for recommendations and guidelines to choosing and publishing a research project and have added insights and learning gleaned during the 'Early Career Psychiatrist Leadership and Professional skills workshop'.

Key take away: It is prudent to cautiously explore and experiment with the guidelines and learnings listed here to suit the Early Career Psychiatrist (ECP) style. We believe that these gleanings can benefit other medical professionals with relevant modifications.

Keywords: Early Career Psychiatrist, Early Career Psychiatrist Leadership and Professional skills workshop

Corresponding   author:
Dr. Sharad Philip
Email : sharadphilipdr@gmail.com

INTRODUCTION

Research is an important building block for most academic careers. One of the main goals of education in psychiatry should be to encourage individuals in the early stages of their careers to conduct research[1]. Research collaboration is vital for an Early Career Psychiatrist (ECP) because it will improve communication, the sharing of competence and production of new scientific knowledge, leading to novel treatment methods and services. Research not only provides a deeper understanding of scientific topics within the specialty, it also helps an individual to develop analytical, conceptual and critical thinking skills that extend beyond the research project itself. Research may also be an expectation of a training program or of a supervisor. Getting experience in research early in training enables ECPs to balance research time as well as clinical work, and might have an impact on their professional choices [2].

Conducting research can be challenging for many ECPs, especially at the start of their career. Research requires time and commitment and the results are often not guaranteed. Training programmes often give priority for clinical teaching rather than research. Previous literature shows that less than one third of residency programmes in Psychiatry offer formal research training and this may even be lower in the Asian region [3]. Thus, young psychiatrists often do not feel competent in carrying out a research projects or getting their work published.

Therefore, in this article, we discuss about how to decide on a research project, how to write a research proposal and how to get your research published, with special focus on how choosing the correct title for your paper can help in publication of your paper. This is based on the proceedings of the Eighth Leadership and Professional Skills Course for Early Career Psychiatrists conducted by the Dr Ramachandra N Moorthy Foundation for Mental Health & Neurological Sciences, Bangalore, at the National Institute of Mental Health and Neuro Sciences (NIMHANS) in January 2020.

DECIDING ON A RESEARCH TOPIC

Deciding on the research question is vital in the final outcome of a study. If the research question is not well-defined, the research is unlikely to provide useful information and the time and effort invested in the study would be wasted.

A research question has been defined as "the uncertainty that the investigator wants to resolve by performing a study". A clinician may encounter several opportunities to develop research questions in their everyday clinical practice [4]. The research question may be based on an observation or a clinical experience. For example, a psychiatrist who has observed that some patients with depression respond better to cognitive behaviour therapy (CBT) than others, may question what factors contribute to the effectiveness of CBT, which may be the basis of a research question. Alternatively, some ECPs may decide to select a research topic for a learning experience, to get experience in an area which they have not been exposed to in the past. Or else, a research question may be identified through a literature review. A literature review may reveal gaps in knowledge in the existing literature. Certain areas may not have been studied or may only have been studied in limited settings. Such gaps in knowledge may serve as an appropriate research question [4]. The discussion section of many scientific articles identifies the current gaps in knowledge in the topic and suggests areas for further research [5]. These can be useful in identifying an appropriate research question. Finally, discussions with colleagues may also provide important insights into possible research areas. It is a good practice to keep a research notebook to write down research questions that you encounter during your clinical practice or while reading research articles. This will aid you in identifying the best research question from a list of possible research areas [6].

Selecting an area that you are interested in is of utmost importance. Research can be time consuming, prolonged and exhausting. Therefore, unless you are enthusiastic about the topic under study, it may be difficult to sustain motivation to complete the research in the long haul.

Another fact that needs to be considered when choosing a research topic is that whether you have time to conduct the research alongside your clinical work. Studies that may take up a lot of your time or those that may need to be done over a long period may not be suitable for an ECP with multiple roles and responsibilities.

If a research project is not published, it might as well

never have been done, because nobody will know about its results. Therefore, the likelihood of getting published needs to also be considered when choosing a research project. It is suggested that any research question should pass the "so what" test [5]. If the answer to this question is useful, meaningful and has implications for improvement of patient care, the research is more likely to be published. A good research topic should be narrowly focused and clearly define and an important part of a broad-ranging complex problem. A young researcher may become over-enthusiastic and try to incorporate too many research questions in a single study, which may make the study less feasible. If the initial research question is broad, it can be broken down into smaller questions [6] which can then be addressed in separate studies. Prior to deciding on a research topic, it is also important to assess your own resources, in terms of both capabilities and time you can dedicate for the research. The opportunity the research will provide for national or international collaboration should also be considered. A research project needing inter disciplinary and international collaboration is likely to provide new scientific knowledge with greater translational impact. Furthermore, the role of research may differ among different institutions and departments. Therefore, it would be wise to be aware of the priority that research takes within your department and the potential for support [5]. Furthermore, the research topic should be harmonious with your supervisors' wishes and be within the expertise of the supervisor. If not, a co-supervisor maybe needed to fill in the gaps of knowledge [7]. For early career psychiatrists, lack of funding has also been identified as a major barrier in conducting research. Therefore, the opportunities for funding should also be considered when choosing a research project [8]. ECPs may have to choose their topic to correspond with the available funding resources or may need to fund their projects themselves. If self-funding is required, the cost of conducting the research needs to be kept in mind when deciding on the research topic.

The ethical aspects of the study should also be considered when deciding on a research topic. In many resource limited developing countries, there is often no clear distinction between the healthcare provider and the research clinician and patient care is often integrated with clinical research. This may potentially result in subordination of patient care for research, therapeutic misconception and inappropriate inducement [9].

Therefore, ethical implications of the study should be considered and input from the local ethics committees and institutions should be consulted prior to commencement of a research.

The feasibility of finding the study population should also be considered when selecting a research topic. If the study process requires participants to answer long questionnaires, include multiple visits to the hospital or requires participants to undergo numerous investigations, participants are unlikely to consent to be a part of the study [10].

Table 1 – Factors to consider when choosing a topic for your research

- Area of interest
- Focused on a prevalent and important problem
- Yields useful information
- Provides opportunity for collaboration
- Narrowly focused
- Feasible in terms of your time and capabilities
- Whether multidisciplinary involvement in needed
- Funding
- Ethically acceptable
- Feasibility in finding the study population
- Publishable

DECIDING ON THE STUDY DESIGN

The research question is the basis of choosing the study design. In other words, the study design should be appropriate to answer the particular research question.

Examining previous literature to identify methods that have previously succeeded answering similar research questions is helpful in deciding the type of study design. The language used in the research question is also helpful in identifying the type of study design. Tully et al has suggested that if a research question starts with "how many" or "how often", this suggests prevalence or an incidence of a problem is assessed, which suggests that a descriptive epidemiological study design would be

suitable. If the question starts with "why", this may indicate that a deeper understanding of the topic is needed, which suggests that a qualitative study design would be most applicable. Finally, if the research question aims at answering "what is the impact of a particular experience or intervention", this indicates that a causal relationship is sought between two variables and a comparative study design is needed [6].

PITCHING FOR FUNDING

With the recent change in research policies there is an increased demand for funding and stiff competition among research and health organizations to obtain funding opportunities. Fundraising for research may be a daunting task for an ECP, due to their limited experience, lack of strong research background and inadequate administrative training. The first step in applying for a research grant is selecting the appropriate research team. If the reviewers feel that the team of researchers does not have the skills or workforce to execute the planned activities, it may lead to rejection of the proposal [11]. Current mental health research policies emphasize the need for higher degree of interdisciplinary and interagency collaboration. Therefore, when choosing your research team, you should ensure that your team of collaborators has the professional experience in the area of the project, leadership skills, networking and management skills needed to execute the planned activities.

Once you have your research team, the next step is searching for available funding options. If your initial research topic does not comply with currently available grant options, you may choose to wait for a further grant opportunity to become available, adapt the project in order to fit current funding requirements, or expand the search for funding options [11].

When preparing the research proposal, it should be done in accordance with the detailed instructions stated by the funding body. Careful reading of such instructions may avoid your funding proposal being rejected for not complying with the donor's requirements.The proposal should start with giving the background information about the evidence currently available, the current gaps in knowledge and how your research plan to address these gaps. Next, the goals and objectives of the project should be clearly stated. This should be followed by a detailed methodology, describing the study participants, study instruments, data collection and analysis. The description of the methods should be in sufficient detail to make the reader understand who (of the team members) is going to do what (project activity) at any given point [11]. References about the study instruments and procedures should be provided where ever appropriate, to demonstrate the scientific soundness of the study. The expected outcomes and results of the project should be highlighted and should correspond to your aims and objectives. The methods of evaluating the project performance should also be stated. Plans to address any drawbacks or unexpected outcomes should also be discussed. The financial aspects have to be carefully considered and a detailed budget and financial plan should be presented. Avoid both overestimation and underesti-mation of finances as it can give the impression that the financial plan is unsound. The plan for dissemination of results as well as benefits of the project to the applicant, the applicant's institution, participants and the community should be emphasized. Strategies to maintain sustainability of the product should also be included. The roles and responsibilities of each of the team members should be stated. Their professional experience, skilled compe-tencies and previous success with similar projects should be highlighted, to reassure the reviewers that the team members are capable of executing the planned activities. If there is any evidence to support the feasibility of the project (*e.g.* pilot studies, or previous similar studies done in other settings), they should be included. Finally, the ethical aspects of the research should always be included.

Presentation of the research proposal itself is crucial in deciding whether the proposal will be accepted. First, know your audience. The audience will consist of experts in your field as well as generalists with exposure to your field of study. The ultimate goal of the presentation is to convince the evaluators that your project is worth doing and the team members are capable of carrying it out. Generally, the presenter should change in accordance with the change of the topic being presented. However, changing speakers can distract the audience. Therefore, these shifts should be kept minimal. It is also important for other team members not to interrupt the speaker. The presenter should appear respectful to the reviewers and should present the proposal with emotion and devotion. Once the proposal is presented, be prepared

to respond to the questions and feedback of the reviewers. Be flexible and modify your proposal incorporating the reviewer feedback and resubmit your proposal.

EFFECTIVE WRITING AND GETTING YOUR PAPER PUBLISHED

Once you have chosen the appropriate journal, the next step is publishing your manuscript. For an article to be published it needs to have good scientific validity as well as being well written. Manuscripts that cover significant, timely and prevalent issues, are well designed, have practical implications and which are well written are more likely to be accepted for publication [12]. If the manuscript fails to make a significant contribution to knowledge, has methodological flaws, outdated literature reviews, inappropriate or incomplete statistics and are difficult to follow, they are more likely to be rejected [13]. While some of the deficiencies can be corrected through the review process, certain deficiencies such as insignificant topics and inappropriate designs are unlikely to be improved.

When writing the manuscript, it is vital to adhere to the author guidelines of the particular journal. The sentences should be kept short, a spell check should be run and for authors whose first language is not English, it is useful to get the manuscript proofread by a native English speaking person [14,15]. Usually, a manuscript will need to be revised several times before it is ready for submission.

The title of the manuscript should be considered carefully, as this will affect how the paper appears on search engines. The tile predicts content and condenses the paper's content in a few words, reflects the tone or slant of the piece of writing, captures the readers' attention and helps to differentiate the paper from other papers of the same subject area. Ideally, the title of your manuscript, seen in isolation should give a full yet concise and specific indication of the work reported. A title should be concise but informative and should contain information about the type of study (*e.g.* clinical trial, case report, meta-analysis etc..) [16], but should not exceed 10-12 words.Care should be taken to ensure that the title does not make more claims than what your paper conveys. The introduction should be brief and should include an explanation why the research question

is important, the gaps in the current knowledge about the topic and how your study is going to bridge this knowledge gap [16]. The methodology should be clearly described in a way that the study can be easily replicated by another investigator [15]. The results should provide answers to the research question and should parallel the methods section. The results that need to be highlighted can be included as figure or tables, but care should be taken for these not to be a repetition of the text. The discussion should include a recap of your major findings, how these compare with the existing literature, strengths and limitations of your study and a strong take home message [16].

Once you have submitted your manuscript your article will be reviewed and you will be informed with a decision. The goal of the reviewers and editors is to improve the quality, readability and credibility of your manuscript. Therefore, you need to take all reviewer comments into consideration when revising your manuscript. Do not be discouraged if your manuscript gets rejected. 70% of the rejected manuscripts ultimately get published in another journal [17]. Therefore, use the reviewer comments to rewrite the article and submit to alternative journal [16]. Though the process is arduous; patience, persistence, utilization of available resources with guidance of mentors can result in publication, which helps to boost confidence and career of an ECP [18, 19].

CONCLUSION

Research is an inevitable part of an ECP, but formal training and experience in research is lacking in psychiatry training programs. Success of a research starts with choosing the right research topic, which is of an area of interest, feasible, ethical, cost effective and publishable. Funding opportunities may be limited for an ECP and lack of experience may make applying for a research grant challenging for an ECP. Learning the fundamentals of writing and presenting a research grant proposal will improve an ECP's confidence in applying for research grants. No research is completed without publishing the results. Therefore, skills in effective writing should also be mastered by ECPs.

Leadership and Professional Skills for Early Career Psychiatrists workshop from SAARC nations. It was held in Bangalore at the National Institute of Mental Health And Neuro Sciences (NIMHANS) from January 30 to February 1, 2020. We were mentored and taught at the workshop by Prof Norman Sartorius, Prof Mohan K Isaac, Prof Santosh K Chaturvedi and Prof Pratima Murthy, who were assisted by Dr Arun Kandasamy and Dr Krishna Prasad M. We thank Dr Shalini Naik and Dr Chithra K who coordinated the logistics. We also express our heartfelt thanks to the host institution - NIMHANS and its administration for all the facilities extended.

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