

# Effect of background experience on student perceptions of ethical issues in animal science

Shannon M. Wyatt, **Mark A. Anderson**, Stanley F. Kelley, Marcy M. Beverly,  
Kyle J. Stutts and Jessica L. Lucia

Sam Houston State University  
Huntsville, TX

# Background

- Martin et al., 2006 found that students performed better on exams, quizzes, and term projects in an animal behavior class if they had no agricultural background, and students with no previous beef cattle experience performed better than those with beef cattle experience
  - Suggested incomplete or inaccurate prior knowledge hinders learning
- Pratt-Phillips and Schmitt, 2010 also found that previous equine experience was not correlated with overall performance in an introductory equine science course.
  - Suggested hands-on animal experience doesn't teach scientific principles taught in the classroom, but may cause students to overestimate their knowledge

# Objective

- To determine if students entering this course had inhibitions to formation of opinions on ethical issues in Animal Science based on previous experiences and background

# Hypothesis

- We hypothesize that a student's previous beliefs and experiences in production animal agriculture will inhibit their ability to logically utilize information regarding emotional ethical issues.

# Materials & Methods

- 40 question survey given at the beginning of the course (n = 53)
  - Sophomore level Animal Science course
    - Focus on ethical issues in Animal Science
    - Writing Intensive course
    - Core Curriculum course
    - Discussion-based course
- Same survey given at the end of the course (n = 57)
- 9 demographics questions
  - Gender, major, classification, age
  - Species of interest, 4H/FFA/Livestock judging experience

# Materials & Methods

- 3 questions regarding emotional feelings
  - Chickens, horses, cattle
- 2 questions regarding the production of each of 3 agricultural products: veal, eggs and pork
  - Do you think production of this product causes distress to the animals?
  - Do you think production methods of this product should be modified?

# Materials & Methods

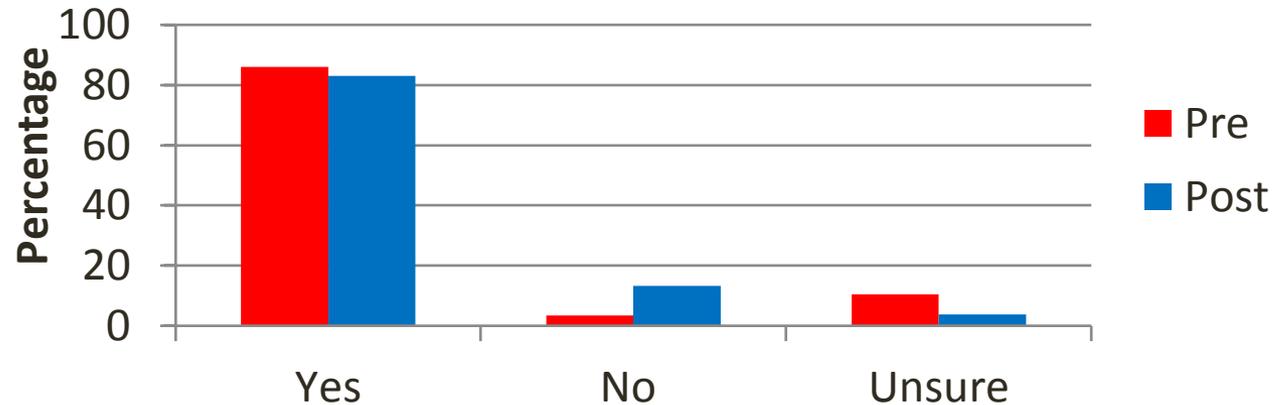
- Statistical Analysis (SAS 9.2)
  - Pre- and Post-survey responses were compared
  - Chi-square analyses were used to determine if differences existed in the frequency of answers to each question

# Demographics

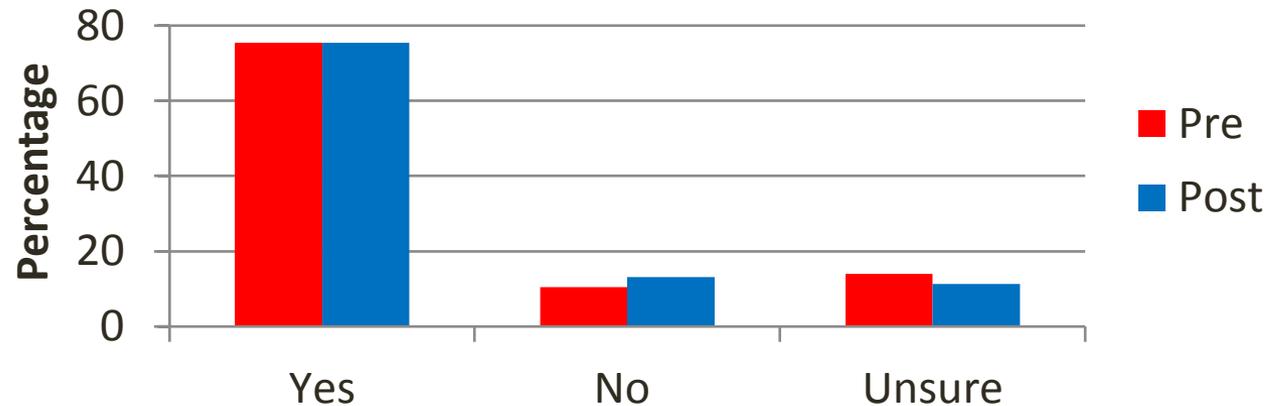
- 62% female
- 44% sophomores
- 53% were 17-19 years old
- 42% Animal Science majors
- 25% non-agriculture majors
- 53% were raised in a rural setting
- 64% had participated in FFA
- 54% had previous livestock judging experience
- Species of interest:
  - 33% horses
  - 26% companion animals
  - 23% cattle

# Results

## Do horses have emotional feelings?



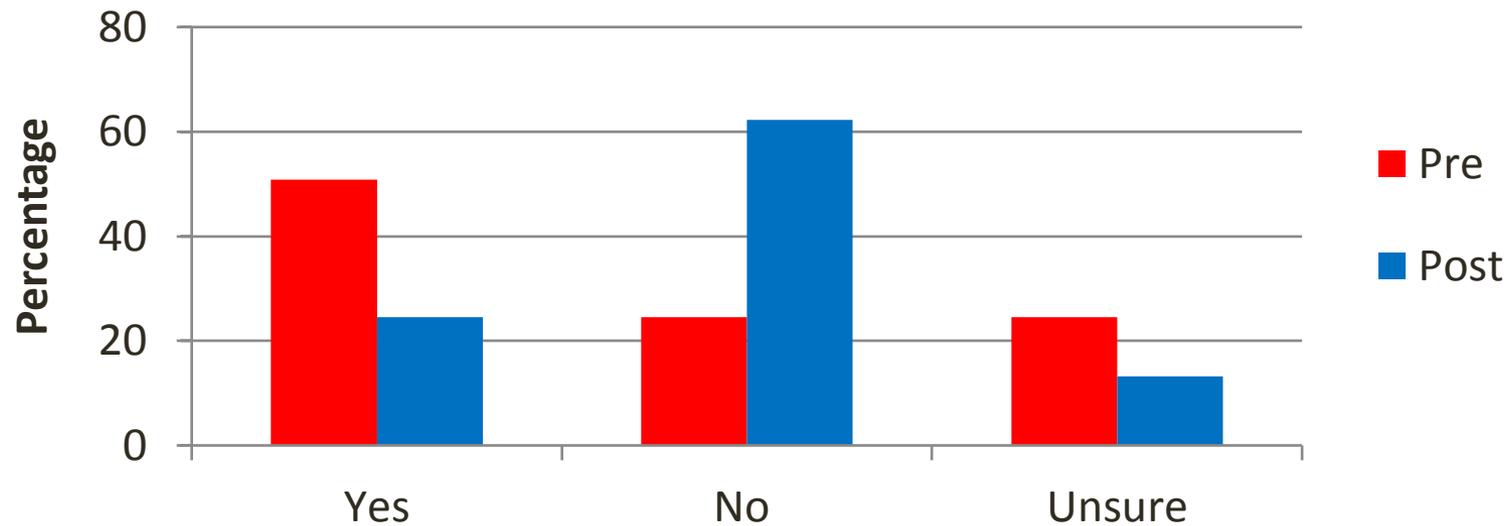
## Do cattle have emotional feelings?



\* Indicates a significant change in the student responses between the Pre and Post survey ( $P < 0.05$ )

# Results

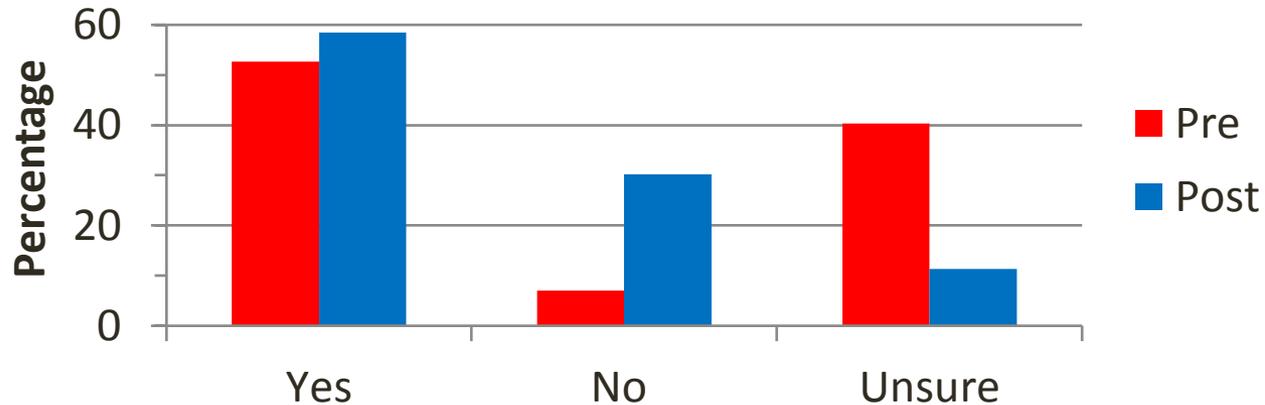
Do chickens have emotional feelings?\*



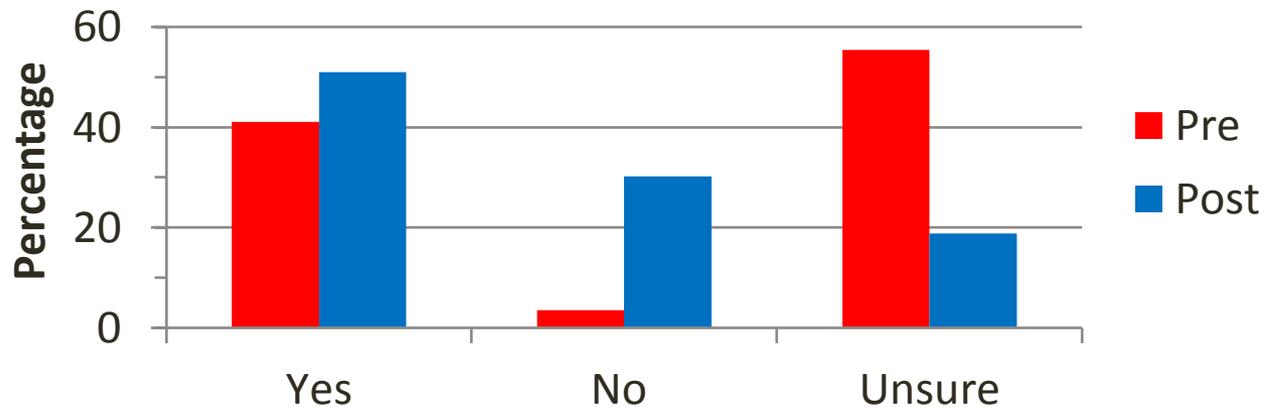
\* Indicates a significant change in the student responses between the Pre and Post survey ( $P < 0.05$ )

# Results

Does veal production cause distress to the animals?\*



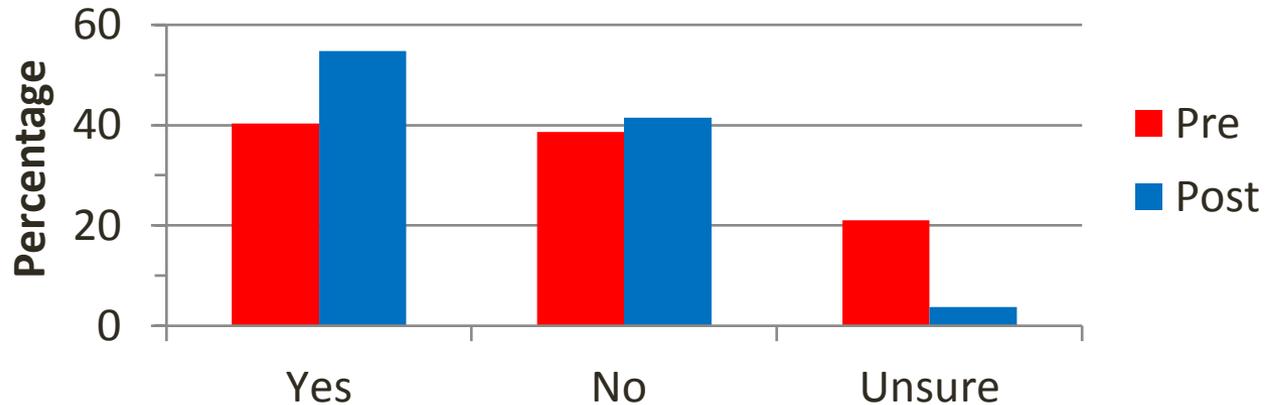
Should veal production be modified?\*



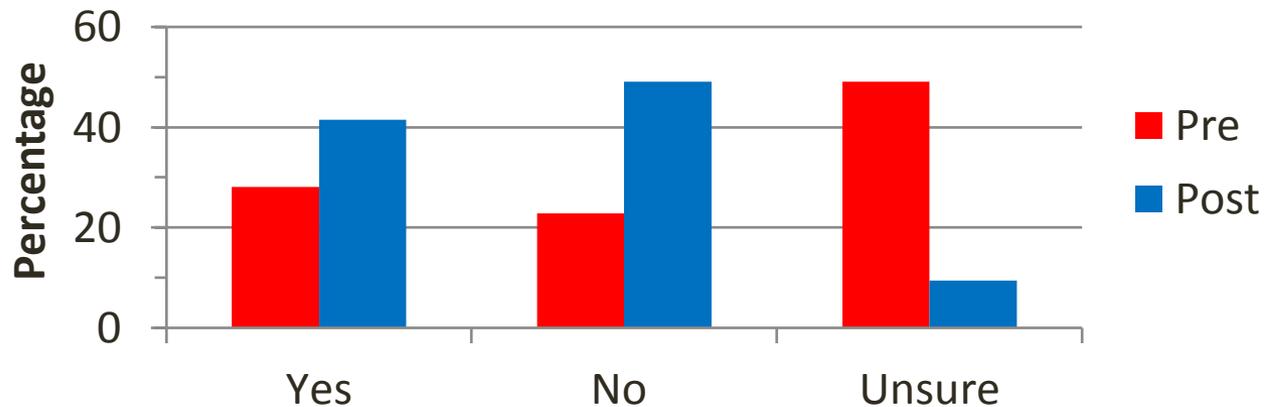
\* Indicates a significant change in the student responses between the Pre and Post survey ( $P < 0.05$ )

# Results

Does egg production cause distress to the animals?\*



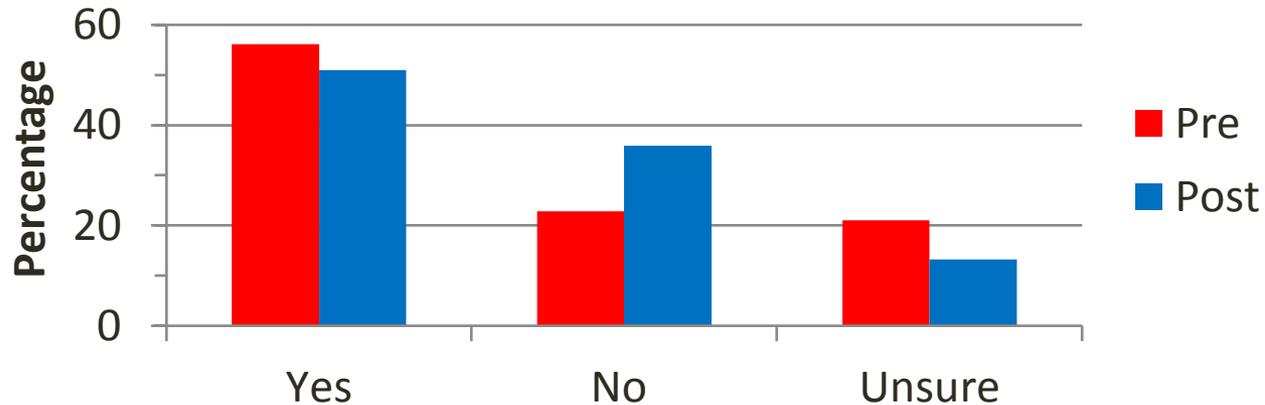
Should egg production be modified?\*



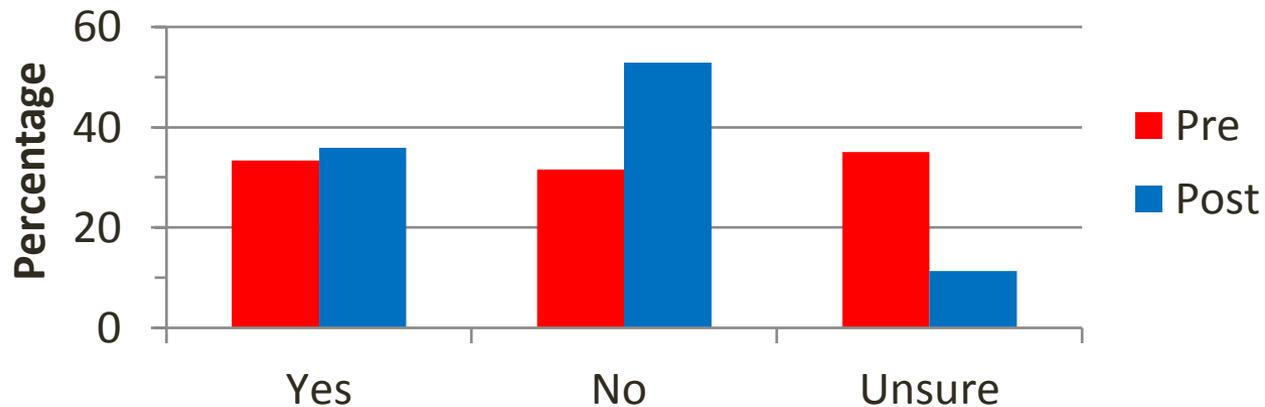
\* Indicates a significant change in the student responses between the Pre and Post survey ( $P < 0.05$ )

# Results

Does pork production cause distress to the animals?



Should pork production be modified?\*



\* Indicates a significant change in the student responses between the Pre and Post survey ( $P < 0.05$ )

# Discussion

- Many students marked “undecided” in answering these questions in the pre-surveys, indicating an openness to consideration of the issues
- While most students maintained throughout the course that horses and cattle have emotional feelings, the belief that chickens have emotional feelings dropped significantly
- By the end of the course, most students believed that veal, egg and pork production caused distress to the animals, yet most did not believe that modifications of those production methods were necessary

# Conclusions

- These results indicate that the previous experiences of students enrolled in this course did not inhibit their ability to utilize the presented production information to reform or confirm their opinions on ethical issues in Animal Science.
- The results also indicate that a disparity exists between the opinion that animals are experiencing distress, and the opinion that action should be taken to resolve that stress



- Martin, T.I.; Friend, T.H.; William, J.L.; Archer, G. 2006. Predictors of Success in an Undergraduate Animal Behavior Course. NACTA Journal. 50:3 51-56.
- Pratt-Phillips, S.E.; Schmitt, S. 2010. The Effect of Previous Equine Experience on Performance and Effort Required in an Introductory Level Equine Science Class. NACTA Journal. 54:1 41-45.

# Questions