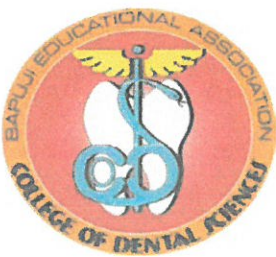


# CODE OF ETHICS FOR RESEARCH

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**Background:**

Ethics is the science of the morals of human conduct and provides the principles that rule the behaviour of society. Ethical principles are integral to the dental profession and research. Ethical guidance should be positive, demonstrating best practice and providing guidance on the appropriate standards of personal and professional behaviour. However, maintenance of standards should not be regarded as a burden. It is meticulous exercise of what is to be expected from reasonable people under normal circumstances. Without it the profession could not flourish. The Code of Human Research Ethics are a set of general principles that are applicable to all research contexts and are intended to cover all research with human participants. There are numerous reasons for behaving ethically. Researchers should respect the rights and dignity of participants in their research and the legitimate interests of stakeholders such as funders, institutions, sponsors and society at large. In return Participants should have confidence in the investigators. Good research is only possible if there is mutual respect and trust between investigators and participants.

## **Introduction**

Research is promoted to a large extent at our institute in order to improvise and inculcate research culture among students and faculty. The code of ethics for research practice are postulated keeping in consideration guidelines provided by Indian Council for Medical Research at our institute research projects are made to follow appropriate ethical, legal and professional standards. This code of ethics applies to all faculty and students of our institute and visiting researches and students of other institute with whom we share our research facilities.

## **Principles of Research ethics**

The principles mentioned below are to guide the researchers at the institute to follow during the process of research and non-abiding to the same will be considered as violation and will be acted upon with strict disciplinary measures as deemed appropriate by the committee appointed to overlook the same.

### Honesty

- Strive for honesty in all scientific communications.
- Honestly report data, results, methods and procedures, and publication status.
- Do not fabricate, falsify, or misrepresent data.
- Do not deceive colleagues, research sponsors, or the public

### Objectivity

- Strive to avoid bias in experimental design, data analysis, data interpretation, peer review, personnel decisions, grant writing, expert testimony, and other aspects of research where objectivity is expected or required.

- Avoid or minimize bias or self-deception.
- Disclose personal or financial interests that may affect research.

#### Integrity

- Keep your promises and agreements
- act with sincerity
- Strive for consistency of thought and action.
- Avoid careless errors and negligence
- carefully and critically examine your own work and the work of your peers.
- Keep good records of research activities, such as data collection, research design, and correspondence with agencies or journals

#### Openness & Transparency:

- Share data, results, ideas, tools, resources.
- Be open to criticism and new ideas.
- Disclose methods, materials, assumptions, analyses, and other information needed to evaluate your research.

#### Accountability

- You and only you are responsible for your doing an nobody else
- Take responsibility for your part in research
- Be prepared to give an account (i.e. an explanation or justification) of what you did on a research project and why.

### Intellectual Property

- Honor patents, copyrights, and other forms of intellectual property.
- Do not use unpublished data, methods, or results without permission.
- Give proper acknowledgement or credit for all contributions to research.
- Never plagiarize.

### Responsible Publication

- Publish in order to advance research and scholarship, not to advance just your own career.
- Avoid wasteful and duplicative/ sliced publication.

### Social Responsibility

- Strive to promote social good and prevent social harms through research, public education, and advocacy

### Non-Discrimination

- Avoid discrimination against colleagues or students on the basis of sex, race, ethnicity, or other factors not related to scientific competence and integrity

### Human Subjects protection

- When conducting research on human subjects, minimize harms and risks and maximize benefits
- respect human dignity, privacy, and autonomy
- take special precautions with vulnerable populations
- Strive to distribute the benefits and burdens of research fairly.

**Research culture:**

At our institute, the prime importance towards the research has been provided to enhance the innovations and scientific thinking among the students and faculty alike. The students have been continuously exposed to all possible evolution in the field of dentistry and they are kept abreast with the updates.

Students are encouraged to take up research projects other than compulsory by the university based on their interest and passion. To facilitate the same, the institute organises research centred lectures and programs on regular basis. And also encourage them to attend the university organised research orientation programs.

**Training and supervision**

Our institute ensures training and supervision in relation to ethical aspects of biomedical research and enables researchers to

- Develop, foster, and maintain a culture of integrity in science
- Discourage and prevent unethical conduct
- Empower researchers to hold themselves and others accountable to high ethical standards
- Increase knowledge of, and sensitivity to, ethical issues surrounding the conduct of research by researchers with diverse backgrounds
- Improve the ability to make responsible choices when faced with ethical dilemmas involving research
- Provide an appreciation for the range of accepted scientific practices for conducting research

- Inform faculty and students about the regulations, policies, statutes, and guidelines that govern the conduct Public Health Service-funded research and promote compliance with the same
- Promote a career-long positive attitude toward research ethics and the responsible conduct of research

Senior research faculty are able to supervise and mentor the upcoming research oriented faculty by offering guidance and training to design and structure the research activity and overlook the integrity of research and its ethical aspects. In case of troubleshooting senior faculty guide the researchers to resolve the hurdles encountered.

### **Research protocol**

Our institution has constituted institutional Review Board (IRB) which overlooks all the research proposals intended to be conducted at our institute for sound scientific fundamentals. IRB consists of senior faculty of the institute who have enough research experience and training. The board evaluates all the research projects for the fulfilment of research methodology protocols and guide the students and researchers for proper carrying out of the projects. The faculty of IRB guide and resolve any difficulties encountered during the process of research.

Once the project is approved by the IRB, they will be submitted to institutional ethics committee – College of Dental Sciences (IEC-CODS) for further evaluation and clearance. IEC-CODS is an autonomously functioning committee appointed by Head of the institute to evaluate ethical aspects of research projects of our institute. IEC-CODS consists of internal and external members and subject experts who periodically meet and evaluate research proposals for any possible ethical concerns, on obtaining clearance from IEC-CODS, research projects being carried out for long terms, will have to periodically submit their reports of



progress of the project. Also it is mandatory to submit final report outcome of the project once it's completed to the IEC-CODS.

### **Safety concerns**

Researchers should comply with codes and regulations relevant to their discipline. Researchers should handle research subjects, be they human, animal, cultural, biological, environmental or physical, with respect and care, and in accordance with legal and ethical provisions. Researchers should have due regard for the health, safety and welfare of the volunteering subjects, community, collaborators and other individuals involved in respective research projects.

Research protocols take account of and are sensitive to, relevant difference-s in age, gender, culture, religion, ethnic origin and social class. Researchers should recognize and manage potential harms and risks relating to their research.

### **Collaborative Research:**

Our institute as established MOUs with various research institutes both dental and other specialities to facilitate research and development. Our parent association, Bapuji Education Association, has also initiated steps to facilitate inter disciplinary research. Apart from these any research which is provided assistance to or taken assistance from shall follow the following guidelines.

All collaborators in research collaborations should take responsibility for the integrity of the research and follow the guidelines of IEC- CODS.

All collaborators in research collaborations should maintain transparency in relation to the sharing of research data. The norms of the same has to be laid down and agreed upon before initiation of the study.

All collaborators should agree at the start of their collaboration on expectations and standards concerning research integrity, on the laws and regulations that will apply, on protection of the intellectual property of collaborators, and on procedures for handling conflicts and possible cases of misconduct. The same has to be documented and saved and be notified to the IRB.

During publication, all partners will have to be consulted before submission of manuscript. The same has to be documented and the norms to be followed should be laid down and documented during the designing the study.

**Publication Guidelines:**

All authors are fully responsible for the content of a publication, unless otherwise specified.

All authors should agree on the sequence of authorship, acknowledging that authorship itself is based on a significant contribution to the design of the research, relevant data collection, analysis and interpretation of the results. Researchers should discuss authorship at an early stage in a research project to establish:

- Who will be listed as an author on potential research outputs
- The order in which the authors will be listed
- The responsibilities of each author

Authors should ensure that their work is made available to colleagues in a timely, open, transparent, and accurate manner, unless otherwise agreed, and are honest in their communication to the general public and in traditional and special media. Authors should acknowledge important work and intellectual contributions of collaborators, assistants, funding agencies, and any other individual who have influenced the reported research in appropriate form. All authors should disclose any conflicts of interest and financial or other types of support for the research or for the publication of its results.

Authors can issue corrections or retract work if necessary; however the reasons shall be clearly stated. Authors and publishers should consider negative results to be as valid as positive findings for publication and dissemination. Researchers should adhere to the same criteria as those detailed above whether they publish in a subscription journal, an open access journal or in any other alternative publication form.

**Research Misconduct and Research Ethics Violation:**

Research misconduct is defined as fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results

- Fabrication is making up results and recording them as if they were real.
- Falsification is manipulating research materials, equipment or processes or changing, omitting or suppressing data of results without justification.
- Plagiarism is using other people's work and ideas without giving proper credit to the original source.

There are further violations of good research practice that damage the integrity of the research process or of researchers in addition to direct violations of the good research practices set out in this Code of Conduct, examples of other unacceptable practices include, but are not confined to:

- Altering the authorship criteria which was agreed upon during the initiation of the study.
- With holding or altering or undue over and under emphasising the research findings.
- Allowing funders sponsors to jeopardize independence in the research process or reporting of results so as to introduce or propogate bias.
- Delaying or hampering the work of other researchers.

- Ignoring violations of research integrity by self and others involved in the research.

Possible types of Ethical violations;

- 1) Conflict of Interest: Any action that may result in a conflict of interest must be fully disclosed. When objectivity and effectiveness cannot be maintained, the activity should be avoided or discontinued.
- 2) Disputes about authorship: Proper authorship representation is generally a matter for the Involved parties to resolve.
- 3) Duplicate Submission and Slicing: Duplicate submission abuses the resources of all affected journals, including the valuable time of editors, reviewers, and staff, and is unprofessional and unacceptable,
- 4) Fabrication or misrepresentation of data or results: Any incidence of fabrication or Misrepresentation to be an extremely serious breach of professional conduct, with potentially severe ethical and legal consequences.

**Plagiarism:-**

Plagiarism constitutes unethical scientific behaviour and is never acceptable, Proper acknowledgement of the work of others used in a research work must always be given. Further, it is the obligation of each author to provide prompt retractions or corrections of errors in published works. There are varying degrees of plagiarism warranting different consequences and corrective action, listed below from most to least serious:

1. Verbatim or nearly verbatim copying or translation of a full paper(s), or the verbatim or nearly verbatim copying or translation of a significant portion(s) of another paper(s).
2. Disclosing unpublished data or findings without permission, even if attributed.
3. Unaccredited verbatim or nearly verbatim copying or translation of individual elements of another paper(s).
4. Unaccredited paraphrasing of pages or paragraphs from another paper(s).
5. Credited verbatim copying or translation of a major portion of a paper without clear Delineation (e.g., quotes or indents)

Although the general consensus is that plagiarism is a bad idea, it can be difficult to avoid it or discuss it if we have different understandings of the definition: To steal and pass off (the ideas or words of another) as one's own;

- To use (another's production) without crediting the source
- To commit literary theft
- To present as new and original an idea or product derived from an existing source.

Plagiarism could be of two types

- a) Negligent or unintentional plagiarism: It means innocent or careless presenting another Person's work as one's own without acknowledging the Source.
- b) Dishonest or intentional plagiarism: It means knowingly and deliberately presenting another person's work as one's own work without acknowledging the Source.

Detection of Plagiarism:

It is the prime responsibility of an institute or individual to distinguish original content from plagiarized work. The detection of plagiarism is a judgment to be made by a person who understands the subject and who is also aware of the definition of plagiarism. Such person should also be aware of the tools available to detect the plagiarism. Our Institute will use the best tools / software to detect plagiarism. It is of an at-most important for an academic institute to educate its student and teaching community about what constitutes plagiarism, how it is detected and of course the action that is going to follow if plagiarism is proved. There are software's available to check the plagiarism.

Considering the issue, our institute provides its students, the access to Drillbit software to students and faculty, which is used for plagiarism. The software has been installed and will scan the documents for plagiarism and reports with appropriate certificate mentioning the plagiarised data.

**Dealing violations and misconduct:**

Any violations noticed as per the criteria mentioned as above, the head of institute and IEC-CODS is bound to take appropriate steps. IEC- CODS will evaluate the issues regarding the misconduct and/or violations. The head of the institute and IEC-CODS reserves all rights to make decision regarding the violations and take necessary disciplinary steps if found any violations and/or misconduct. Transparency has to be maintained while dealing with violations and /or allegations of misconduct during the research.