Journal of Investigative Surgery, 24, 101–102, 2011

ISSN: 0894-1939 print / 1521-0553 online
DOI: 10.3109/08941939.2011.572797

informa
healthcare

EDITORIAL NOTE (2)

Developing the Research Idea

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ABSTRACT

After the interest in surgical research, developing the research idea is of fundamental importance because without it we can not have research. Where do the research ideas come from then? Is there any better way to improve our ability to generate research ideas? Where do they come from? What are the factors that stimulate the research idea?

Anything we do in and out of medicine or surgery should be the force that will maintain our mind occupied on our future research ideas. From events in the clinical arena to discussions in formal rounds or informal meetings should be the origin of our thinking in research. So, the generation of research ideas come from any place and we should be aware of it. We could be successful in research if we could produce and accumulate the ideas as they frequently present to us in our professional or daily life. The research environment could help us in securing the presence and evolution of the idea. Be aware of changes and future developments and be ready to admit and grow the research idea that could be presented to you during the practice of medicine.

INTRODUCTION

The research idea usually comes from interest, knowledge and desire to obtain an appropriate answer regarding the problem identified. Asking specific questions about the areas of interest will be very helpful in defining the research idea.

The research idea is not difficult to develop when you use an inquisitive mind and attitude towards finding responses to the questions presented. The research idea would then offer a guiding light to the research process.

SOURCES FOR THE RESEARCH IDEA

For the researcher, the research idea comes naturally and is immediately incorporated into a good research protocol. The difficulty might arise for those individuals who are unfamiliar with research, and thus the research idea does not readily present itself. These individuals need support to reach an appropriate research idea. It is possible that at this stage the most effective manner to reach the research idea is by examining the most diverse possibilities and questions in the areas of concern. Then the next step would be to select the best idea.

The research idea is important because the results of the project are dependent on its elaboration and execution based on a well-outlined research plan. Good research ideas are the basis for the development of excellent protocols and, at the same time, for the integration of successful studies with the best conclusions.

The research idea proceeds from many sources, such as a literature review, reference books, specialty books on the topic in question, analysis of the discussions emanating from floor rounds, Grand Rounds and other internal conferences utilized by the various teaching residency programs. Members of the faculty will frequently present interesting points which medical students, residents and faculty could utilize as potential sources for excellent research ideas and potential review or full analysis of the topic under consideration.

EVOLUTION OF THE RESEARCH IDEA

The research idea represents the first exposure of the researcher or the researcher-to-be to the possibility of advancing the first steps of the research project. The research idea can be heterogeneous, multifaceted, and only limited by the imaginative capability of the investigator. The research idea, of course, can be very simple and clearly visible from the beginning. The research idea can be present in any possible form.

The research idea responds to the "whys" of a clinical case, a particular situation or problem that presents in daily practice and can be very satisfying when appropriately addressed. Nadey Hakim, well-known English transplant surgeon, put it very clearly when discussing the research idea [1]. He wrote, "The research idea must be original. It could be an observation; it could come from talks, lectures. . .or it could be personal inquisitiveness and dreaming"[1]. Hakim continued his discussion by invoking science philosopher Karl Popper, who said, "What a good teacher says is this: Try to learn what people are discussing nowadays in science. Find out where difficulties arise and take interest in disagreement. These are the questions you should take up"[2].

As suggested before by Popper, researchers should not be afraid to approach difficult issues or questions arising from controversial topics [2]. On the contrary, researchers searching for research ideas should be aware that research ideas can originate from unsettled or unsolved clinical issues. It would not be hard to understand, then, that difficult topics or challenging areas are excellent sources for research ideas [3].

FACTORS THAT STIMULATE THE RESEARCH IDEA

As previously mentioned, the research idea is frequently stimulated by thoughts that the clinicians have while performing their usual duties. The research idea can frequently center around clinical concerns and the ability to solve these issues effectively. Let's present for a brief moment a surgical and medical case as an example of a potential research idea.

In surgery, we could examine the best characterized issues, such as preoperative assessment, details of the operation and its performance, modification of the surgical technique, postoperative follow-up, and final results, including morbidity and mortality. The research idea could come from more specific topics related to the previous general topics. One could approach, for instance, the differences and outcomes of laparoscopic inguinal hernioplasty vs. regular open hernia repair. Other ideas could be oriented toward the proper surgical procedure, such as which suture is best. What is the best tissue approximation? How many layers should be sutured? Many more research questions could follow, covering a large number of simple or intricate areas worth exploring in better understanding of hernia disease and/or treatment.

In medicine, the origin, diagnosis and treatment of the disease take precedence over strictly surgical matters. If we follow, for example, the topic of hypertensive disease, there are many research ideas that could emerge from careful consideration of the disease course. Simple or complex research ideas could appear, stimulated by the desire to have more precise diagnosis and/or treatment. An example could be to define ideal blood pressure levels, or the most important contributing factors for improved survival, or the best treatment for maintaining optimal blood pressure measurements. These are just a few examples of the many research ideas that could be entertained in the clinical arena. Literature review topics can also be a rich source of many promising research ideas. The research idea development becomes, at this point, so extensive that the possibilities for study are practically inexhaustible.

CONCLUSION

It is well-known in the realm of the clinical or basic sciences that the development of the research idea is the central element in the creation of a significant research protocol, and, thereafter, a good experimental design and the institution of a complete research study. Stimulating the sources for the research idea and knowing the factors that could potentially enhance better ideas is fundamental to improving the research process. The research idea is the critical step needed for research advancement in the medical and surgical sciences.

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