

# Attitude of Scientists on Research Ethics and Role of Libraries: A Study of Institutions of Department of Biotechnology, India

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This study is a formal interaction with the faculty members and scientists practicing research at the Institutes of the Department of Biotechnology, India, with the goal of gathering their view points for active contribution of libraries to research ethics and the research undertaken at the institution. Their perception for the importance of research ethics and contribution of libraries was one of the focuses of the study. It was also attempted to get explanations for violations of ethical standards during study, as well as to determine their perspectives on maintaining ethical practises. The survey reveals that the scientists at the institution have positive attitude towards Research ethics and libraries. It is also a key conclusion that libraries play a significant role in the sphere of research.

**Keywords:** *Research ethics; Libraries; Scientists; Faculty members; Ethical research, Ethically sound research.*

## 1 INTRODUCTION

A person can be designated as Scientists who work to get more closer to any phenomenon for better understanding. Their continuous effort helps them to achieve expertise in that particular field. They have a clear grasp about why an incident happens, what may be possible triggers for it, and how it will impact society and the world and that too with its proper explanation. Scientists

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are the one who provide correct direction and also, Research is conducted under their supervision. For good research, it is important to conducted it ethically. The scientists are the one of those who knows very well about the importance of ethical practices in research. The libraries are important pillars of any academic or research institutions. They have potential to support the research work of their parent organization by providing assistance by ways of resources or reference services. They contribute to the nation by making and building well- educated young generation, hence the potential human resource for the country.

## 2 OBJECTIVES OF THE STUDY

The buzzword “Research Ethics” draws attention towards broader aspect. The study was meant to elicit answers of certain queries. For the same the objectives were devised as following-

(i) To ascertain scientists’ perceptions of the significance of Research Ethics. (ii) To identify possible reason for violation of ethical practice. (iii) To get suggestions to conduct research ethically. (iv) To explore scientists’ perspectives on the Library’s role to encourage the ethical thought among researcher.

## 3 RESEARCH METHODOLOGY

It was a survey, conducted upon the scientists using a standardised online questionnaire. The response received from them was analyzed using the MS-Excel and MS-Office.

## 4 SCOPE AND LIMITATIONS

The study cantered on faculty members and scientists to understand about their perspectives and strategies in favour of research ethics. Another attribute which is engaged has widely recognized as a non-profit organisation, i.e. library, to recognise their significance and relevance in ethical research activities. As far as the study is concerned, three institutions from the Department of Biotechnology, India, namely the National Centre for Cell Science (NCCS) in Pune, the Rajiv Gandhi Centre for Biotechnology (RGCB) in Kerala, and the Institute for Stem Cell Science and Regenerative Medicine (In Stem) in Bangalore, were chosen from the western and southern regions of India.

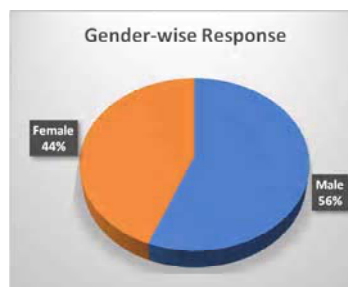
## 5 DATA ANALYSIS AND INTERPRETATION

### *5.1 RESPONSE RECEIVED*

NCCS, Pune, RGCB, Kerala and In Stem, Bangalore, India, are well-established research institutions. They are also collaborating with organisations

both within and outside of India. The institution's website had been used to acquire the e-mail of all faculty members and scientists. For the survey, a well questionnaire was distributed to them via email. The received response is taken into account in the study.

Gender	No. of Respondent
Male	14
Female	11
Total	25



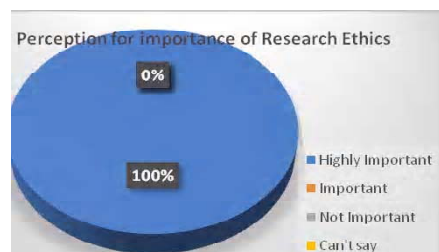
**Table 1: Gender-wise Response    Fig. 1: Gender-wise Response**

Among the distributed questionnaire to the potential respondents, as data fetched from the website, there were total 25 questionnaire were received. The above table and figure demonstrate that the male respondent ratio is higher than the female respondent ratio.

### 52 SIGNIFICANCE OF RESEARCH ETHICS

A question was designed to get the perception of respondents regarding the significance of Research Ethics, whether is it important or not.

Significance of Research Ethics	Response
Highly Important	25
Important	0
Not Important	0
Can't say	0



**Table 2: Significance of RE**

**Fig. 2: Significance of RE**

Everyone who answered had the same perspective. They were agreed strongly with the significance of Ethics in conduct of any research.

### 53 REASON FOR BREACH OF ETHICAL PRACTICE

There are several reasons why some tasks in research-related activities may not be performed in accordance with defined procedures. These acts are not only detrimental to the study, but also to the community. It was attempted to explore the most likely rationale for such acts from the replies.

Reasons	Response
Deadline pressure	12
Response rate	09
Insufficient training	17
Researchers' discipline	17

**Table 3: Reasons for breach****Fig. 3: Reasons for breach**

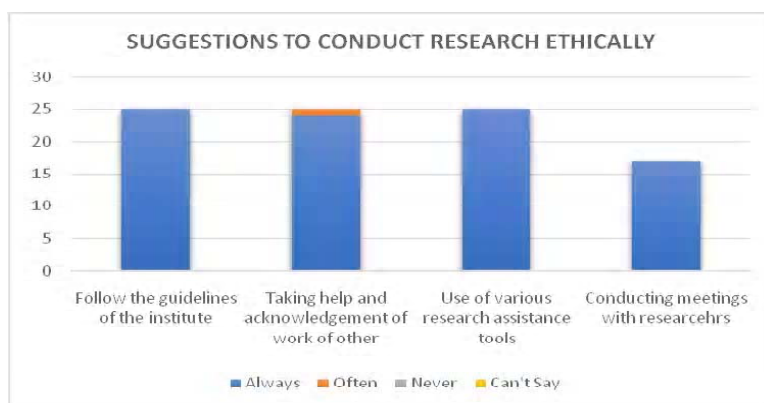
According to the responses, the most probable reason of ethical violations is researchers' poor discipline and insufficient training. The response of 25 people supports this. With 12 votes, deadline pressure is the second most common reason for ethical violations, followed by respondent response rate (09 votes).

#### 54 SUGGESTIONS TO CONDUCT RESEARCH ETHICALLY

The respondents of the study are not only educators but also mentors who shows the correct path to their students and researchers working their supervision. Corollary, getting suggestions from them to encourage ethical actions in research will be more beneficial.

Suggestion	Always	Often	Never	Can't Say
Follow the guidelines of the institute	25	0	0	0
Taking help and acknowledgement of work of other	24	1	0	0
Use of various research assistance tools	25	0	0	0
Conducting meetings with researchers	17	0	0	0

**Table 4: Suggestions to conduct Research Ethically**



**Fig. 4: Suggestions to conduct Research Ethically**

According to the response, it is strongly advised to utilize different research support tools during various research-related tasks. recommendation to follow the guidelines of the institute and Taking help and acknowledgement of work of other. According to the above table figure, arranging a meeting with students can be a measure to carry out research in an ethical manner.

#### 55 PERCEPTION FOR ROLE OF LIBRARY

Libraries are the institutions that provide assistance with teaching, learning, and research. Therefore, their role become more important. The respondents were asked about the agreement for library's role in support of the ethical research activities.

Role of Library for promotion of Research Ethics	Response (%)
Agree	80
Neutral	20
Disagree	00
Can't say	00



**Table 5: Libraries and Research Ethics** **Fig. 5: Libraries and Research Ethics**

From the above table and figure, it can be interpreted that 80% of the respondents were clear about the library's contribution to the Research Ethics. Whereas 20% respondents were responded neutral and no one vote for disagreement for the contribution of the library for the promotion of Research Ethics.

## 6 FINDINGS OF THE STUDY

The study was meant primarily to elicit the perspectives of scientists and faculty members, as well as to identify the different efforts made by the institutions' central libraries to promote research activities and ethics in them. Hereunder are the study's key outcomes:

- Study reveals that 100% respondents were strongly favouring to the importance of Research ethics. They were unanimous in their belief on the importance of ethics in the conduct of any study.
- Another finding was that the Researcher's poor discipline and insufficient training were marked as is one of the biggest reasons behind violation of ethical practice during research activity while deadline pressure and response rate of respondents were the least possible reason for the same, respectively.
- As per the suggestions are concerned, using research assistance and obeying institutional norms were highly recommended.
- According to the findings of the survey, 80 percent of respondents agreed with the library's beneficial role for contribution to the research ethics.

## 7 RESULT AND DISCUSSION

Research is a noble effort with the ultimate objective of promoting societal well-being. consequently, such acts are carried out, keep in mind that they should be done with ethical thinking. This viewpoint is mirrored by the responders. They stated that it is really crucial throughout study.

The respondents give their free opinion for the various possible reasons for the breach of ethical practices. According to them, the researcher's discipline and training were the major reason in views of them. After that deadline pressure followed by response rate, respectively. In my personal opinion, the training should be provided at priority basis. Because a trained individual can execute their work properly, a learner will continue to be a learner and learn via experience, which differs from person to person.

Respondents were also asked for Suggestions to support ethically sound research. Use of research support tools, obeying regulations of the institution were recommended. Which is also reasonable as it is true that the institutions themselves design adequate guidelines in this regard. Another suggestion was to conduct meetings with researcher. Meetings with researchers for activities throughout research will undoubtedly be a wonderful step.

In continuation, as the study was also dedicated to the role and relevance of the institutions' central library, therefore it was asked from the respondents about it. About 80% respondents was favouring to the role of library with regards to their contribution for promotion of research ethics among researchers,

which is obviously positive thing, while 20% were neutral and no one were disagreed. It is the matter of concern to get whatever the reasons behind such neutral and negative response, hence they need to do whatever is needful. The library should also look after and take care of this, because if the it is making efforts, then at least it should be acknowledged to the users. The objective of the task will not successful in these circumstances.

## 8 CONCLUSION

The many research institutions in India are aiming to fulfil the goal of societal welfare. Among these, institutions considering for the study, NCCS, Pune, RGC, Kerala, and InStem, Banlagore, are autonomous institutes of India's Department of Biotechnology. Research is being conducted at these institutes under the direction of scientists and faculty members. Libraries serve as information intermediaries as well as facilitator. The survey showcases that respondent had a positive perspective toward the function and contribution of libraries in supporting research activities and promoting ethical awareness. This also reflects the institution's optimistic attitude. It will certainly contribute in spreading consciousness about research ethics.

### 56 CREDIT AUTHORSHIP CONTRIBUTION STATEMENT

Prof. M.P. Singh conceptualised the idea and Shashi Rai has designed the study. Shashi Rai distributed the questionnaire, collected data, analyzed, prepared tabulation and visualisations then wrote the original draft which was then revised and edited the final version by Prof. M.P. Singh. All authors read and approved the final manuscript.

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