

## Scope for animal welfare education in open and distance learning: findings from a needs assessment study in India

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### Summary

The objectives of this study were twofold: to assess the demand for animal welfare education by open and distance learning (ODL) and to identify content to be covered in an ODL animal welfare programme. Through email, personal interviews and online surveys, data were collected from 161 respondents. The key survey questions were on: the need and reasons for providing animal welfare education through ODL; entry-level qualifications; job/career prospects; duration of the programme, and suggestions on course contents. The majority of respondents felt that there was a need for a one-year ODL academic programme on animal welfare. In the light of the findings of this study and related discussions, the authors recommend that online and ODL programmes in animal welfare be developed to meet the continuing educational needs of veterinary students, working veterinarians, para-veterinarians and other stakeholders closely related to animal welfare.

## **Keywords**

Animal welfare – India – Needs assessment – Open and distance learning.

## **Introduction**

‘The greatness of a nation and its moral progress can be measured by the way its animals are treated’ – Mahatma Gandhi.

In recent decades, ethical concerns about the quality of the lives of animals have increasingly become the subject of public policy and controversy. Consequently, society has turned to science for guidance, and animal welfare has become a focus of scientific study (1, 2). Thus, unlike many other scientific specialties, the field of animal welfare owes its existence not primarily to the curiosity of its scientific pioneers, but to ethical concerns existing in society (3). Now, animal welfare education is a multidisciplinary subject which is evolving rapidly, with the core components of welfare science, welfare ethics, and welfare standards (4).

The livestock sector is one of the fastest-growing sectors in Indian agriculture. Its contribution represented 26.84% of total agricultural output in 2011–2012. This is compared to 16% in 1970–1971, showing an annual growth rate of 4.3%, higher than the 2.8% growth in the overall agricultural sector (5, 6). Intensification of livestock production has brought these consistent growth rates, along with a great change in the dynamics of traditional animal–human relationships. Changes in societal values, changes in the relationship between animals and humans and the changing demands of the general public have invoked an urgent need to consider animal welfare practices. Livestock production has to be more humane, taking account of ethics and community values (7, 8).

Veterinarians and para-veterinarians play an important role as intermediaries between animals, their owners, and the public in protecting animal wellbeing. To assume their rightful place as leaders in this field, however, veterinarians and para-veterinarians must accept

the study of animal welfare as a legitimate discipline. They need to actively participate in the wider social discussion about how animals are appropriately used and cared for. Unfortunately, in India's Bachelor of Veterinary Science and Animal Husbandry degree programme (9) there are only two credits (30 teaching hours) on animal welfare (1.13% out of 177 total credits). There are no animal welfare credits in the veterinary polytechnic curriculum offered to para-veterinarians. This inadequate training and lack of exposure to the subject is resulting in veterinarians/para-veterinarians not being able to understand welfare issues and the consequences of poor welfare.

### **Need for, and relevance of, distance education programmes in animal welfare**

In Open and distance learning (ODL), the learner and teacher are separated by time, space and/or distance. This system provides flexible (anywhere, anytime and anyhow) educational opportunities in terms of access (opportunity to all, freeing them from constraints of time and place) and multiple modes (print and electronic learning resources) of knowledge acquisition.

Undertaking a needs analysis is an important preparatory activity for launching academic programmes in ODL. It is generally conducted to assess the scope and support for commencing such an initiative, to identify the target population, the likely rate of enrolment, employment opportunities that the course will open up and the academic relevance to different stakeholders. It also helps to understand the concerns of the various stakeholders and to consider their suggestions for the content of the programme. The people involved in a needs analysis normally include experts/practitioners in related areas and potential learners, who are able to provide useful inputs regarding various aspects of the programme. Through needs analysis one can also gather views on the desirable contents/courses, the teaching medium and modes of learning. This will hopefully lead to addressing the impact of a changing economy, society and job markets. In view of all these, needs analysis is considered to be a

crucial step in developing and launching ODL programmes globally (10).

Animal welfare is now being taught in many universities across the globe as a core discipline in veterinary science/animal science faculties and this expansion is likely to continue. The traditional veterinary/animal science schools all over the world are facing several educational challenges. These include: inadequate funding, the rising cost of education, insufficient capacity to train and educate veterinarians in multiple/expanding disciplines, a shortage of faculties, and time limits of veterinary degree programmes (11, 12, 13, 14, 15, 16, 17, 18, 19, 20). As a teaching methodology, distance education has the potential to address many of these issues. Distance education through a Global Open Food and Agriculture University operated by the Consultative Group on International Agricultural Research (CGIAR) has been suggested as a means of dealing with the problems being faced by the veterinary schools in developing countries (21). The notion that distance education is inferior to traditional teaching is being countered by millions of student experiences in overcoming the above issues (22). By its very nature, distance education can increase the capacity of current facilities and faculty and provide increased flexibility, convenience and high-quality technology-enabled learning experiences. It also allows students to acquire knowledge and skills more cheaply while still maintaining their employment (16, 23, 24).

The present needs assessment was undertaken to investigate the scope for, and usefulness of, ODL in animal welfare education for veterinary students, working veterinarians, para-veterinarians and other stakeholders.

### **Aims of the study**

The main aims of the study were:

- to assess the demand for animal welfare education through ODL
- to identify the major contents to be covered by animal welfare education through ODL.

## **Methodology**

### **Study design**

Following survey methodology, the study was undertaken using a questionnaire. Some participants received the questionnaire by email, some filled it in during the course of a personal interview, and others took the questionnaire online. The survey sought views on the need for animal welfare education through ODL; reasons for animal welfare education through ODL; entry-level qualifications for enrolling on the programme; job/career prospects in animal welfare; duration of the programme; and suggestions on course contents.

### **Sampling and data collection**

The questionnaire was emailed to 200 veterinarians working in veterinary/agricultural universities, animal husbandry departments and research institutes in India. Thirty-seven of these completed the questionnaire. In Delhi, 60 respondents (including academics, researchers, animal welfare activists and students) answered the questionnaire as part of a personal interview. The same questionnaire was used for an online survey through SurveyMonkey ([www.surveymonkey.com/s/H7PSFL9](http://www.surveymonkey.com/s/H7PSFL9)). In the online survey, 64 respondents participated and completed the questionnaires. Thus the final sample size was 161.

### **Data analysis**

The data were analysed simply by looking at the frequency with which respondents chose particular answers (Tables I to IV). The course content as suggested by the respondents was analysed and duplicate suggestions were removed. The suggested course content is presented in Box 1.

## **Results and discussion**

The survey respondents comprised 37 (22.98 %) veterinarians working in veterinary colleges, research institutes and in general practice; 60 (37.27%) non-veterinarians, which includes academics,

researchers, animal welfare activists and students from general universities; and 64 (39.75%) non-veterinarians working in animal welfare organisations.

### **Why is animal welfare education in ODL necessary?**

The data collected revealed that 83.85% of the respondents identified a growing need for animal welfare education through ODL. The reasons given as to why there is such a need can be found in Table I. The most important reasons given were that there was a need to: impart scientific knowledge to people who work closely with animals; establish a better trained and knowledgeable workforce for employment opportunities in the animal welfare sector; raise awareness about legal issues and animal rights; improve the current inadequate teaching about animal welfare in veterinary colleges; raise academic recognition and expand curriculum content in this evolving field, and provide new options for studying animal welfare for those concerned about the issue (Table I).

### **Entry qualification and career prospects in animal welfare**

Just under a third of respondents suggested that the entry qualification for an animal welfare career should be a degree in veterinary science. Other suggestions included a degree in any science subject, a degree in any subject, or education up to 12th standard (i.e. education up to 18 years of age) (Table II).

Perceived career prospects for people with animal welfare qualifications included research and development, self-employment, work in animal welfare non-government organisations (NGOs), and public sector work. Respondents also thought that holders of animal welfare qualifications would have greater access to higher education and would have more chance of promotion in their current work places (Table III).

## **Suggested duration and contents**

The majority of the respondents suggested a one-year ODL programme in animal welfare, while others suggested a six-month programme or a two-year course (Table IV).

The respondents of the study made several suggestions about the content of an ODL animal welfare programme. The important suggestions are summarised in Box 1.

## **Discussion**

In recent years, animal welfare has become recognised as a core issue for sustainable animal production systems. Members of the public will not accept production systems that cause poor welfare. The study of welfare has become part of the scientific basis upon which important political decisions are made (25). The evolution of animal welfare science over the last three decades has been dramatic and has resulted in valuable conceptual and policy frameworks. Many international animal welfare organisations recognise the five freedoms elaborated by the Farm Animal Welfare Council (26):

- Freedom from hunger and thirst - ready access to fresh water and a diet to maintain full health and vigour
- Freedom from discomfort - providing an appropriate environment including shelter and a comfortable resting area
- Freedom from pain, injury or disease - prevention or rapid diagnosis and treatment
- Freedom to express normal behaviour - providing sufficient space, proper facilities and company of the animals' own kind
- Freedom from fear and distress - ensuring conditions and treatment to avoid mental stress.

Globally, approximately 68 billion land animals were killed for human consumption in 2010. In addition, approximately one trillion fish are caught each year, and another one trillion are farmed (27). A growing

majority of livestock and poultry are raised on industrial farm animal production facilities which are also called ‘factory farms’, where tens of thousands of animals are confined, along with their waste, on a very small land area. Around the world, such facilities account for an estimated 67% of poultry meat production, 50% of egg production, and 42% of pork production (28).

India is one of the top four egg and broiler chicken producers in the world, with 63.02 billion eggs and 2.34 million tonnes of chicken, respectively (29). Approximately, 80% of egg production in India takes place on factory farms with battery cages. Hens in battery cages spend their lives confined in tiny wire enclosures in high-density poultry sheds. Each cage is so small that the birds lack the ability to fully stretch their wings, walk, or engage in most of their natural behaviours. Operations with 10,000 to 50,000 hens crowded into one shed are now the norm in India. Nearly 2.4 billion broiler chickens, though not confined to cages, also experience crowded confinement, poor air quality, and stressful handling. In addition to the animal welfare issues associated with industrial production, these operations have harmful impacts on the environment, human health, and the lives of smallholder farmers.

A multi-stakeholder engagement strategy is required to review current animal welfare approaches in order to develop policies and practices that can address and mitigate these impacts (30). One such approach is to make distance education on animal welfare science, ethics and standards available to large numbers of veterinary students, working veterinarians and para-veterinarians. Such an animal welfare programme through distance education would promote awareness and disseminate information about animal welfare, thus increasing the knowledge of veterinary professionals and improving their skills. It would provide a professional and structured framework to promote the intrinsic value of animals and their contribution not only to the country’s economy but also in terms of their social and environmental worth.

Animal protection is included in article 51 of the Indian Constitution, which refers to ensuring ‘compassion to all living creatures’. In 1999, to help make sure that animals are indeed treated with care, the Standing Finance Committee of the Ministry of Environment and Forests, Government of India, established the National Institute of Animal Welfare. It was of the opinion that ‘there is a need for niche education for specific job requirements in the animal welfare sector as trained personnel are not available to work in the animal welfare sector’. The Animal Welfare Board of India (AWBI) is also working on animal welfare issues and it engages over 2,500 animal welfare organisations. The Central Government and the governments of Indian states have been assisting these organisations with various animal welfare interventions, because, although well-intentioned, these organisations are usually not managed in a professional manner, primarily due to an inadequate understanding of animal welfare. There is, therefore, as the findings of this present study demonstrate, a strong need for an academic programme on animal welfare delivered through ODL; such a programme would have positive implications for all stakeholders in the livestock sector.

## **Conclusion and implications for practice**

The current Indian veterinary undergraduate curriculum has only two credits (30 teaching hours) on animal welfare (1.13% out of 177 total credits), which is not enough to provide graduates with sufficient awareness and knowledge of animal welfare issues. It is well acknowledged that governments, veterinarians, para-veterinarians and managers of animal welfare organisations are the most important stakeholders in animal welfare issues. It is necessary to improve their capacity as animal welfare advocates. Further, there is no ODL certificate/diploma programme exclusively on animal welfare to meet the continuing education needs of the approximately 57,500 veterinarians, 70,000 para-veterinarians and 2,500 managers of animal welfare organisations across India. Therefore, an educational programme on animal welfare delivered online or through ODL is of significant academic importance. This will build the capacities of veterinary students, working veterinarians, para-veterinarians and

other stakeholders closely related to livestock development and improve animal welfare outcomes.

In the light of the findings of this study and related discussions, the authors recommend the development of an India-specific ODL programme on animal welfare. The creation of such a programme would include input from animal welfare experts, the Ministry of Environment and Forests, the Department of Animal Husbandry and Dairying, AWBI, the National Institute of Animal Welfare, and representatives of NGOs such as Humane Society International and People for the Ethical Treatment of Animals.

The broad structure for the programme is suggested below:

*i) Target population*

- current veterinary students studying in all Indian veterinary colleges (approximately 10,500)
- working graduate veterinarians in State Animal Husbandry Departments in India (approximately 57,500)
- working para-veterinarians and other stakeholders closely related to livestock development (approximately 70,000)
- animal welfare campaigners working in over 2,500 organisations all over India
- members of animal welfare ethics committees in several research organisations.

These listed target groups from other countries could also benefit from an ODL or online programme.

*ii) Level of the programme:* post-graduate diploma in animal welfare (depending on the response to the initial programme, it could be scaled-up to a Master's programme).

*iii) Duration of the programme:* one year.

iv) Admission qualification: a degree in any subject (to accommodate graduate veterinary students, working veterinarians, para-veterinarians and animal welfare campaigners).

v) Medium of instruction: English (it could be translated into other languages based on the need).

vi) Number of credits: 32 (three compulsory and one elective course each with eight credits are suggested, based on the findings of the study and a review of the literature [3, 4, 7, 31, 32, 33, 34, 35]).

- Course 1: Animal welfare science
- Course 2: Animal welfare ethics and philosophy
- Course 3: Animal welfare laws/policies (Indian and global)
- Course 4: Animal welfare standards for food animals (elective)
- Course 5: Animal welfare standards for companion animals (elective)
- Course 6: Animal welfare standards for experimental and zoo animals/wildlife (elective)

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**Box 1**

**Suggested course contents for an animal welfare programme through open and distance learning**

- Introduction to animal welfare, history of animal welfare and human–animal coexistence
- Current status of animal welfare in India and abroad
- Animal welfare science
- Animal welfare laws, ethics and rights
- Animal welfare standards for farm animals, companion animals, zoo animals, poultry, etc.
- Animal behaviour, biology and emotions
- First aid treatment, care for street animals, help needed during disasters and natural calamities
- Informed care and management of animals based on knowledge about their needs
- Animal production and environmental sustainability
- Use of animals for food, entertainment, experimentation, wildlife, etc.
- Humane methods of animal production, experimentation, transportation and slaughter
- Wildlife conservation, stray-animal control and prevention of cruelty to animals
- Organic animal farming and veganism
- Advocacy, communication, legal frameworks and regulations, law enforcement and prosecution processes associated with animal welfare.

**Table I**  
**Reasons for animal welfare education through open and distance learning**

Reasons	No. of respondents (%)*
To impart scientific knowledge to people who work closely with animals	71 (44.10)
To established a better trained and knowledgeable workforce for employment opportunities in the animal welfare sector	68 (42.24)
To raise awareness about legal issues in relation to animal rights	65 (40.37)
To increase the teaching of this important subject in Veterinary Colleges	60 (37.27)
To bring academic recognition and an expand curriculum to the evolving field	55 (34.16)
To provide study options to meet the growing concern about the issue	46 (28.57)
To raise awareness of cruelty against animals	34 (21.12)
To build compassion among the general public with regard to animal welfare problems	30 (18.63)
To increase understanding of the role of animals in the overall ecological balance of the world	25 (15.53)

\* The total number of questionnaires received was 161. Respondents could give more than one answer

**Table II**  
**Entry requirements for enrolling on an animal welfare programme**

Minimum education requirements	No. of respondents (%)*
Degree in veterinary science	48 (29.82)
Degree in any science subject	40 (24.84)
Degree in any subject	39 (24.22)
12th standard (Education up to age 18)	34 (21.12)

\* The total number of questionnaires received was 161. Respondents could give more than one answer

**Table III****Job/career prospects for those with a diploma in animal welfare**

Job/career prospects	No. of respondents (%)*
Research and development	72 (44.72)
Self-employment	54 (33.54)
Work in non-governmental organisations	47 (29.19)
Public sector work	41 (25.47)
Access to higher education	32 (19.88)
Promotion in current job	30 (18.63)

\* The total number of questionnaires received was 161. Respondents could give more than one answer

**Table IV****Suggested duration of the programme**

Duration	No. of respondents (%)*
Six months	62 (38.51)
One year	79 (49.07)
Two years	20 (12.42)

\* The total number of questionnaires received was 161. Respondents could give more than one answer