

ORIGINAL RESEARCH ARTICLE

Knowledge and Awareness about Research Ethics and Ethics Committees among Engineers

S Bhuvaneshwari*¹, D Vijaya², P Hema³

¹Professor, Department of Pharmacology, ²Professor, Department of Biochemistry, ³III year MD Pharmacology, PSGIMS & R, Peelamedu, Coimbatore, 641004, Tamilnadu, India

Received 09 Nov 2013; Revised 18 Dec 2013; Accepted 27 Dec 2013

ABSTRACT

A common man must understand what is happening in the name of science which is going to penetrate the lifestyles of living. In other words there is a communication gap between the advent and advancement of science and the common man. So this study was planned to assess the knowledge and awareness of Research ethics and Ethical committees among engineers and to identify the areas for improvement of knowledge thereby creating awareness.

On approval by the Institutional Human Ethics Committee, 85 Engineers were recruited and asked to fill up the questionnaire related to Research and ethics committees after obtaining informed consent. This survey revealed that only 16.48% were aware of functioning of ethics committees. 41.17% engineers were under the misassumption that approval for research should be obtained from head of institution and 54.11% were aware of the need for monitoring by ethics committee. To improve study outcome, many (30.58%) had chosen that appropriate sample size as the best option. 61.17% knew that informed consent is mandatory; 60% were aware of the participant's right to know about methodology risks and benefits and 52.94% had idea regarding participant's right to withdraw from study. 35.29% engineers participated in the study thought institute is responsible to pay insurances for study related injuries to participants. Most of the participants were aware about autonomy of participants and monitoring of research.

The results revealed that there is a wide gap in the knowledge and awareness regarding the number of ethics committees, essential members of the committee, and the person who give approval to undertake research. Thus the study has identified the need for imparting knowledge on research ethics human ethics committees to engineers.

Key words: knowledge and awareness, research ethics, ethics committees, engineers

INTRODUCTION

Research is vital for the understanding of problems that affect individuals, communities or health systems. It allows for a systemic and scientific assessment and often provides knowledge that can improve quality of health and health care system. Ethics involves systematizing, defending and recommending concepts of right and wrong conduct of research. It is mandatory for any research activity to get ethics committee approval. The basic purpose of a research is to gain knowledge that could benefit the current and future generation^[1]. It is essential for every research to undergo ethical review and ethical approval before enrollment of participants in order to observe autonomy, non-

maleficence, beneficence and justice^[2]. In a cross sectional study conducted at Makerere University, the respondents do agree that the Ethical committee makes researchers more aware of ethical issues (52.9%), that ethical review is important for protection of human subjects (55.8%), and that the system of ethical review protects human research participants (65.7%)^[3]. Few studies had brought out the consequences of those who had not got approval from ethics committee would not be approved to publish their research in journal, and it would damage researchers reputation as well as the reputation of the institution and their co-workers^[4]. There are many ethically significant and

complex issues relating to human health and research. The ethics committees function to safeguard the dignity, rights, safety, and well-being of human participants in research and fostering high ethical standards for the conduct of research involving humans. There have seen a steep rise in the number of clinical research studies in India in the recent years. Hence the protection of vulnerable populations in countries like India is of utmost importance and urgency. There has been no concerted move to educate the public on ethical issues confronting medical practice and research. Hence this study was planned to assess the awareness and knowledge of engineers towards ethics committees and research ethics practices are largely unknown. The engineers were selected as the study group on the assumption that their involvement in clinical research as researcher would be minimum and considered as representatives of common man.

MATERIALS AND METHODS

This cross sectional observational study was done among engineers after getting Institutional Human Ethics Committee approval. A self administered questionnaire was given to the participants. Each questionnaire had informed consent form as an enclosure explaining the purpose of the study, assurance of confidentiality and voluntariness in participation. Engineers with experience in clinical research were excluded from the study. The validated questionnaire included:

1. Essential member(s) of Human ethical committee
2. Approval for undergoing research,
3. The role of Ethics Committee on their view
4. Improving the quality of the outcome of any research
5. Obtaining informed consent from study participants
6. Explanation on methodology, investigations, risks, benefits to the participants before research
7. Participant's right to withdraw from the study after initiation
8. Monitoring of research.
9. Insurance for the study participants
10. Dissemination of any research

The data was statistically analyzed.

RESULTS AND DISCUSSION

A total of 85 engineers were taken up for survey out of which 6 had experience in any kind of

research not involving research. 62.4% of the participants knew what ethics denotes. Only 16.48% were aware of ethics committees and an equal percentage of participants were aware of the functioning of two ethical committees (human and animal ethics committee). 41.17% of participants were under the misassumption that approval for research should be obtained from head of institution (**Figure 1**). But they had better awareness about essential members of human ethics committee (**Figure 2**). 40% study participants were aware that the role of ethics committee is to protect the right, dignity and safety of participants (**Table 1**). Selecting appropriate sample size was chosen as the best option to improve study outcome, by 30.58% of the participants (**Figure 3**).

Assessing their knowledge on informed consent process, 61.17% knew that informed consent is mandatory; 60% were aware of the participant's right to know about methodology risks and benefits and 52.94% had idea regarding participant's right to withdraw from study. Further 54.11% were aware of the need for monitoring by ethics committee (**Figure 4**) and 35.29% engineers participated in the study thought institute is responsible to pay insurances for study related injuries to participants (**Figure 5**). The survey on dissemination of study results revealed that 9.41% and 2.35% of participants were aware of oral presentation in conferences and journal publications respectively as the mode of dissemination, but majority (89.41%) has not responded to this issue. The results of the study has uncovered the fact that a though a good proportion of the of participants were aware of monitoring of research, informed consent process & its contents a wide gap in the knowledge and awareness regarding the type and essential members, insurance to research related injuries, mode of dissemination of research findings was very poor. However the findings clearly identified the need for imparting knowledge regarding research ethics and Ethics committees to common men like engineers.

Table 1: Role of Ethics committee

Role of Ethic committee	Number of Participants
Protect the right, dignity and safety of participants	34
Protect researcher's right to conduct legitimate investigation	25
For sound scientific content of the project	16
For the welfare of society	48
To maximize the claims of negligence	15
To get financial benefit	8

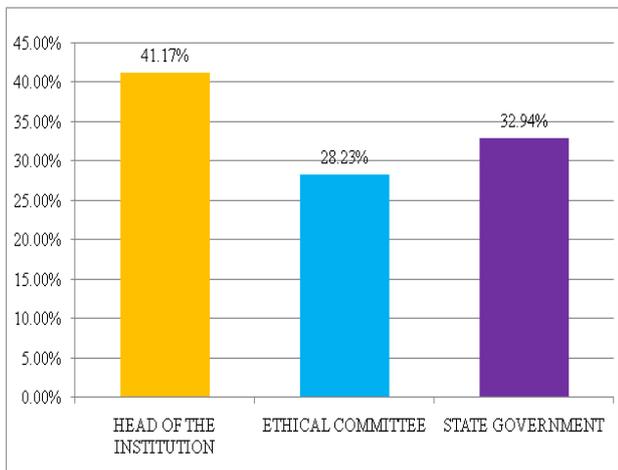


Figure 1: Authority to Give Approval for Research

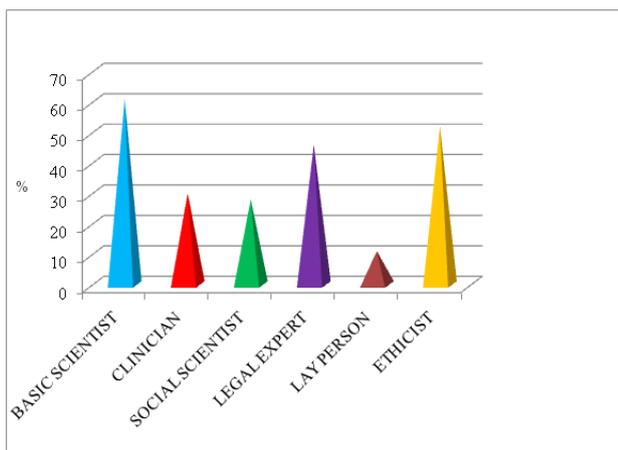


Figure 2. Essential Members of Ethics Committee

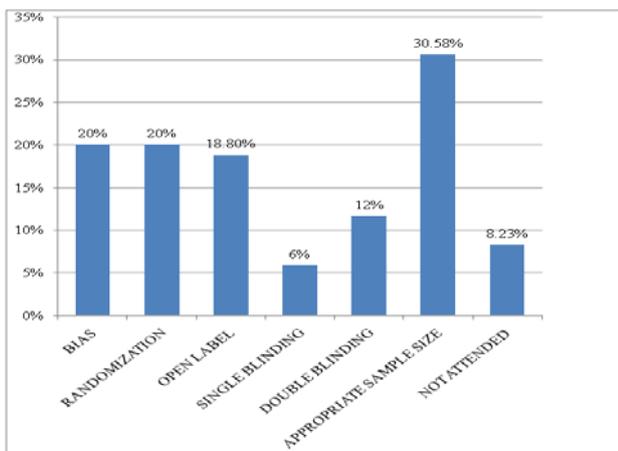


Figure 3: Suggestions to Improve Quality of Research

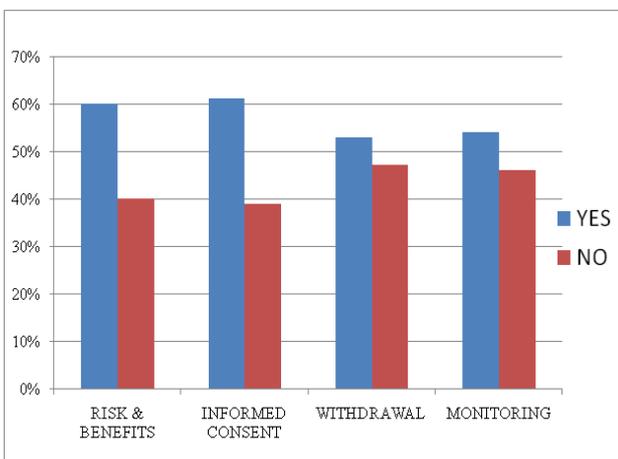


Figure 4: Need to Maintain Autonomy of Participants and Monitoring of Research by Ethics Committees

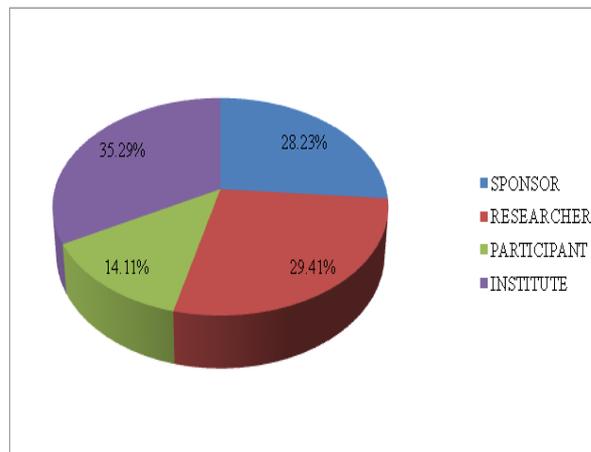


Figure 5: Authority to Pay Insurance for Study Participants

REFERENCES

1. Charles BR Ibingira , Joseph Ocheing. Attitudes and Perceptions about the Research and Ethics Committee in Kampala, Uganda. TIJM April-June 2010; 3(2):347-5.
2. Gabriela Maria Costa, Renta de Oliveira Cartaxo, Mayara Lima Barbosa, Suely Deysny de Matos Celino. Awareness of University Professors about the role of the Research Ethics Committee. Rev bioet(Impr.) 2012;20 (3):467-76.
3. Charles BR Ibingira, Joseph Ocheing. Attitudes and Perceptions about the Research and Ethics Committee in Kampala, Uganda. TIJM April-June 2010; 3(2):347-351.
4. Hadir F. El-Dessouky, Amr M. Abdel-Aziz, Chadi Ibrahim, Malini Moni, Reham Abul Fadl, Henry Silverman. Knowledge, Awareness, and Attitudes about Research Ethics among Dental Faculty in the Middle East- A Pilot Study. International Journal of Dentistry 2011; Article ID 694759:1- 13.