

been avoided. This observation supports the inference drawn by Rennie who stated that there is a need for guidance in reporting observational studies.^[7,8]

In this study, out of 220 dissertations analyzed only 20.0% (44/220) specified the eligibility criteria, sources and methods of case ascertainment and control selection and 80% (176/220) did not. Tooth *et al.* stated, in a survey of longitudinal studies in stroke research, 35% articles (17/49) did not specify the eligibility criteria.^[9]

A study on reporting of epidemiologic studies found that the participant selection process – for example, information

Table 4: Characteristics of dissertations analyzed as per STROBE

Criteria as per STROBE (n=220)	Frequency	Percentage
Title and abstract as per STROBE		
Yes	164	74.5
No	56	25.5
Specific objectives of dissertations mentioned as per STROBE		
Yes	211	95.90
No	9	4.1
Mentioned key elements as per STROBE		
Yes	39	17.7
No	181	82.27
Mentioned setting, locations as per STROBE		
Yes	56	25.5
No	164	74.54
Mentioned eligibility criteria as per STROBE		
Yes	44	20
No	176	80
Mentioned variables, exposures as per STROBE		
Yes	18	8.2
No	202	91.8
Mentioned sources of bias as per STROBE		
Yes	11	5.0
No	209	95.0
Mentioned statistical methods as per STROBE		
Yes	79	35.9
No	141	64.1
Mentioned participants, descriptive data, outcome data as per STROBE		
Yes	18	8.2
No	202	91.8
Mentioned key results as per STROBE		
Yes	27	12.3
No	193	87.7

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on exclusions and refusals – often lacked details. He also found that the selection of controls and adjustment for potential confounders needs greater clarity, consistency and explanation.^[10] We also observed these insufficiencies in the majority of dissertations.

Only 5.0% (11/220) dissertations described any efforts to address potential sources of bias and only 1.4% (3/120) explained how missing data were addressed.

World-wide, there is a need of reporting medical research from India and other developing countries. Indian doctors lag behind in publishing their research work. To boost publications, the Medical Council of India has stipulated minimum number of publications by faculty and postgraduate students. Eventually, there is a growing concern of scientific publications in India and majority of PGs may consider publishing their research work for dissertation in future. Adaptation of standard guidelines like STROBE will improve the quality of publication besides increasing the quantity.

According to Chaudhuri^[11] and Nayak,^[12] national journals should be encouraged and supported for publishing the work of Indian authors. Publications in high impact factor journals are necessary for the advancement of Indian medical and scientific profession. Publications in high impact factor journals truly represent the best international content. Their editors actively seek the best articles after evaluation. Publications resulting from international collaborations increased from 3% in 2001-8% in 2006 in India.

Study by Kumaragurupari examined scientific publications generated by ophthalmologists, optometrists and researchers working in vision science in India through a systematic search of Medline using the PubMed interface. A total of 2163 related articles were published from 2001 to 2006. During the 6-year period studied, the annual output of research articles has nearly doubled, from 284 in 2001-460 in 2006. Two-thirds of these were published in international journals; nearly 41% in vision-related journals with high impact factors and 3% in impact factor journals, which were not vision-related. Around 50% of the publications came from nine major eye hospitals. Clinical science articles were most frequently published whereas basic science the least.^[1] Hence, PGs specially from clinical specialties should follow some standard international guidelines to report and publish their research.

PGs should also have access to international journals to get the content of international publications. Concerned institutions should subscribe them regularly. According to a survey by Murthy *et al.*,^[13] subscriptions to international journals were inadequate in most of the institutions in India, their research in 2002-03 showed that only 53 of 128 surveyed institutions in India subscribed to more than two journals.

International collaborative research supports many scientists and clinicians from India and has a growing record of

biomedical accomplishment.^[14] According to Kupfer *et al.* (1995)^[15] many Indian researchers now have experience in collaborating with researchers in the US and other western countries. They bring their own expertise, for instance, many have extensive experience in rural outreach, an important asset considering the need for comprehensive epidemiologic data and populations with both common and rare genotypes. Western scientists stand to gain enormously from access to patients and expertise of their Indian collaborators.

This analysis will be helpful to find out the obstacles of research productivity, which would help to develop research quality and capacity. The shortfalls of observational epidemiology in terms of the generation of contradictory and spurious findings have been highlighted by many commentators. A general practitioner, James Le Fanu, stated that “the simple expedient of closing down most University departments of Epidemiology could both extinguish this endlessly fertile source of anxiety-mongering while simultaneously releasing funds for serious research” The abandonment of observational epidemiology might be premature without first trying some remedial steps. One important step would be to improve the reporting of observational epidemiological studies.^[16]

In the present study, we could not get a representative sample of dissertations from all medical colleges in Pune. Results may be applicable to the medical college from which dissertations are analyzed. However, it suggests that there is a need of adoption of some research tool by PGs, ultimately it will help to improve medical literature. Other limitation of the study is that it assessed dissertations reporting only observational studies. Dissertations reporting experimental studies needs separate tools like CONSORT.

We would like to recommend that PGs should be more vigilant in reporting of their research, there should be more transparency in the dissertations. All projects should state generalizability of their study and its findings. PGs should study how assessment of dissertations will be made after completion of dissertations so that they will not miss any important point to report. They should be made aware of assessment tools such as STROBE, CONSORT (Consolidated Standards of Reporting Trials) and PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) that may be adopted by universities to evaluate dissertations. It will help to improve study design of their research. For this purpose, help from clinical research faculty and statisticians should be taken beforehand while designing research study.

Adoption of such tools by PGs and their guides will help to create more uniformity in reporting. It might help temper the over-enthusiastic reporting of new findings in the scientific community and popular media and improve the methodology of studies in the long-term.^[3]

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