Medicine has evolved based on sustained scientific research. Medicine is a biological science and biology is never stationary. The biology evolve with time, hence medicine has to evolve by research [1]. India is a second most populous country in the world and about 30% population of India is below the poverty line. India is a land of contrasts inhabiting most affluent to the poorest of the poor [2]. On one hand we have best of the treatment facilities available while on other hand a basic treatment is not available to the masses. The orthopaedic surgeons in India come across large number of low and high velocity trauma, neglected trauma, poor man’s disease such as tuberculosis and other infections, nutritional deficiency diseases. We have vast number of clinical cases in various stages of natural history of disease. Most of the treatment facilities have limited health care budget [2]. The orthopaedic surgeons in our country keep on treating such cases at various stages of natural history, by small modifications/innovations. If any innovation, small or big is evaluated scientifically, this becomes a credible research [3]. The research is nothing but summation of small solutions/innovations evaluated scientifically to make the outcome predictable [3].

The research includes a clinical research and basic science research. Basic research gives us a new and deeper understanding of health, disease and healing whereas clinical research guides us to improve diagnosis and treatment. The basic and clinical researches are two sides of one coin both inseparable [4].

In spite of huge clinical material in India, the articles published by Indian orthopaedic surgeons are very scarce. This is because they are burdened with large number of patients, poor infrastructure to conduct research, less incentives for research and lack of enthusiasm to publish. Further most of the indexed journals are published from developed countries and are less inclined to accept articles on problems of developing countries [5]. We have to provide scientific evidence for treatment to the clinical problems unique to our land. Scientific communications (presentations and publications) are needed for growth of science and to improve the quality of clinical practice.

Any clinician sitting in his hospital/clinic should document all consecutive cases on a computer excel sheet. The identical cases treated in an identical manner over a length of time and evaluated by the same evaluation method every time becomes a credible data. The statistically significant difference in the outcome becomes a conclusion to a research question “whether the reported method has solved the clinical problem or not.

While performing a study the following issues are to be kept in mind. The study should have a clear research question, what is evaluated, how it is evaluated, what is observed, whether observation differences are statistically significant to provide a valid conclusion, which should be the answer to the research question [6]. Any study if published in a journal is available to others practicing far away and beyond human life and a basis for future research.

Before writing, the author should thoroughly go through the instructions to author of that particular journal. Author should follow the style of journal. Introduction should be 25% of manuscript. It should cover current state of knowledge on the subject and lacunae in current knowledge. The introduction should end with the statement as to what is the study with its methodology (research hypothesis).

Materials and Methods section should be very clearly written. It should be written in such a manner that anybody after reading the article can perform study. If one is doing a clinical study, he must include period of study, place of study, design of study, number of patients chosen, inclusion and exclusion criteria, consent of patients, approval from Institutional review board and statistical analysis of data. It should be explicitly clear about the variables chosen, evaluation method adopted and how
the data was recorded. If the study is experimental, appropriate consent from animal welfare committee is to be taken as per Helsinki declaration. The details about animal selection, number of animals, selection of variables, tests conducted, observations made must be given.

The results should be analysed after appropriate follow-up. These should be assessed by established criteria. The results should be clear and concise, explained by tables and figures. The patients who have been lost to follow-up and died, should be identified and excluded from overall results.

The discussion should discuss the variation in your study, method of study. The outcome of the study should be discussed in light of articles published in the literature. The limitations of the study are discussed. Lastly conclusion statement should contain answer to the research question.

The abstract should be written at the end. It is most commonly read part of the manuscript [6]. It should stimulate readers to read full paper. The structured abstract, has four parts – Background about study, its aim and research question. Then materials and methods should explain what was done. Results – What was observed or what was found and finally in conclusion what was concluded.

The title should be crisp and informative. The references should be in Vancouver style as per journal’s requirement. In Vancouver style references are cited consecutively in text as they come. The tables should be numbered and quoted in text at appropriate place. There should not be mismatch of data in text and table. The graphs, bar diagrams, histograms are required to highlight some observations which are difficult to understand.

The photographs selected should highlight specific findings. There should be proper legend to each photograph. Only selected photographs should be given, journals are not photo album [6]. At the end of abstract 3-8 key words should be given.

The article then should be read carefully for grammatical correction. Any study, if methodically conducted with clear concise writing will find a place in literature. We conduct almost 1500 thesis/dissertation in India by MS/DNB students. These thesis/dissertations if methodically conducted could contribute significantly to Indian literature and help in improving patient care.

The research is nothing but summations of critically well thought of conclusions about the outcome of treatment we offer to the patients every day and well thought innovations we undertake [6].

References


Conflict of Interest: NIL
Source of Support: NIL