

Do Mexican TN-Visa Swine Caretakers' Euthanasia Attitudes differ if they are Male or Female?

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Summary and Implications

Currently, Hispanic and Latino caretakers make up 17.2% of the total animal production and aquaculture workforce in the United States (U.S.). Yet, little is known about swine euthanasia attitudes as it relates to age demographics. The objective of this project was to investigate if there were euthanasia attitudinal differences between ≤ 30 years and > 30 years swine caretakers on a Trade NAFTA (TN)-visa from Mexico working on a commercial sow farm. An online Qualtrics survey was delivered in Spanish language and completed by 40 caretakers ($n = 20 \leq 30$ years and $n = 20 > 30$ years). Eligible respondents were swine caretakers on a TN visa and who spoke and read Spanish as their first language. Results will be presented descriptively. The majority of caretakers were male (63%), and 97.5% had received a higher education, with 55% never euthanizing an animal prior to this job. Average residency in the U.S. was 3.1 years. Regardless of caretaker age, all reported to being confident, knowledgeable, could make decisions, and were comfortable in performing euthanasia. Furthermore, there were no differences when euthanasia was being considered on an adult pig versus a neonatal piglet. In conclusion, these results suggest pigs and piglets are likely to receive timely and humane euthanasia to alleviate suffering on-farm regardless of caretaker age that are on a TN-visa from Mexico.

Introduction

Performing euthanasia has the capacity to affect and/or contribute to occupational and moral stress, euthanasia-related strain, compassion fatigue and burnout. Impacts of euthanasia tasks on occupational stress have been studied in

laboratories, veterinary clinics, and animal shelters, but less is known about how it affects swine caretakers. Campler et al. (2018) investigated English-speaking swine caretaker characteristics and attitudes toward timely euthanasia. The authors identified three distinct caretaker groups: 1) confident and empathetic; 2) confident, knowledgeable, and detached; and, 3) unconfident and lacking knowledge. Empathy attribution was strongly correlated with empathy affect and these attributions were higher in female-compared with male caretakers. Currently, Hispanic and Latino caretakers make up 17.2% of the total animal production and aquaculture workforce in the United States (U.S.). Yet, little is known about how they feel about euthanasia, and how this might differ between male and female caretakers. The objective of this project was to investigate if there were euthanasia attitudinal differences between 30 years and under and over 30 years swine caretakers on a TN-visa from Mexico working on a commercial sow farm.

Materials and Methods

This study was reviewed and approved as exempted research by Iowa State University Institutional Review Board (IRB: 20-364-00) for Human Subjects Research and complied with CFR 45 Part 46. A single swine company in central Iowa was used to recruit 40 caretakers ($20 \leq 30$ years and $20 > 30$ years). Eligible respondents were swine caretakers on a Trade NAFTA (TN) visa from Mexico who spoke and read Spanish as their first language. Prior to participating in the survey, caretakers signed a consent form.

Survey: One anonymous survey was created using Qualtrics software. The survey included 10 demographic questions about the participants, including: age, sex, ethnicity, highest degree earned, primary on-farm assignment, position title, euthanasia history, worked with other livestock, farm size and residency in the U.S. Caretakers completed 31 questions that were separated into four categories adapted from Rault et al. (2017); (a) **confidence** defined as knowing a pig is unlikely to recover, and identifying what is wrong (b) **knowledge** defined as having the skills to care for an ill or injured pig before euthanasia, and knowing how to complete euthanasia (c) **decision** defined as thought process that results in a timely euthanasia treatment option and, (d) **comfort** defined as feelings towards conducting euthanasia and coping afterwards. Furthermore, questions were delineated into adult pig (gilt, sow, teaser boar) and piglets (defined as the neonatal or suckling piglet). Caretakers answered using a 5 five-point Likert scale; 1) Strongly Disagree, 2) Disagree, 3) Neither Agree or Disagree, 4) Agree, 5) Strongly Agree. Additionally, caretakers were given the option “Choose not to disclose”.

Statistical Analysis: All data are presented descriptively. Demographic data are presented as count and percentages. Non-demographic results are presented as medians.

Results

Demographics: The majority of caretakers were male (63%), and 97.5% received a higher education, with 55% never euthanizing an animal prior to this job. Average residency in the U.S. was 3.1 years (Table 1).

Confidence: Regardless of age categorizations, median caretaker responses indicated that they were confident identifying illness, health outcomes, and knew when to euthanize pigs and piglets (Table 2).

Knowledge: Regardless of age categorizations, median caretaker responses indicated that they had sufficient knowledge in diagnosing sick or compromised pigs and piglets, knew what to do with sick or compromised pigs and piglets and knew if a pig or piglet needed to be euthanized (Table 2).

Decision: Regardless of age categorizations, median caretaker responses indicated that they did not have difficulty deciding when to euthanize pigs and piglets. Both age groups noted agreement with their co-worker’s euthanasia decisions, and were confident in conducting euthanasia. Caretakers 30 years old or younger neither agreed nor disagreed that they are less likely to euthanize a sow that is close to farrowing, while caretakers over 30 years indicated that they would euthanize a sow for humane reasons if she was close to farrowing (Table 2).

Comfort: Regardless of age categorizations, median caretaker responses indicated that caretakers are comfortable euthanizing pigs and piglets. Additionally, caretakers did not indicate that they prefer others to euthanize for them or that they disliked euthanizing pigs and piglets (Table 2).

Discussion

When surveying two age groups (≤ 30 years and >30 years) of Mexican swine caretakers on a TN-visa, there were no reported differences between confidence, comfort, knowledge and decision-making attributes. Furthermore, they did not differ when having to euthanize an adult pig versus a neonatal piglet. These results might be explained by the rigorous onboarding that this company does through week one orientation and several weeks of on-farm training. This on-boarding includes clear guidance on specific circumstances that absolutely require pigs to undergo euthanasia, along with education on the caretaker’s duty to avoid suffering in lieu of life preservation. In conclusion, these results suggest pigs and piglets are likely to receive timely and humane euthanasia to alleviate suffering on-farm regardless of caretaker age that are on a TN-visa from Mexico.

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Iowa State University Animal Industry Report 2022

Table 1. Spanish-speaking TN-visa swine caretakers' (n=40) demographic information.

<i>Variable</i>	<i>Category</i>	<i>Count (%)</i>		
		<i>≤30 Years</i>	<i>>30 Years</i>	<i>Combined</i>
<i>Sex</i>	Male	9 (22.5)	16 (40)	25 (63) [‡]
	Female	11 (27.5)	4 (10)	15 (37)
<i>Ethnicity/Race¹</i>	White*	17 (42.5)	17 (42.5)	34 (85)
	Native American	1 (2.5)	1 (2.5)	2 (5)
	White*/Native American/Other	0 (0)	1 (2.5)	1 (2.5)
	Other	1 (2.5)	0 (0)	1 (2.5)
	Choose not to disclose	1 (2.5)	1 (2.5)	2 (5)
<i>Highest degree earned²</i>	Bachelor's	8 (20)	3 (7.5)	11 (27.5)
	Professional title**	11 (27.5)	17 (42.5)	28 (70.0)
	Prefer not to answer	1 (2.5)	0 (0)	1 (2.5)
<i>Primary on-farm assignment³</i>	Maternity/wean	12 (30)	9 (22.5)	21 (52.5)
	Breed	8 (20)	9 (22.5)	17 (42.5)
	Other	0 (0)	2 (5)	2 (5)
<i>Position title⁴</i>	Manager: Works with pigs often	0 (0)	3 (7.5)	3 (7.5)
	Caretaker: Works with pigs occasionally	2 (5)	1 (2.5)	3 (7.5)
	Caretaker: Works with pigs often	18 (45)	16 (40)	34 (85)
<i>Euthanasia history⁵</i>	Before this job	7 (17.5)	11 (27.5)	18 (45)
	After this job	13 (32.5)	9 (22.5)	22 (55)
<i>Worked with other livestock⁶</i>	Yes	14 (35)	11 (27.5)	25 (62.5)
	No	5 (12.5)	9 (22.5)	14 (35)
	Prefer not to answer	1 (2.5)	0 (0)	1 (2.5)
<i>Farm size (No. sows)⁷</i>	≤1999	0 (0)	1 (2.5)	1 (2.5)
	2000 - 5000	16 (40)	17 (42.5)	33 (85)
	≥5001	4 (10)	2 (5)	6 (15)

[‡]Rounded up to the nearest whole number

*All caretakers were Spanish-speakers of Hispanic or Latinx origin

**The professional title in this table consisted of Master's, MD, DVM, and PhD

¹Ethnicity/Race options were: White, Black or African American, Native American, Asian, Pacific Islander, Other, and Choose not to disclose

²Highest degree earned options were: no formal education, daycare or preschool, elementary and secondary (grades 1-12), grade 12 (no diploma), grade 12 (with diploma), grade 12 (GED or technical school), college credits – less than 1 year of college, Associate Degree, Bachelor/ Baccalaureate, Master's degree, professional title, PhD, and choose not to disclose

³Primary on-farm assignment options were: maternity/wean, Breed, Other

⁴Position title options were: Manager: Works with pigs often, Caretaker: Works with pigs occasionally, Caretaker: Works with pigs often,

⁵Euthanasia history options were: Before working with pigs. After working with pigs. I have never euthanized an animal. I prefer not to answer

⁶Worked with other livestock options were: Yes, No, and I prefer not to answer

⁷Farm size (number of sows) options were: ≤1999 sows, 2000-5000 sows, and ≥5001 sows

Iowa State University Animal Industry Report 2022

Table 2. ≤30 years (n = 20) or > 30 years (n = 20) Mexican swine caretakers' attitudes toward adult pig's and piglet's euthanasia.

Survey questions	ADULT PIGS				PIGLETS			
	Age ¹				Age ¹			
	≤ 30		>30		≤ 30		>30	
	Median	n	Median	n	Median	n	Median	n
Confidence								
Know if pig will recover ²	4.0	20	4.0	20	4.0	20	4.0	20
Know what is wrong ³	4.0	20	4.0	20	4.0	20	4.0	20
Know when to euthanize ⁴	4.0	20	4.0	20	4.0	20	4.0	20
Easy to identify illness ⁵	4.5	20	4.5	20	4.0	20	4.0	20
Knowledge								
Insufficient knowledge for ill pig ⁶	2.0	20	2.0	20	2.0	20	2.0	20
Insufficient knowledge for euthanasia ⁷	2.0	20	2.0	20	2.0	20	2.0	20
Insufficient knowledge to diagnose ⁸	2.0	20	2.0	20	2.0	20	2.0	20
Decision								
Difficult to decide ⁹	2.0	20	2.0	20	2.0	20	2.0	20
Timeliness: I wait too long ¹⁰	2.0	20	2.0	20	2.0	20	2.0	20
Rationale I feel there are good reasons not to ¹¹	2.5	20	2.0	20	2.5	20	2.0	20
Co-worker disagreement ¹²	2.0	20	2.0	20	2.0	20	2.0	20
Confidence in euthanizing pig ¹³	4.0	20	4.0	20	4.0	20	4.0	20
Close to farrowing: Less likely to euthanize a sow ¹⁴	3.0	20	2.0	20
Comfort								
Comfortable ¹⁵	4.0	20	4.0	20	4.0	20	4.0	20
Prefer someone else ¹⁶	2.0	20	2.0	20	2.0	20	2.0	20
Dislike euthanizing ¹⁷	2.0	19	2.0	20	2.0	20	2.0	20

Caretakers were asked to rank questions on a Likert scale consisting of: 1=Strongly Disagree; 2=Disagree; 3=Neither Agree or Disagree; 4=Agree; 5=Strongly Agree

¹Age was defined as ≤ 30 years old and > 30 years old

²Know if pig will recover was the following statement "When I see a sick pig/piglet I usually know if it will get better"

³Know what is wrong was the following statement "When I see a sick pig/piglet I usually know what is wrong with it"

⁴Know when to euthanize was the following statement "I feel confident that I know when a pig/piglet needs to be euthanized"

⁵Easy to identify illness was the following statement "It is easy to identify a sick or compromised pig/piglet"

⁶Insufficient knowledge for ill pig was the following statement "I do not have enough knowledge and/or experience to know what to do with sick or compromised pigs/piglets"

⁷Insufficient knowledge for euthanasia was the following statement "I do not have enough knowledge and/or experience to know if a pig/piglet needs to be euthanized"

⁸Insufficient knowledge to diagnose was the following statement "I do not have enough knowledge and/or experience to diagnose what is wrong with sick pigs/piglets"

⁹Decision was the following statement "it is difficult to decide when a diseased pig/piglet should be euthanized."

¹⁰Timeliness was the following statement "I tend to wait longer than I should before euthanizing a pig/piglet"

¹¹Rationale was the following statement "I often feel that there are good reasons for not euthanizing a pig/piglet"

¹²Co-worker disagreement was the following statement "I often disagree when a coworker says a pig/piglet needs to be euthanized"

¹³Confidence in euthanizing pigs was the following statement "I am more likely to euthanize a pig/piglet now than 5 years ago"

¹⁴Close to farrowing was the following statement "I am less likely to euthanize a sow that is close to farrowing than other sows"

¹⁵Comfortable was the following statement "I feel comfortable doing euthanasia"

¹⁶Prefer someone else was the following statement "If I had the choice, I prefer someone else to euthanize pigs/piglets rather than myself"

¹⁷Dislike euthanizing was the following statement "I dislike euthanizing pigs/piglets"