

12-1-2002

Measuring the Ethical Cognition Effects of a Videotape Livestock Show Ethics Education Program

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Recommended Citation

Goodwin, J. L., Murphy, T. H., & Briers, G. (2002). Measuring the Ethical Cognition Effects of a Videotape Livestock Show Ethics Education Program. *The Journal of Extension*, 40(6), Article 10.
<https://tigerprints.clemson.edu/joe/vol40/iss6/10>

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December 2002 // Volume 40 // Number 6 // Research in Brief // 6RIB2



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Abstract

As Extension educators and agriculture education teachers address the sensitive issues of livestock show ethics and quality assurance of the food animals produced and marketed to the public through the youth livestock program, they must ensure that their educational efforts are effective. Everyone has an opinion about what should or should not be done in order to improve the situation related youth livestock ethics. This study examines the effectiveness of a video educational program that has been in widespread use since its inception in 1996.

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Introduction

The issue of livestock show ethics gained public attention in 1994 as residues of clenbuterol were discovered in several major livestock shows in the United States. The Food and Drug Administration (FDA) acted on concerns about possible adverse effects of clenbuterol residues on public health (Rodriguez, 1995).

In a provocative 1990 study of 1,945 participants of the Houston Livestock Show and Rodeo, Murphy, Norwood, and Dubes (1992) found that 25% of the respondents had knowingly used illegal drugs in preparing market animals for show ring competition. Even though "steroids" are contraband in this country, 7.9% of respondents indicated they had given these substances to market animals. Of those responding, 42.5% had illegally used tranquilizers in their animals, and 37.5% admitted to falsification of data on livestock registration certificates. The authors of this article noted that Murphy, Norwood, and Dubes (1992) referred to the compound clenbuterol as a "steroid" even though it is not actually classified as a steroid, but as a beta-agonist. Also, while clenbuterol was cleared for use in the United States for the treatment of horses in 1998, at the time of the study the drug was a contraband substance.

These unscrupulous practices not only threaten the future existence of 4-H and FFA youth development programs involving livestock, they also threaten consumer confidence in a safe and wholesome food supply. As a result, ethics educational efforts have been implemented in many states nationwide. The essence of livestock show ethics education is expressed as Coffey and Goodwin (1995) stress the importance of breaking the "curtain of silence" that the unethical few work behind.

Many states have aggressively implemented ethics educational efforts to 4-H and FFA audiences. The question at hand, then, is does the effort of presenting such educational programs result in a positive difference in the actions of individuals at youth livestock shows?

Purpose and Objective

The purpose of the study reported here was to determine the effectiveness of a videotaped ethics educational effort directed to individuals involved in youth livestock shows (e.g., 4-H and FFA members, parents, FFA Advisors, and Extension Educators).

To accomplish this purpose, the research objective was to determine livestock show participants' ability to correctly sort a list of livestock showing practices as either ethical or unethical. This ability was assessed both before and after exposure to a livestock show ethics education video program.

Methods and Procedures

Three questions were used to determine if a particular practice was ethical or unethical.

1. Does the practice violate FDA law? An example is the use of a substance not cleared for food animal use (e.g., certain diuretics, tranquilizers, anti-inflammatory agents, and feed additives).
2. Is it a fraudulent misrepresentation of the animal? Or, more succinctly stated, is it fraud? Examples include false ownership, falsified birth dates and ownership dates, and surgical manipulation of the animal.
3. Does the practice compromise the welfare of the animal? Examples include excessive short docking of lambs resulting in higher incidence of rectal prolapse, or severe restriction of feed and water to control weight.

If any of the three questions are answered yes, the practice in question is ethically unacceptable based on the constructs proposed in this study.

These questions were developed through an analysis of the available literature for use in the ethics education video "Line in the Sand" (Goodwin, 1996). This video has been adopted for use in all 50 states since its introduction in the fall of 1996. The ethical test offered in the video is a three-step test composed of three questions to assist individuals in discerning whether or not a particular practice involved in the showing of livestock is acceptable.

This presumption, that the construct offered above is a valid test of the ethical or unethical nature of a practice, has been scrutinized by a wide variety of audiences in many states. There has never been a valid argument against the three "Line in the Sand" questions reported by a presenter of the information in the United States to the producer of the video. The producer of the video has presented the three-question test to over 5,000 people in 10 states and has never had an audience member contest the validity of the three-question ethical test. As stated by Ann Swinker, Extension Equine Specialist at Colorado State University, "The three-question ethical test in the 'Line in the Sand' video has become the standard on which livestock showing practices are now measured in the state of Colorado, where the video is in use in every county in the state" (personal communication, April 30, 1997).

During the first nine months of 1997, 918 individuals involved in youth livestock shows in six states participated in this study. Data were collected from 4-H and FFA members, parents, FFA Advisors, and Extension Educators in Oklahoma, Idaho, Alabama, Washington, Oregon, and Ohio.

Sampling

A posttest-only control group experimental design was utilized in the study (Borg & Gall, 1996). Participants in the study were randomly selected into the treatment or the control group based on where they sat in the rooms used to deliver the ethics education programs. In half the cases, those sitting on the left-hand side of the presenter were selected as the Treatment group, while in the other half, those on the right were so selected. This selection procedure has been criticized. The most valid of these criticisms has been that two people, entering the room together, would not have the same probability distribution surrounding their selection into the Treatment group. (If one is chosen, and the other was bound to sit beside her, he would almost certainly be chosen). This is certainly true, and in the strictest of interpretations may well invalidate the principles of random assignment.

The reader may want to consider this fact a limitation of this study and use caution when generalizing to other populations. The authors contend, however, that the reader should consider the following when judging the reliability of this sampling technique. Many of the rooms used in this study were livestock show arenas--they were round. There are a few situations in which the side of the room is chosen for reasons other than random assignment. At weddings, for example, the choice of sitting on one side or another has underlying meaning. If there is no underlying reason to sit on one side or another, then two people entering together may well have different

probability distributions for being chosen into the Treatment group, but the two other people entering right behind them would not. Finally, these were relatively large samples.

Treatment

Control group participants were asked to sort a list of eight livestock showing practices as either ethical or unethical prior to the audience being exposed to the experimental treatment (viewing the "Line in the Sand" videotape). The treatment group participants sorted the same list of practices after exposure to the treatment.

The eight livestock showing practices included on the instrument to be sorted as either ethical or unethical included the following.

1. Twine glued to cattle in order to exhibit the animal at its best advantage.
2. Clipping, fitting, and grooming an animal in order to exhibit the animal at its best natural advantage.
3. Changing the color pattern of an animal so that it can be shown in another breed classification.
4. False ownership, showing an animal that really doesn't belong to you.
5. Drenching an animal with water in order to meet a minimum weight requirement.
6. Cleaning or polishing the hooves of an animal (if not against the rules of the show).
7. Drenching an animal with water in order to express capacity and volume in a breeding animal.
8. The use of a diuretic (such as Lasix) in order to meet a weight requirement.

According to the three "Line in the Sand" questions proposed as a guide to determine the ethical or unethical nature of a livestock showing practice, situations 2 and 6 are ethical, and situations 1, 3, 4, 5, 7, and 8 are unethical. These were considered the "correct" responses to the instrument for the purposes of this study.

As an indication of internal consistency, Cronbach's Alpha was calculated for the eight questions included on the instrument and found to be .64. This would indicate that measures of correlation between items on the instrument were in the acceptable range.

Findings: Effectiveness of the Video Program

While the treatment was randomly assigned, this study involved intact groups who were, in some manner, self-selected through their participation in an ethics education presentation. Caution is warranted in making inferences beyond the sample population described here.

When analyzed together ($n=918$), the participants did quite well on the test. The mean score of the control group was 91.75% (7.34 of 8.0), while that of the treatment group was 95% (7.64 of 8.0). There was a statistically significant difference between the control and treatment groups' ability to correctly sort the eight livestock showing practices.

While the treatment was clearly effective in increasing the mean score achieved on the instrument by the participants, in the judgment of the researchers, only a perfect score could indicate the presence of the desired level of ethical cognition. In this view, one either possesses the necessary level of ethical reasoning, or one does not. The degree to which a given respondent lacked the prerequisite cognitive ability to behave ethically was deemed unimportant.

To investigate this hypothesis, a new variable was created. A "0" was assigned to those individuals who missed even one of the eight questions, and a 100 to those who correctly sorted all eight livestock showing practices. Additional tests were conducted to determine the number of perfect scores in the sample populations before and after the treatment and the probability that any differences in the sample populations occurred by chance.

The Chi-Square statistic did exceed the tabulated value at the alpha established a priori ($p < .05$), thus the null hypothesis (that the populations would show a homogeneity of distribution) was rejected. The treatment resulted in a higher-than-expected percentage of perfect scores. In the control group, 64.1% of the subjects (268 of 418) achieved a perfect score. On the other hand, 79.6% (398 of 500) of the subjects exposed to the treatment achieved a perfect score. Subjects in the treatment group were better able to correctly identify all eight of the livestock showing practices as either ethical or unethical. So the treatment was deemed effective in altering the subjects' knowledge about acceptable and unacceptable practices.

The fact that 64.1% of the control population achieved a perfect score tends to support Coffey and Goodwin's (1995) supposition that the majority of livestock show participants behave ethically. For some people, this could lead to a conclusion that the comparatively small number of people

involved reduces the significance of the problem. Unfortunately, history has demonstrated that a small number, or even one unethical act, can trigger an overwhelming response in the form of public outcry and governmental regulation.

Conclusions

No claims are made regarding the change of unethical behavior at youth livestock shows as a result of exposure to the educational program serving as the experimental treatment in this study. However, the authors contend that a change in ethical cognition did occur in the treatment group and that this change was due to the treatment. The authors also contend that this change in ethical cognition or knowledge is essential and prerequisite to positive changes in attitude and, finally, behavior. Because ethical behavior is the desired outcome of all ethics education efforts, additional research is needed to determine the relationship between ethical cognition and ethical behavior regarding the particular issue of livestock show ethics.

A complete reporting of this study can be found in the Proceedings of the 26th Annual National Agricultural Education Research Meeting in Orlando, Florida (Goodwin, 1999).

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