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## Ethical Issues in Higher Education and Scientific Research: Erosion of Academic Integrity

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# Academic Leadership Journal

Ethics is the cornerstone of dental research or for that matter any research. Authorship in a scientific research is an important issue which requires considerable debate. The pressure to publish is well-established in the university community. Faculty member's performance and promotion are judged by the number of published articles in academic scholarly journals. If survival means publish or perish, any and every effort to see one's name in print becomes important. In such a situation, we should not be surprised to see the operation of the cliché, "You scratch my back, I'll scratch yours" (Lazar, 1995).

## Indian Scenario

India is having around 310 dental colleges, which makes approximately about one third of the dental school present world wide. Annually around 25,000 dentists are graduating every year in India (Sivapathasundharam, 2007). There has been a sudden uncontrolled mushrooming of colleges in the last decade. And as it goes without saying, any growth seemingly uncontrolled, called malignancy in science, should be observed with suspicion. Examination system and enrollment in these schools have been traumatized in India. Medical and dental seats are being allotted in private institutes on basis of capitation, with assurance of degree. This uncontrolled mushrooming has led to number of health care professionals of doubtful integrity and questionable quality.

Most of the dental schools or universities in India are not having an ethical committee. Ethical issues like informed consent, ethical committee clearance are being taken for granted; being mentioned in the manuscript or research paper, without the actual consent or clearance being taken. Dentistry in India is currently being challenged to maintain its ethical character (*Borpujari, 2000*).

A certain number of publications are required for promotion as agreed on by the medical and dental councils respectively. Though the intentions were good, this has led to a race for publication. A practice is noted of including entire department's name in a research project. In few places it is mandatory for postgraduate students to include name of all other postgraduate students and faculty in a scientific research. Though not in curriculum and without training undergraduate students are being forced to carry out scientific research at their own expenses. No guidelines or protocols are followed in such studies, there is falsification of data, or in some cases data is made arbitrarily. These undergraduate projects are sent for publication by the faculty; taking the entire credit.

The problem at hand is the research work being conducted by these health care professionals. To enhance their performance and for promotion, research work is being manipulated or being done on paper. Similar to mushrooming of the schools, there also has been a rapid escalation in the healthcare journals in the country. These journals have a sole aim of taking advantage of the medical or dental council's rule of publications for promotion. These journals are paid ones; being run to publish research for those desperately in need or those seeking promotion. Even though mentioned peer reviewed, many of these journals publish research articles without a review process.

The compulsions to indulge in such unethical practices include desire to see voluminous curriculum

vitae, to increase number of publications for promotions and academic advancement, to prove professional supremacy and publications are also the criteria to become guide.

During the past decade, there has been a gradual erosion of ethical principles that guide scientific research as well as writing and publication. Thus, a growing commercialization of research with its effects on the ethical conduct of researchers and the advancement of scientific knowledge are of concern today and need serious thought. The misconduct in research and publication affects authors, reviewers and editors but the worst sufferer is the patient. Misconducts, whether done intentionally or through ignorance, have the same consequence. There is no difference in the seriousness of misconduct if it is done through ignorance (CBE Style Manual Committee, 1983, 1991)

### **Authorship: An Ethical Dilemma**

It surprises when one reads a two-page article in a dental or medical journal with seven, eight, nine, or more authors. Who qualifies as an author of scientific research? Length alone is no indication of quality however, is it correct to list people because they need the publication or they are friends? One of the other observations is that many people have their names listed as authors without having contributed to, read, or seen the paper which carries their name and for which they will take credit, at least on their CVs (Lazar, 1995). Gift authorship is when an author is included just because of seniority or because he/she is a colleague or wife/husband or son/daughter etc to increase the publications. This kind of practice carries an unfavorable impact on scientific research and publications.

This problem can be prevented if the authorship is decided in the beginning of the study. The journals safeguard themselves by asking the authors to submit a checklist including the criteria for authorship. To qualify as an author, one must have participated sufficiently in the conception, design, analysis, and interpretation of the data, drafting, and/or revision of the article. In other words, one must contribute to the intellectual content of the article. Those persons who provide routine assistance or supervise a research group or thesis should not be listed as authors, but should be acknowledged in the appropriate section (Jain, 2010).

### **Duplicate publications and Salami Slicing**

The submission or publications of an article by two journals that are identical or overlap substantially with or without acknowledgment to another are called duplicate publications. The authors are asked to give an undertaking that the manuscript is not submitted elsewhere and not under consideration for publication elsewhere. Publication of articles that have similar hypothesis, sample characteristics, methodology, results, and conclusion of a published article is unethical (Benos 2005). Such articles may have the same authors or may be different authors without the k (Mundava and Chaudhari, 2007). Such publications are unethical as it wastes the time of reviewers, occupies the valuable space of published scientific data, and such unnecessary over-emphasized publication inflates scientific literature with flawed meta-analysis for no benefit other than to the author.

### **Plagiarism**

Plagiarism, an ethical breach is the representation of another's work in any form as one's own without appropriate acknowledgment. Plagiarism comes from the Latin word *plagiarius*, which means abducting or kidnapping. While academic dishonesty is not a new phenomenon, there is no agreement

about why plagiarism is so prevalent in the academic world ([Chaudhuri](#), 2008). Plagiarism is unethical and can hurt any academic institution's reputation. There is a difference between plagiarism and copyright infringement. Plagiarism is limitation of ideas or writings without any acknowledgement as opposed to copyright infringement which is extensive use of somebody's work without permission, with or without acknowledgment (Kock and Davison, 2003). Factors that are likely to be associated with plagiarism can be summarized into three main types: (1) informal and formal pressures on researchers to publish; (2) limited knowledge about what level of idea-borrowing is acceptable and (3) systemic difficulties that hinder action against the perpetrators of plagiarism that create formidable obstacles for the victims of plagiarism to hold the perpetrators accountable for what they have done (*American Dental Association*, 2003).

Dental profession holds a special position of trust within society which in turn grants certain privileges not available to the public at large (*Welie*, 2004). In return, the profession makes a commitment to uphold ethical values and principles, including those of justice, integrity and fairness. Upholding those values remains a daunting challenge and dentists worldwide expect their peers to uphold an altruistic ideal. This is a professional obligation and a "social contract", the basis for granting professional status (*Bertolami*, 2004).

Ethics education is recognised by dentists as a solution for many of dentistry's professional challenges (*International Association of Dental Research. Code of Ethics*, 2003). Dental ethics education is an integral aspect in training dentists to uphold the standards of their profession. It is important for every dental school curriculum to inculcate professional ethics into its curriculum. This education needs to start early, be reinforced continually throughout students' graduate training, and continue after they embark upon their professional careers.

The problem of authorship and plagiarism is not something of which we are unaware. Several editors of dental journals already recognize this problem and have set and implemented their own standards. Dental schools must have an established ethical committee for research on human subjects. Most scientific journals ask authors to make declarations at submission about the integrity of their research. There are many academic institutions all over the world which are using plagiarism detection tools to detect Internet plagiarism. More than detection or catching students, a plagiarism detection tool can be used as a beneficial educational tool and a preventive measure for both faculty and students.

## **Conclusion**

Ethics education cannot guarantee that students will practice in an ethical manner, though it can give students the tools to uphold professional values. To overcome this problem of fraudulent research the medical and dental health councils need to change their rules, regarding publications for promotion. Instead of fixing publication in any indexed journal, the councils may choose specific journals having an impact factor above a certain fixed number. Therefore we suggest collective and concrete efforts by the medical and dental councils, schools and universities, head of departments, professionals involved in scientific research, and journal editor to set acceptable standards in scientific research. If higher education has to improve in the current scenario then the importance of leadership skills of the head of departments and the role of a dean in maintaining an academic integrity therefore cannot be overemphasized.

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