Several medical journals in developing countries are found to have methodological rigor when compared to those from developed European countries, which may contribute to the reasoning that research from Asian region is ‘fraudulent research’. A former editor of the British Medical Journal (BMJ) reported in 2006 that fraudulent research regularly appears in more than 30,000 scientific journals published worldwide. It is very easy to find out whether the research is fraudulent or not by the critical review of the research article by the expert editors. Statistical values reported will show errors. One simple example is the mean of the particular variable in the study should be equivalent to the average of all subgroups means (Sampling Distribution). So, it would be wiser not to continue the research than generating data digitally with imaginary patients, reproducing the few data collected several times and making a big sample size, conducting a badly designed methodological rigor and unscientific research, eventually becoming black listed by reputed Medical Journals.

Any institution can improve medical research by constructing a well designed research division with experts. It is institutions responsibility to assure the quality of data reported in the manuscript. Medical research should not be aimed solely at the self advancement of the researchers. It should be for the pure improvement of the medical science.

The main theory of statistics lies in the term variability. All individuals are different. Characteristics which vary according to person, place and time are known as variables. For example, lipid profile levels of the patient with myocardial infarction visiting Medicine OPD. Several factors such as Gender, Age, BMI, Smoking, Alcoholism, Diabetes, etc will affect the lipid profile levels of different individuals. Most of the time, the sample infers about a big population (Sampling Error). Variability is instrumental and observer difference (Non Sampling Error).

Statistical methods try to quantify the uncertainties present in the medical research. Probability is the measure of uncertainty. From the very beginning of a study, the researcher should try to reduce this error using proper scientific methods. Several statistical techniques are available for analysing different types of medical data. Before starting the study, researcher should do an extensive review of good scientific literatures from the reputed medical journals and end up with a proper research hypothesis and prepare a research proposal with study design, sample size and statistical methods rather than after conducting the study and going to the statistician and conjuring up a result and according to that fixing a objective and writing a introduction and discussion. These types of researches will end up with serious errors.

There are several good research studies reported in medical journals from developing countries without utilizing the full findings of the study. The result section is usually not up to par because of the lack of knowledge in appropriate test for the analysis of data and the coding of data. If the researcher is not aware about the proper research design
in descriptive studies, case control studies, cohort studies and clinical trials, it would be better to discard the study rather than reporting clinical trials in the methodology part and making it a hospital based observational study.

Medical Statistics helps the researcher to arrive at a scientific judgement about a hypothesis. It has been argued that decision making is an integral part of a physician’s work. Frequently, decision making is probability based. As medicine becomes increasingly reliant on statistics, no clinician can afford to leave the statistical aspects of a medical research and scientific paper to the “experts”.

Suggestions to improve the quality of Medical Research Articles in Developing countries

1. The researcher should plan the study and write a proper research proposal before conducting the study by an extensive review and literature and the guidance of subject experts, senior author (Guide) and Statistician.

2. Always attempt to conduct research in new and relevant topics which is of high practical value and scope rather than selecting a widely known fact and unnecessarily burdening editors, reviewers, and readers, and finally the author.

3. It must also be familiar topic for the researcher as it is difficult to prepare an impressive paper on an unfamiliar topic.

4. When researchers do not know the methodology properly in advance, the study becomes a futile time sink and may become invalidated because of low sample size and lack of availability of materials. This is too frequent an occurrence to dismiss.

5. According to dependent and independent variables, the researcher should select the appropriate statistical tests (Table 1). If the data follows normal distribution then select parametric tests. Whenever data is not following normal distribution should use non parametric tests. For example: In a drug utilization study of antidepressants with independent variables of age, gender, monthly income, employment of the patient and dependent variable Essential drug list of Nepal, generic and trade, logistic regression is the appropriate statistical test. In the paper regarding significance of hepatobilary enzymes for differentiating liver and bone diseases, the independent variable were taken as age, gender and dependent variable were the levels of AST, ALT, ALP, γ-gt were assessed in cases of viral hepatitis, extra hepatic cholestasis, Paget’s disease, osteomalacia and the controls. In the latter study, ANOVA is the appropriate test2-17.

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6. Presenting the preliminary report of the study in reputed conferences will allow the researchers to improve the quality by the comments from the experts and seniors.

Recommended guidelines for submission to NJE

Before submitting the article to Nepal Journal of Epidemiology, make sure your article has the quality of the article published in the latest issue of NJE and it is in the journal format.

We have recently introduced the sub-headers under material and methods section, and in the Discussion section with distinguishable formatting for the new researchers and authors to understand easily and construct the same type of study in their setups. By this, the author will get more visibility and citations to his article. The author should not copy and paste tables directly from SPSS or any other statistical software. Construct simple MS word tables or make it in MS Excel.

In our journal, nearly ten well experienced editors will be working along with two chief editors, the Managing editor, Associate Managing Editors for each article, except the formatting editor, reference editor and reviewers. Plagiarism will be checked by the plagiarism committee from Gulf Medical University, Ajman, UAE, and any plagiarism detected will result in the rejection of the article. Before publication of any article in our journal, five of the editors do the critical review of the final version of the article and give the decision whether the article is publishable. We are holding the flag for quality of articles, not quantity of articles in each issue that is why we have less than 10% acceptance rate and more than 10 international indexations with plenty of citations to the articles and an average of 10,000 readers per article. We give more importance to a properly designed genuine study.
It is sincerely recommended and encouraged by the Managing editor and Author that the contributing researchers follow a diligent and systematic pattern in conducting and presenting their studies. This will not only lead to improved quality of research but will also enhance and augment the quality of Asian journals and thus, contribute meaningfully to the progress of research and improvement of medical care in developing countries.

Conflict of Interests
The author has no conflict of interest arising from the study.

References

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