



A survey on the attitudes of psychology students towards the use of animals in medical research

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ABSTRACT **Background:** Psychology courses and psychology students have very poor understanding of animal research and the ethical issues involved in animal research. This is despite the fact that animal research plays a vital role in behavioural research. The study was aimed to survey the attitudes of psychology students towards animal research.

Methodology: A total of 202 undergraduate students in the final year of their undergraduate studies from various colleges of Mumbai were administered a semi-structured questionnaire on attitudes towards animal research. The questionnaire was validated by three senior researchers and was specially designed for the study. The data was collected and analysed using descriptive statistics and percentages.

Results: Only 50 students (24.75%) had ever visited animal house/ animal laboratory in the past and only 29 (14.36%) of them had actual experience of handling animals mainly in form of dissection studies on rats and cockroaches. Majority of them believed that animal research had no bearing on problems concerning humans (43.6%, n = 88) and 27.7% (n=56) of them were of neutral opinion. Almost 84% (n=168) of them were concerned of pain and suffering animals would have undergoing research. 90% students voted in favour of stringent ethical guidelines for animal research.

Conclusion: Animal research awareness is poor in undergraduate psychology students and there is a need to incorporate the same in their curriculum to help foster better understanding of animal research and its long term implications.

KEYWORDS : animals, animal research, ethics, psychology, psychology students.

INTRODUCTION:

Animal research refers to the use of non-human animals in experimentation, primarily for human benefit.^[1] Animal experimentation has created a binary of responses, with supporters of animal experimentation on one side and objectors of such kind of research on the other.^[2] Supporters of animal research include the father of physiology, Claude Bernard, who stated that “*experiments on animals are entirely conclusive for the toxicology and hygiene of man. The effects of these substances are the same on man as on animals, save for differences in degree*”.^[3] Hence, supporters of animal research based on the principle suggested by Bernard argue that animal research reveals much about human biology that would not have been possible otherwise. They further argue that animal research also reveals information about human behaviour.^[4] The contributions of behavioural research on animals in the field of psychology are undisputable and are believed to have laid the foundation for the treatment of phobias, drug addiction and anxiety disorders.^[5] Furthermore, animal research has facilitated the study of the neural basis for schizophrenia, retrograde amnesia, depression and a wide range of other psychological phenomenon.^[6] It is due to these reasons that the American Association for the Advancement of Science (1990) stated that “*the use of animals has been and continues to be essential in applied research with direct clinical applications in humans and animals*”.^[7] On the other hand, people argue that animal research is unethical as animals are abused during the course of the experiment, and are reduced to mere tools for furthering human knowledge and benefits.^[8] Proponents of this opinion often believe that and that animals should have an equal right to live a full life, free of pain and suffering as humans; and thus believe that animal research practices should be abolished.^[9] Such a paradoxical response is attributed to varying attitudes towards animal research, which are affected by various factors. Researchers have broadly divided these factors into four categories: personal, cultural, animal and research characteristics.^[10]

While, there is much literature on how these factors influence the public attitudes of people towards animal research in the west, the same literature is almost non-existent in India.^[11] Hence, in order to understand the attitude of psychology students in India towards animal research, the following study was undertaken.

METHODOLOGY:

The subjects of our study included under-graduate psychology students studying in colleges of Mumbai city. They were administered

a questionnaire which was framed by the authors via emails, social media or in person. The questionnaire included a number of questions asking about what they felt regarding animals being used in research and their suggestions were asked about the alternatives available or which animals can be used for research. The data collected from consenting students and entered in Microsoft excel sheet and analysed. The questionnaire used in the study was validated by 3 senior researchers prior to being administered to the students. The psychology students were studying in the undergraduate (B.A.) course in psychology across various colleges in the city of Mumbai. All students were in the final year of the undergraduate studies. The students were explained about the aims and objectives of the study and a written informed valid consent was obtained from all students prior to the administration of the questionnaire. The data obtained was analyzed using descriptive statistics and percentages.

RESULTS:

Our study population included a total of 202 students in age group of 18- 21 years doing their final year of Bachelors in Psychology of which we had 33 (16.33%) males and 169 (83.66%) females. Only 50 students (24.75%) had ever visited animal house/ animal laboratory in the past and only 29 (14.36%) of them had actual experience of handling animals mainly in form of dissection studies on rats and cockroaches. None of them had any experience with animal research. Majority of them believed that animal research had no bearing on problems concerning humans (43.6%, n = 88) and 27.7% (n=56) of them were of neutral opinion. Almost 84% (n=168) of them were concerned of pain and suffering animals would have undergoing research but only 30% (n=60) of them preferred human patients dying for want of animal research. Not many were in favour that new drugs and surgical procedures should be tested in animals before being used for humans and almost 62% (n=126) thought there were other alternatives available for conducting research in this regards. Various options suggested were animal clones, tissue culture, 3 D printing and artificial cells and tissue, plants tissues, consenting humans, terminally ill humans and criminal offenders. When asked about which animals should be allowed for use in research rats, mouse, monkeys, insects were suggested for using by our study population.

Only 16 students were aware of ethical guidelines for animal research. Almost 79% (n=159) of them were in favour that animals should be treated at same levels as humans for their rights and 90% (n=182) of them voted for stringent regulations for ethical practice in animal research in India. Only 42% (n=84) were in favour of totally abolishing

animal research. All the major findings of the survey are in Table 1.

DISCUSSION:

Psychology students usually have very little exposure to ethics and animal research during their training and studies. Hence we expected some unusual answers after administering the questionnaire. Ethical guidelines is rarely taught in the undergraduate curriculum.^[12] Majority of the students voted for stringent ethical regulations with regard to animal research in India. This was heartening as they had the same respect for humans and animals in a research perspective. Usually animal research has taken a backseat in India and it is only recently that various animal activist organizations have been laying down the rules and regulations for animal research.^[13] Some students were in favour of abolishing animal research. This would be a travesty for neuroscience and psychiatry as animal research serves as building blocks for drug and neuroscience research in humans.^[14] Overall we perceived that undergraduate psychology had a poor knowledge of animal research and the ethical issues concerned with the same. This led to some of the answers given by them. There is a need for inclusion of research ethics as a topic with both human and animal research in undergraduate curriculums so that awareness about the same may be increased. The study was circumscribed to just 202 students and this served as a limitation of the study. Larger studies in diverse populations of psychology students across various cities are needed to draw an Indian perspective. Nevertheless awareness about animal research needs to be created in psychology students at an undergraduate level.

Table 1 – Answers to questionnaire given by the psychology students

Question / Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Medical research on animals has little bearing on the problems confronting people	16 (7.9%)	42 (20.8%)	56 (27.7%)	69 (34.2%)	19 (9.4%)
I am very concerned about the pain and suffering animals undergo during animal research	103 (51%)	67 (33.2%)	29 (14.4%)	2 (1%)	1 (0.5%)
I would rather see human patients die of disease than see animals slaughtered to save humans via research	23 (11.4%)	38 (18.8%)	72 (35.6%)	52 (25.7%)	17 (8.4%)
Animal research may give us scientific data but very little of this is applicable to human beings	9 (4.5%)	71 (35.1%)	54 (26.7%)	61 (30.2%)	7 (3.5%)
New surgical procedures and experimental drugs must be tested on animals prior to studying them in humans	6 (3%)	31 (15.3%)	37 (18.3%)	86 (42.6%)	42 (20.8%)
There are plenty of viable alternatives to the use of animals in biomedical and behavioural brain research	27 (13.4%)	99 (49%)	55 (27.2%)	21 (10.4%)	0 (0%)
Most important medical breakthroughs come about from experimentation with animals	6 (3%)	69 (34.2%)	60 (29.7%)	60 (29.7%)	7 (3.5%)
Most psychological and psychiatric research done in animals is invalid and not needed	11 (5.5%)	50 (24.8%)	67 (33.2%)	69 (34.2%)	5 (2.5%)

Ethical aspects of animal research needs stringent regulation in India	103 (51%)	80 (39.6%)	15 (7.4%)	3 (1.5%)	1 (0.5%)
Animals in research must be treated at the same levels for their rights as humans	99 (49%)	62 (30.7%)	23 (11.4%)	17 (8.4%)	1 (0.5%)
Animal research in medicine is not justified and must be totally stopped/abolished	42 (20.8%)	44 (21.8%)	60 (29.7%)	47 (23.3%)	9 (4.5%)
Do you think experimental genetic research like cloning and DNA research should be allowed in animals	7 (3.5%)	64 (31.7%)	77 (38.1%)	43 (21.3%)	11 (5.4%)

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