EDITORIAL

Ethical issues in research: study design and publication-worthiness as a case in point

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Several issues of this Journal have, in the recent past, carried editorials related to scientific and ethical aspects of psychiatric research and publishing in India and elsewhere.[1-4] One of the reasons why this subject has been accorded prominence is that the Medical Council of India and many universities now require evidence of research publications as part of the eligibility criteria for the selection and promotion of medical teaching faculty,[2] heralding the dawn of a "publish or perish" era in the country. Perhaps, as a result, there are now a large number of national, zonal, state, and even private journals in existence, and quite possibly some of the relatively unknown journals among these accommodate research that is of dubious quality.

Do we have evidence for such a serious charge? Bluntly put, the answer is yes. We describe, by way of example, some manuscripts that we have reviewed in our editorial capacities. These have been suitably anonymized to respect professional proprieties.

THREE MANUSCRIPTS

1. Manuscript 1 is a randomized controlled trial (RCT) that compares two long-established antipsychotic drugs for a well-accepted indication on the grounds that there are no published Indian data on these drugs. The manuscript does not state a hypothesis nor a primary outcome measure. The sample size is too small for a superiority trial given that both drugs are active and hence between-groups differences will be small; and it is far too small for an equivalence or noninferiority design, which is probably what the authors had in mind. The diagnoses in the RCT were based on clinical assessment and not on standardized interviews. Patients were recruited in all phases of illness, and not acute illness, alone. Neither patients nor raters were blind to treatment allocation.
2. Manuscript 2 is an RCT that compares two long-established antidepressant drugs for a well-accepted indication. It has all the limitations of RCT and Manuscript 1 with the addition that one drug, which the authors appear to support, is adequately dosed while the other drug, no doubt the comparator, is strikingly underdosed.
3. Manuscript 3 describes a cross-sectional study that compares routine hematological and biochemical test results between manic inpatients and healthy controls drawn from the hospital staff. The aim of the study was to identify biomarkers of bipolar illness.

COMMENTS ON THE MANUSCRIPTS

Patients who consent for research are inconvenienced, or put at risk, in many different ways. For example, they may receive a potentially ineffective drug and thereby suffer illness and its attendant risks for a longer period; they will need to spend more time in the hospital because of the study procedures related to diagnosis and assessment; they will need to undergo more discomfort because of blood tests and other assessments that are mandated by the study protocol; they will need to attend follow-up more often, as required by the study protocol; and so on. Patients consent for research with the expectation that the sacrifice that they make will benefit the cause of medical science in general, and future patients in particular.[5]

Furthermore, when studies are conducted, review and ethics committees spend time and energy in overseeing the research. A funding organization pays for the study expenses, which can often be quite considerable. Hence, all

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in all, it is wrong for very many reasons to conduct research that does not answer a meaningful question or advance the cause of science in any way.

Let us return to the three manuscripts that we have described. RCT 1 appeared to be purely exploratory and was probably unnecessary, given that both drugs were well-established for the indication for which they were being studied, and given the absence of a specific hypothesis that the authors intended to prove or disprove. More to the point, even if the authors were right in believing that the availability of published Indian data would be useful, their study had so many fatal flaws in its research design that no clinically or scientifically useful evidence was likely to emerge from it.

The RCT on which Manuscript 2 was based failed in an additional way: It was quite obvious that the authors intended to promote one drug over the other because the latter drug was underdosed. No explanation had been provided for the choice of dose. No conflict of interest was described in the manuscript, even though the choice of drug and dosing pattern suggested that a conflict existed. Thus, this study was even less likely to educate medical science and benefit future patients than the first study.

Manuscript 3 was astonishing in a different way; it described a study that, possibly, would not have been considered as serious research even half a century ago, before the dawn of the era of biological psychiatry.

As already pointed out, both of studies 1 and 2 were riddled with several glaring flaws. At present, the bar for good scientific research has been raised so high that, often, a single serious flaw is sufficient for a manuscript to be rejected by a journal of good standing. Researchers are then content to submit their manuscripts to lesser known journals, which in turn are willing to publish studies that are lower in quality. The researchers are now content because they have publications that expand their curriculum vitae (CV), and the journal editors are content because they have material to fill their pages. About Study 3, it would be surprising if it were to be published anywhere.

TWO QUESTIONS

We raise two questions. First, why are researchers willing to compromise their ethical and scientific integrity in the conduct and publication of research that does not meet contemporary standards? Next, when such research is conducted, who is culpable for what is clearly a breach of ethical and scientific standards?

RESEARCH SKILLS

With regard to the first question, we would like to believe that researchers do not deliberately make compromises merely to improve their CVs. An alternate explanation is that all researchers do not have the necessary skills to design and conduct meritorious studies; this is a credible possibility because India is woefully low in psychiatric manpower, and because there are therefore few academic psychiatric centers in this country. Many centers are making efforts to develop excellence in psychiatric research through workshops on statistics and research methodology. However, a 1-day workshop or even a 1-week workshop, will simply not suffice to create excellence.

So what is the solution? We believe that the answer lies in increased knowledge of the field, in sustained exposure to good quality research, and in the development of an ability to critically evaluate a study and its place in the field. How can these objectives be achieved? Chiefly through the regular reading of the full text of high-quality journal articles. In this context, we are aware that many readers go through journals by scanning through titles and abstracts; those who read the full text commonly read only the introduction and discussion sections to discover why the study was done and what the authors made of the results. Such a reading strategy is insufficient to develop excellence. The most important parts of a research article are the methods and results sections. The introduction to a paper merely provides information which a knowledgeable reader should already possess The discussion merely presents the authors' interpretation of the findings; if a knowledgeable reader has himself read through the results, he can interpret the findings on his own, without requiring help from the authors.

Unfortunately, it is not an easy matter to acquire the knowledge and skills necessary to understand and critically evaluate the methods and results sections of a research paper because this requires the reader to be an expert in many fields: Statistics, research methods, and the specific subject of that paper. So, what should researchers do?

One answer is for researchers to, read, read, and read; in the course of time, the expertise will develop. The other answer is to utilize resources that are already available. One resource, the Synergy Times, has been offered to postgraduate students, academicians, and clinicians in India since 2001. This is an e-newsletter that was begun and is maintained as a free service by one of the authors of this editorial (CA) with a view to helping the reader update his theoretical and practical knowledge in the fields of psychiatry and the allied psychological, neurological, and medical sciences. More than merely providing information, as many online services do, the Synergy Times provides a critical appraisal which can help the reader put the information into context. Across 14 years of uninterrupted production, nearly 2,200 articles have been sent out to those on the mailing list. It is a matter of regret that, although the newsletter was introduced as

a service to postgraduate students and clinicians in India, its services are being insufficiently utilized by the target audience; a substantial proportion of the membership lives overseas. Readers are reassured that, although the Synergy Times is supported, the support is entirely directed toward registered, charitable organizations, and the contents of the Synergy Times are entirely independent and free from industry bias.

Another initiative is in the pipeline. This is to develop an e-platform for a mental health and allied neuroscience journal club that links postgraduate and academic psychiatry departments across the country. Once a month, or perhaps more frequently, one journal article will be posted to the membership of the e-group and one department, by rotation, will be provided with the opportunity to discuss the article in a written presentation that is both educative and critical. Members from other departments will post their questions and comments, and the host department will respond. All posts will be moderated by a senior expert in the field, who will also respond to queries that the host department is unable to answer, and who will post his final evaluation at the end of the exercise. This initiative will either be developed as an individual effort or as a team effort through the Indian Psychiatric Society.

CULPABILITY

We now come to the second question: Who should be held responsible if the research that has been conducted is unpublishable, thereby failing ethical and scientific standards? The researchers, of course, because the buck stops with them. However, what about the scientific and ethics committees that should have exercised due diligence in ensuring that the research proposal had scientific merit? If systems exist to report and discipline investigators for research misconduct, should not systems exist to report and discipline committees that approve studies that should never have been approved, in the first place?

This, unhappily, is a subject that has never been considered. We would like to make a positive suggestion here as we did in the previous section. The scientific merits of a research proposal should be evaluated by one or more independent experts before the proposal is evaluated for ethical soundness. No ethics committee should clear a proposal that has not been approved for scientific content. This precaution should be observed for all proposals, whether funded or unfunded.

RESPONSIBILITY OF THE JOURNAL EDITOR

Finally, how should the editors of a journal react to a submitted manuscript that does not meet criteria for responsible research? More importantly, in a country that is struggling to develop research standards and where individual investigators may be forgiven because they have not received the necessary training to design publication-worthy studies, and where they do not have access to the materials that will help them develop the skills, some responsibility should be laid at the doors of the research review committees and ethics committees that approve the study protocols. However, no channels presently exist to provide editorial feedback to individual institutions and review or ethics committees; this is a delicate situation, because it is bound to sour the relationship between author and journal were a submitted study to be reported for ethical and scientific deficiencies.

CONCLUDING NOTES

Journal editors and reviewers probably see only the tip of the iceberg. There are a large number of studies that are conducted by postgraduate students that do not see the light of day either because they are unpublishable (which means that they should never have been conducted, in the first place) or because their publication has been delayed or neglected (which is a betrayal of the patients who consented to participate in the studies). Exactly the same concerns apply to papers that are presented at conferences but are thereafter not submitted for publication.

We leave the reader with questions related to common situations. Are replicatory studies justified on an issue which appears to be reasonably well resolved? Can “never been studied before in India” be a justification for replicatory research? We believe that the answer to both questions is an affirmative, but only if the study is sufficiently large and well designed to provide an authoritative answer to whatever research question has been a *priori* set. The subject of challenges in the design, execution, and regulation of clinical trials in India has been discussed in greater detail elsewhere.[5]

REFERENCES

1. Rao TS, Andrade C. The MMR vaccine and autism: Sensation, refutation, retraction, and fraud. Indian J Psychiatry 2011;53:95-6.
2. Rao TS, Andrade C. Ethical issues in psychiatry research: Special concerns for India. Indian J Psychiatry 2013;55:1-2.
3. Sathyanarayana Rao TS, Andrade C. Policy of the Indian Journal of Psychiatry on the problem of plagiarism. Indian J Psychiatry 2014;56:211-2.
4. Rao S, Andrade C. Indian Journal of Psychiatry: Changes in instructions to contributors. Indian J Psychiatry 2014;56:319-20.
5. Andrade C, Appaiah T. Clinical trials in developing countries: Challenges in design, execution, and regulation. In: Tohen M, editor. Clinical Trial Design Challenges in Mood Disorders. Amsterdam: Elsevier; 2015.