

Chapter-25

How to write a Monograph

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Medical writing has rapidly evolved over the last few decades. It has gained its due importance as the health sector evolved from a service oriented to an education based profession. In other words the combination of knowledge with skills is becoming a norm rather than an exception. For instance, the British NHS was designed to serve the sick, one and all, at the time of its introduction in 1948. So, the clinical skills were transferred by the seniors to the juniors, as an on the job training. ‘See one, do one, teach one’ was the motto until the 1990s. Teaching was secondary. Formal education *per se* was slow to emerge.

Matters have since changed. Everything is structured and acutely monitored. It is mandatory for everyone working in the NHS to continue a process of medical education (CME) gathering certain number of points for annual appraisal to maintain the license to practice in the UK. Pakistan has always given much importance to continuing medical education. The college of physicians and surgeons of Pakistan (JCPSP) was the outcome of the efforts of visionaries like Professor MAH Siddiqui who used his position and contacts with General Burki in early 60s to lay the foundation of the college. It has proved to be the fountainhead of knowledge and skills.

Writing a dissertation as a requirement of gaining the Fellowship of the College (FCPS) is an excellent strategy to inculcate the writing habits in our young professionals. Each one of these dissertation contains a plethora of information. In 1991,

the college decided to introduce its own journal. Prof Fazle Elahi was the Chief Editor, Shahida and I were privileged to be its first Editors.¹ It was rightly believed that ample material will be available through dissertations for the journal. It is with much satisfaction that I reflect upon its success, as the JCPSP stands immediately behind the Pakistan Journal of Medical Sciences and JPMA as regards its Impact Factor as per JCR released in 2017.²

I believe thousands of these dissertations remain confined to book cases of the authors and archives of the college library. Majority of them can be made more accessible to the global academia. Surely some of them can be converted into the monographs.

So what is a monograph?

A monograph is a form of writing on one topic by one author. It differs from a book as the later covers many subjects in many chapters; and may be single or multi authored. A monograph is easy to write and disseminate huge personalized knowledge to the world, giving due access to the readers interested in a 'specific' topic or indeed a 'particular writer'.

Who should write a monograph?

If you are an experienced physician or surgeon, and wish to disseminate your knowledge and personal experience, a monograph may be a good option. You may have learnt a thing or two from your practice; or indeed carved out a new way in your field of expertise which you may have found profitable in meeting your goals and would like to share it with your peers or juniors, then you have every reason to write a monograph.

For instance, when I had gained about 20 years of practical experience in battling with oral cancer, I found an urge within myself to jot down all my good, badly or ugly experiences in a narrative form. I noted that Head and Neck Cancer is a multidisciplinary entity and requires a dedicated team, determined to accept the challenge. This battle cannot be fought individually. This was long before the MDT came into a mandatory practice. I also found out that I could handle

my surgical resection keeping both parts of the neck in view, operating from the head end rather than from one side of the patient, as is customarily taught. So I documented it. I also made a point in my monograph, that cancer would be managed through drugs and gene therapy rather than surgery only in the future. I quoted the example of TB, which in my student days was treated by my teachers by pneumonectomy or dispatching a patient to the sanatoriums.

All that has changed, and so has cancer. Many cancers are now successfully treated with medicines, alone or combined with radiation, with new drugs emerging each passing day. Immune therapy is growing by the day. Gene therapy is rapidly developing to nip the bud in the process of malignant transformation of cells. So, in our own professional life time cancer has changed from a killer disease to a chronic illness! I had noted that in 1980s and documented so in my monograph.³ The point of emphasis here is that you learn a thing or two in your practical life and document it earnestly and honestly. It may well provide guidance to some in your field of expertise.

As mentioned before, everyone who has something to add to the knowledge, based upon his original work, research or practical experience, is entitled to write a monograph. If you are a relatively younger professional, you may struggle to find readers, unless your work is exceptional.

Components of a Monograph

Now let us look at the components of a monograph and the necessary steps to write one. The first and foremost step in writing a monograph is the selection of a subject or topic. Obviously, a person writing a monograph has to be competent enough to focus on a point that must interest a large cohort of readers. However, it is important to point out, that a subject/topic must be unique in its content and wording to instantly attract a reader's attention. It must carry due gravitas yet must not be overwhelming. Simple and coherent words and phrases are far more influential in carving the path for future research

than monolithic, pompous, or double barreled even treble barreled terms. One should go through a series of similar topics used by other authors in the past to avoid a repetition as well as to find ones' own niche.

The topic of research and hence the monograph has to be of common interest to attract a wider audience as it must also be unique to leave your footprints on the sands of medical writing. The subject must be original, feasible, practical, reliable and easy to generate interest of others working in the same field. While choosing a topic one must avoid the one which may lead to irrelevant conclusions as it would obviously affect the readership. Similarly a well-worn out topic which has been thoroughly thrashed out by numerous writers, may have been exhausted and already provided all the essential information. In other words, your work may not outshine. Thus if fresh knowledge is not added, the whole effort may be wasted away.

The most important element in choosing a topic is the factor of its *brevity* and *content*. If the subject becomes too exhaustive and you fail to draw a conclusion, then it may not justify to be labelled as a monograph. An ideal monograph must not become too diluted or exhaustive. The whole concept of a monograph is to finish off the subject of research in a given time and space.

An established practice to choose a topic is to look at several subjects which interest you and may interest your readers. Then do a critical review of the merits and demerits of each subject. One by one you can eliminate those which are much too broad and may deprive you of focusing on a specific point. Eventually you would arrive at a topic which would encompass your concepts, aims and objectives of the research and simply fit like the last piece in a jigsaw puzzle.

It is advisable to research other subjects and topics matching yours, written by other writers. It would not only give you a fair idea of the choice of the topic you may have identified but also guide you in the matter of final selection. One must remain humble and down to earth, as when you may think that you may have invented the wheel, you may be surprised to discover,

even get a rude shock, to learn that not one but many people may have already covered many miles leaving you only a trail (*ghubar e rah*) to chase!

It is best to discuss the subject with a senior faculty with interest and experience in field of your interest. You must however, seek advice only from a faculty with a trek record of research and documentation. Not every clinician may be a good researcher or writer. It is a lamentable observation that many a top clinician hardly ever indulge in research and writing. It reminds me of a senior surgeon in a teaching hospital in England calling himself 'only a cutter' with no interest in reading or writing!

Seeking permission to publish a monograph is another step. If you are an established academician with a trek record of research and publications, then the step of obtaining permission from the competent authority to write a monograph will not apply to you. If you are a young writer, you should seek permission from the competent authority.

As a matter of fact the finest monograph is written by a person of strong academic standing wishing to share the experience with peers and the students for their guidance. If you are a seasoned writer, with some books already published, then you may have no difficulty in either asking the same publisher or someone else to publish your work. But that does not debar others from writing one. Just like in other facets of medical writing, there are many fake publishers who would gladly offer you their so called 'Professional' services. Beware of pitfalls. Not every grass that looks green is natural, it may well be an artificial turf!

RESEARCH

The fundamental brick of any monograph is a thorough research on your chosen subject. Any academic student knows well enough that research involves many elements, particularly literature search. It is wisely said that when you believe you might have discovered a black hole in the galaxy; in your Eureka

moment, think again. Someone may have already done more work than you envisage. So conduct a thorough literature search. However, you may be amazed to learn that despite the earlier works, how many avenues remain unexplored. In fact a good writer would do a critique, identifying those elements or lacunae which remain to be investigated.

LITERATURE REVIEW

When the powerhouse of information was handed over, to humanity in 1990, by Tim Berners- Lee; the inventor of the World Wide Web, the whole world changed. It made life easy for a researcher, as the ocean of information lay open to be explored, literally at the click of a button.

What is important though, is that you must pick up only the literature relevant to your topic. The objective of literature search is to provide a natural and logical flow from the past to the present. In other words, laying a foundation for your research on the basis of what is available, and then imperceptibly developing a cascade of events, to culminate at a focal point of your study. The quality of your literature search would be judged by the reader, noting that indeed there was a vacuum in the research now duly filled by your work. In other words your work has contributed in many ways.

A chapter is dedicated to literature search in this book. The reader may refer to it. Currently however, the following sources are in much vogue these days.

- * World Wide Web;
- * Other Internet resources;
- * Library catalogs; and
- * Databases and electronic indexes.

Description of your Thesis, statement of the problem

It basically means that you should define, describe, and elaborate the problem you have chosen to be the focus of your study. Thesis is primarily a process of proving your hypothesis. Sometime disproving a hypothesis may be equally important or

have even more far reaching consequences. An antithesis may in fact carry far more weight than a thesis! Great events in human history have begun with negation of existing norms. Proper statement of the problem is an essential component of a monograph. It is like introducing the subject to the reader duly emphasizing on the focal point of your research.

Following are the focal points of a research based monograph.⁴

- * Facts - Pieces of information that can be objectively observed and measured.
- * Inferences - Statements about the unknown made on the basis of what is known.

Jugements - Expressions of someone's approval or disapproval of something being described, generally (hopefully!) based on some evidence.

Facts are the most relevant factors in a scientific research. The process of collection of facts, sifting through the data and isolating facts from fiction must be meticulous and flawless. Much literature is now available on the ethical principles of medical documentation. Facts must remain facts, and must not be tainted with personal bias, likes or dislikes. Distorting facts to maneuver in such a way as to help reach a predetermined conclusion is a highly unethical practice. One sees it at times, particularly if financial gains are involved such as in the clinical trials and so forth.

An important step towards collection of facts is to maintain a diary of events as they unfold. Once written down, they must not be deleted or tampered with. Sometimes unexpected data, observations or facts may turn out to be a blessing. Do not ignore even the minutest observation. Remember the discovery of Penicillin! It is advisable to categorize each fact and record on a fact sheet. The final output may then be summed up while carrying out a statistical analysis, before writing.

And that brings me to the second point namely inference. It is not a rocket science to infer from your fact sheet, albeit the task can be challenging. Normally, it is a matter of studying

the data i.e. the facts gathered during the study and drawing genuine and un-polluted conclusions. Many unethical practices in medical writing with cooked up data and desirable inferences are not uncommon. It is worse in the developing countries, but is quite common in the advance nations too. China, unfortunately is going through that process at present.

Paid scientists and ghost writers are hired by the middle man, usually business people, to publish in international journals. I have been approached on one occasion to assist in publishing their articles in one of the journal where I am associated. It is advisable to avoid such invitations. Some may be genuine, but who knows?

The third element called Judgment is actually the matter of great importance as your judgment may guide or misguide a future researcher. So, before arriving at a judgment on the issues you have investigated, it may be worthwhile to consult with your supervisor, or a peer. As a human being, sometimes, we tend to give a biased judgment, which may appeal to us may not be a fair one. All the effort done in gathering data, conducting research, doing literature search, etc. may be jeopardized if the judgment is incorrect. One must look at all the aspects, good or bad- before arriving at a decision. Your decision may have a far reaching impact.

We have all encountered dogmatic, opinionated, fixated and rigid seniors; with ideas based obviously upon long term experience. They may not budge even a whisker in their opinions. So if such a person happens to be your supervisor you may struggle to convince him if your judgment does not meet his or hers. Like the saying goes' old habits die hard'! In any event truth must prevail.

Ethical research, as pundits will inform you, involves judging for yourself what the honest outcome of your research is. Influences by seniors should be duly respected but a seasoned supervisor will listen to your argument if it is convincing. It is rightly said that wise men hardly ever agree, fools seldom disagree. So after due discussion with your supervisor or your

seniors or capable peers you may reach a certain judgment which should be noted down as it will be the crux of the whole matter.

Selection of cohorts for your interview in a survey is an essential component of research. Research for a monograph may require a very comprehensive list of potential sources. A record of personal details of each person must be kept. One must however, be extremely careful in saving the personalized data of individuals. The Cyber-attack in the spring of 2017, instantly paralyzed the NHS. We were instructed to stop uploading data as soon as the attack was noticed. Data can be hacked by a nerd sitting in a remote corner of the world, and demand a ransom for releasing the information.

A few years ago, an NHS official left his computer bag in a taxi which had loads of sensitive data. Such stories teach us a lesson that the modern gadgets are inevitable but are also prone to theft of data and loss of personal identity. A hard copy of the individual data must be kept in a safe place to save yourself from a disaster, such as loss of your data.

Difference between a Monograph and an Original Article

A monograph is somewhat different from an original paper; however, in both one has to design, develop and implement a research strategy for a work which one hopes will guide others in the field. So apart from identifying your potential interviewees, and method of collection of data, you should develop and document your thoughts in advance as to how do you plan to proceed in your research. Obviously it is not a divine document, so you may need to develop, cultivate even modify your strategy as you proceed. A monograph is very flexible in many ways such as the flow of your thoughts. So if your research guides you to a pathway that you had not planned previously, you may incorporate it and explain the reasons for doing so. As long as your desired objectives are met, such a change of strategy is acceptable. In any case a planned strategy is always more productive in giving due outcomes.

It is said that you have to read a hundred pages to write a single page ; So before writing down your monograph you should identify the sources of your reading and the reading material that will supplement your topic and your monograph. Such a knowledge could be primary in nature such as written monographs or papers. It can also be in the form a secondary information which may be more general than specific in nature. It could also be derived from other published material relevant to the subject.

So, after the introduction of the topic and the relevant explanation, the next important subject in a medical write up, is the description of methods and materials. It ought to be submerged imperceptibly in the write up, akin to a review paper. One must be clear, that patients are subjects and not material. So be warned that terminology is important. The next step is to define your strategy, and tools of research. It goes without saying that the material used in your research, the experiments, as well as the tools employed need to be clearly identified.

For instance in my monograph on Laryngeal cancer, I was conducting a research on a highly innovative method of retrieving voice after total laryngectomy. I had learned the technique at a conference in Bristol and wanted to see if it could be applied successfully to our patients. It was called the formation of neoglottis. Long before the voice buttons etc., when only an electronic gadget called laryngeal vibrator was available to the post laryngectomy patients to communicate, the neoglottis was a ground breaking surgical technique. I designed a study, and compiled a data after a certain number of procedures, publishing initially as papers then as a monograph. Its failures were more than its success, and I identified the drawbacks, in my monograph. Thank goodness soon after Panje came up with a button and save many a complications of the Steafiri neoglottis. So in my monograph, I identified the subjects, the tools of gathering data, the surgical procedures, the results and discussion. I also did a historical survey of Laryngeal surgery, right from total laryngectomy through conservation surgery

culminating in my personal attempts at voice restorative procedures, duly identifying the need for development of a technique to overcome the side effects such as spillover of saliva , bouts of cough, poor phonation etc.

The importance of describing the results of your research properly cannot be over emphasized. Statistician must be consulted from the outset as the Statistical analysis is the very spine of research. So once the results have been gathered it should be analyzed statistically, and documented in a proper form, a tables, charts, graphs, figures or images, just like any other scientific document.

DISCUSSION

It is the component of a monograph which takes some effort in writing. It must be focused upon your personal work, duly supplemented or critiqued with local, regional, national or international works. What is important is that discussion must not be irrelevant, superfluous or incoherent. This is the commonest fault in many a dissertations and papers. The authors get carried away, and fill up volumes of pages, without concentrating on the matter of research. Such an exercise makes the task totally fruitless, burdensome to the reader, and a waste of time and effort.

It is best to use short sentences. Simple language carries more meaning and bears more fruits than complex semantics. Clear heads bring out precise phrases and vice versa. The hypothesis may be discussed at the beginning duly supported by the reference to any previous work. You should also elaborate as to how your work influences the outcome as well as the long term impact in the field.

Obviously you should discuss the results of your research at length, duly supplemented by relevant references. The focal point of your discussion should be the distinct reason why actually you wrote the monograph. The honest intention, of course, one presumes was, to share your experience with others.

A monograph written for personal glory is a wasted endeavour. A connoisseur can easily discern the reason and discover many faults in it. Writing a monograph is a serious business, and discussion would reflect your depth of knowledge and grip on the subject. Each writer has his own style. Good editors and experts can easily identify if it was indeed the person who claims the authorship, or a ghost writer!

A monograph just like any other medical write up, should culminate with the conclusion you have drawn from your study. It should be brief and to the point. Some of the best writings conclude the matter in a single page. Clarity of mind and the whole process of conducting research, leading to a simple, clear and precise conclusion may have huge impact on the reader. In a monograph, the natural flow on the thought process should culminate the work almost imperceptibly into the conclusions you have drawn and expect others to learn from.

ACKNOWLEDGMENT

No research in medicine is possible without the support of a multitude of persons. Each one should be duly acknowledged for the contribution made. It should neither be unduly generous; unless you really feel deeply obliged and genuinely grateful, nor should it be miserly. Ghost acknowledgment is bad. So to acknowledge someone who has not contributed, even if it may be the boss, is a reflection of sycophancy.

REFERENCES

A comprehensive list of relevant references and bibliography are obviously an inevitable part of any form of medical writing. Same goes for the monograph. Antiquated references and self-indulgence are both discouraged. The bibliographies style should follow the advice given by your supervisor and in line with the university policy, or your publishers. Renowned publishing houses like Springer will give you an exact format to follow.

Executive Summary: Just like a review article, a monograph is preceded by an Executive summary. This is akin to a window into your dwellings. The beauty of writing a summary is in using small meaningful sentences. Confused minds produce long and intricate sentences. In medical writing brevity is beauty. A simple sentence can have far reaching impact than a convoluted one. If you have clarity of mind you will produce brief sentences. The summary is like a precise in an essay. It should introduce the topic, methodology, major aspects of your research, tools of research and statistics protocol, target population, and a reference to literature search, results and a touch of discussion. The final point should be the conclusion you have arrived at and guidance for future researchers. The executive summary may not exceed an A4 page.

Professor Catherine Lavender⁵ has added a new dimension to writing a monograph. It is called Historiography, which indicates the flow of thought linking up the past with the present situation, including the concepts, assumptions, norms, and analytical framework used in the process of past and present research on the subject of monograph. She also highlights that the writer should make it apparent to the reader the major differences between his monograph and those written previously. Drawing upon the deviation from the previous literature, the monograph writer may provide an overview of the ways it deviates, in footnotes or indeed in the introductory chapters. This practice is vital to highlight your work with the previous literature serving as a backdrop.

In addition to these considerations, it is also useful to address critical differences between what could be termed “research issues” on the one hand, and “storytelling issues” on the other. Research issues have to do with the conceptualization of the study, the research and thinking that went into it, and the success of the author’s research questions and answers. Storytelling issues have to do with the author’s success in putting across the thesis and the argument, and can include questions of style and readability. Many monographs which are excellent

examples of research are much less successful examples of storytelling; the opposite is also often true. If people tell you that your monograph “reads better in French,” this might be a gentle hint that you have created a great work of research and a lesser work of storytelling. On the other hand, many wonderful stories teeter on shaky foundation.⁵

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