Occupational Safety and Health: A View of Current Practices in Agricultural Education

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ABSTRACT

Providing safe and secure teaching and learning environments within schools is an ongoing process which requires a significant amount of attention. Therefore, this study sought to: 1) explore safety and health practices within secondary Agricultural Mechanics Education; and 2) identify the perceived obstacles which appear to hinder implementation of safety and health programs. While it might appear logical to assume that Agricultural Mechanics Education consistently reflect acceptable safety standards to promote enhanced learning and skill development, the results suggested there is room for improvement within schools. Findings may be useful to agricultural educators; school administration, teacher educators and safety compliance personnel interested in promoting enhanced occupational safety and health practices.

Introduction

Since the beginning of agricultural education in schools, educators have been concerned about the health and safety of their students. A great deal of attention has been focused on providing a safe educational environment to promote enhanced learning and skill development (Storm, 1993; Threeton & Walter, 2013). However, recent events of the day have revealed that there is good reason for concern related to safety and health practices within Agricultural Education. For example, in 2010, an 11th grade student from a New England state was injured while completing an assigned task within the laboratory setting. The student was instructed to cut what was believed to be a de-energized wire and replace it. Unfortunately, the wire was located in a junction box, which was still energized. As a result, the student was energized by 277 volts of electricity and subsequently hospitalized for burns suffered from the initial shock. Nine-months later the same injury occurred in a similar program in the state. On both occasions, the instructors were not present during the event (MDPH, 2011).

Incidents such as this highlight the ever growing need to examine occupational safety and health practices within Agricultural Education. While all individuals are susceptible to accidents, occupationally related safety literature has revealed that teens are injured at a higher rate than adult workers (NIOSH, 2007a). Every year, 70 teens die from work injuries in the U.S., while another 84,000 are injured severely enough as to require a visit to an emergency room (UC Berkeley Labor Occupational Health Program, 1997; NIOSH, 2007b). As a training ground for the world-of-work, Agricultural Education professionals must provide a safe teaching and

learning environment while simultaneously preparing students to work safely and successfully in the school as well as transfer those assets on-the-job. Therefore, the purpose of this research was to examine current occupational safety and health practices within Agricultural Education programs to determine if further research and development is needed within the field.

Occupational Safety and Health: Deficiencies in Agricultural Education

Conducting classroom and laboratory instruction in a manner that promotes learning, but also ensures the safety and health of the student is a major point of obligation (Gray & Herr, 1998). In response to this obligation, the National Institute for Occupational Safety and Health (NIOSH) developed a Safety Checklist Model (CDC, 2012) for establishing effective occupational safety and health programs within Career and Technical Education (CTE), which includes Agricultural Education. An occupational safety and health program within Agricultural Education is a set of policies, procedures and practices specifically designed to promote a safe teaching and learning environment. NIOSH's Checklist Model contains five essential classifications of guidelines including: 1) Assuring management commitment; 2) Assuring employee and student involvement; 3) Identifying and prioritizing potential hazards; 4) Eliminating hazards; and 5) Training personnel. While many states require the use of NIOSH's Safety Checklist Model as the minimum, little to no research has been conducted to determine whether or not instructors are implementing and enforcing occupational safety and health programs as an element of their curriculum and instruction (CDC, 2012; OSHA, 2013). This question tends to go ignored until an incident occurs, causing the educational institution, state, or NIOSH to investigate.

As an example, NIOSH recently conducted an investigation into an accident in which an 11th grade student within a New England state was injured while turning a piece of stock on wood working equipment. Despite successfully passing an OSHA 10-hour safety course, the student's ring finger came in contact with the rotating cutting head of a jointer (MDPH, 2009). Following the accident, the student was transported to the hospital, where the finger was amputated at the middle knuckle. The student's instructor was present but did not witness the incident. One of the prescribed recommendations from the National Institute for Occupational Safety and Health was that the NIOSH Safety Checklist Model be utilized, as it was designed to aid in complying with OSHA regulations (MDPH, 2009).

With clear guidelines established by NIOSH as well as corresponding state and federal legislation, why are accidents in Agricultural Education occurring? Are instructors utilizing the guidelines? Is safety legislation being enforced? Do students, instructors, and administration understand it? Are the guidelines supported and encouraged by administration? Questions such as these need to be explored in order to gauge what obstacles Agricultural Education instructors face in implementing occupational safety and health practices within their designated programs. Yet little scholarly literature exists which examines if the elements of NIOSH's guidelines are being implemented at the classroom/laboratory level (CDC, 2012; OSHA, 2013).

Occupational safety and health regulations are in place, not only to protect students and school personnel from preventable injuries, but also to protect instructors from unnecessary negligence claims. Despite great efforts, accidents still occur and in some instances can be rather

serious (Gray & Herr, 1998). Instructors may not always consider the liability risks within their classrooms and labs (Storm, 1993). Gray and Herr noted that instructors must anticipate unsafe situations which could reasonably be foreseen and design curriculum and instructional practices to minimize the possibilities of such risks. In today's "sue-happy society" instructors must create a safe environment not only to protect students, but also to avoid possible legal ramifications (Zirkle, 2013). Therefore, preparing the laboratory, educating students, acting as a safety role model, and most importantly implementing and enforcing applicable legislation as well as the NIOSH guidelines can aid efforts to avoid liability issues (Meanor & Walter, 2010). Threeton and Walter (2013) emphasized that only continuous monitoring for potential hazards, supervision of students, adherence to safety guidelines, and routinely enforcing safety standards will improve an instructor's chances in avoiding unnecessary negligence claims. Since accidents can happen in the safest of lab settings, Threeton and Walter advised to accurately record any and all incidents in a detailed manner, regardless of how superfluous it may seem, as some legal proceedings may not transpire until well after the accident has past. This is particularly important, as it is the instructor's responsibility to keep themselves, their program, and students safe.

As the standard bearers within the institution, Agricultural Education instructors and administration have a major responsibility to consistently evaluate the occupational safety and health practices to promote security. Balamuralikrishna and Dugger (1995) noted that staff and administrators play a key role in shaping the future of their institutions. In order to be initiators of the solution, Balamuralikrishna and Dugger recommended completing a SWOT (strengths, weaknesses, opportunities, and threats) analysis of the vocational programs to evaluate both internal and external factors that could contribute to the occupational safety and health within an institution. When educators complete a SWOT analysis, it causes them to reflect on systematic approaches, which could promote the advancement of the safety practices within the institution.

Similarly, Schulte, Carol, Okun, Palassis, and Biddle, (2005) concluded that little quantitative information exists on safety practices provided within career and technical programs, therefore efforts to evaluate occupational safety and health in workforce preparation programs will require studies that evaluate programs in a systematic manner. As Balamuralikrishna and Dugger (1995) indicated, gathering both positives and negatives relating to a program can shed light on potential improvements needed. With the theme of reflecting on areas in need of improvement, this research study sought to explore the safety and health practices within one of the most hazardous educational programs within the U.S., Agricultural Mechanics.

The Problem

Agricultural mechanics laboratories and classrooms are often filled with dangerous tools, equipment, processes, materials and supplies, within a wide range of environmental conditions, which are difficult to control. Agricultural educators, unlike their academic counterparts, are expected to manage the learning environment as well as promote safe practice to control for these potential hazards. As scholars have highlighted, the margin for error within some agricultural programs is so small that improper program safety and health practices can be the difference between life and death (Threeton & Walter, 2013; Meanor & Walter, 2010; Storm,

1993). Yet, little research has been conducted on this topic to determine the level to which safe and healthful practices are being provided (CDC, 2012; OSHA, 2013). Therefore, this phenomenon creates a problem that requires attention, as the results could safeguard life and limb.

Purpose and Research Questions

This research was conducted to examine current occupational safety and health practices within Agricultural Education to determine if further research and development is needed within the field. While a multitude of studies have examined safety and health practices within the workforce (NIOSH, 2004), few have investigated this topic within Agricultural Mechanics Education. Therefore, this study sought to answer the following questions:

1. What is the distribution of practicing agricultural mechanics instructors with a structured occupational safety and health program as an integral component of their curriculum and instruction?
2. What is the distribution of students, which are required to complete safety training prior to participation within the agricultural mechanics laboratory?
3. What is the distribution of students, which are required to complete safety tests prior to participation within the agricultural mechanics laboratory?
4. What is the distribution of students, which are required to complete a safety test with a perfect score prior to participation within the agricultural mechanics laboratory?
5. What, if any, obstacles do agricultural mechanics instructors perceive to hinder their ability to implement an occupational safety and health program in their classroom/laboratory?

Conceptual Framework

In 2010, the U.S. Department of Labor reported approximately 3.1 million nonfatal occupational injuries and illnesses. Given that Agricultural Education is a gateway to the world-of-work, and that over 90 percent of high school graduates have taken at least one related course (U.S. Department of Education, 2012), agricultural educators have a major responsibility to establish and maintain safe and healthful teaching and learning environments to promote future career success. While there are a multitude of important educational initiatives today, Zirkle (2013) emphasized, that providing a safe teaching and learning environment should be the first priority of every instructor. According H.W. Heinrich (1931) preventable accidents result from a chain of sequential events, which are metaphorically similar to a line of falling dominoes. Therefore, as one domino falls it triggers the next and so on. By removing factors such as unsafe conditions and acts from the learning environment, Agricultural Educators can prevent this harmful chain reaction.

The foundation of this research began with the premise that accidents should be viewed as preventable by removing unsafe conditions and acts, while promoting enhanced learning through increased educational safety programming. As Storm (1993) noted, the responsibility for the physical welfare of students rests with the instructor. If Agricultural Educators are responsible for educating future workplace professionals on occupational safety and health practices, it is critical to understand the extent to which they are incorporating safety and health

programs into their curriculum and instruction as well as assess what is either helping or hindering them from doing so. Therefore, the conceptual framework in which this research was founded included NIOSH's Safety Checklist Model (CDC, 2012) for establishing Occupational Safety and Health Programs in CTE, which includes Agricultural Education. According to NIOSH, the key to safe practice within the educational environment while simultaneously promoting enhanced teaching and learning opportunities is to establish a quality occupational safety and health program (CDC, 2012). NIOSH's Safety Checklist Model contains five elements which serve as a guide to establishing effective safety and health programs including: 1) Assuring management commitment; 2) Assuring employee and student involvement; 3) Identifying and prioritizing potential hazards; 4) Eliminating hazards; and 5) Training personnel. Therefore, this model served as the conceptual framework for this research. This study specifically focused on two elements of the model including: 1) Identifying and prioritizing potential hazards (i.e., identifying and prioritizing items, which are obstacles to implementation of a safety and health program); and 2) Training personnel (i.e., safety training provided and assessed prior to student participation in the program laboratory), as educating students and detecting safety concerns is a priority of Agricultural Education. Figure 1 is provided to illustrate the conceptual framework in context.

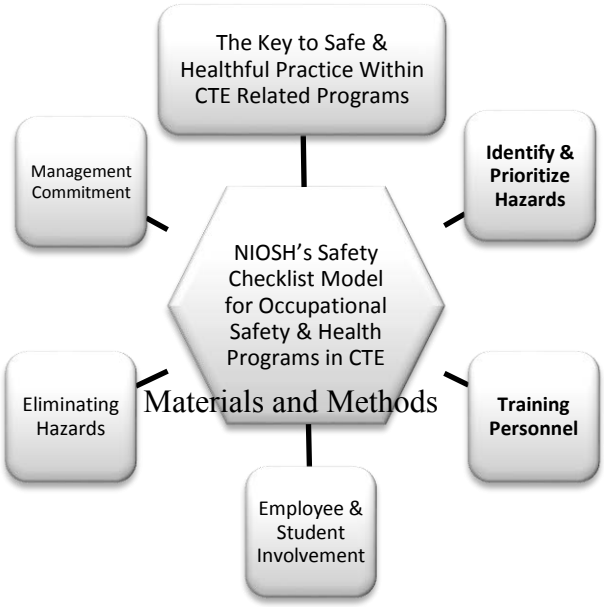

Figure 1. Removal of unsafe conditions and acts via NIOSH safety programing

Instrumentation

The researchers utilized survey research in this investigation in an attempt to provide a platform for honest and unambiguous responses. The instrumentation utilized was an investigator-developed survey based on NIOSH's Safety Checklist Model for establishing effective safety and health programs within CTE related settings such as Agricultural Education. The survey included 27 questions, which corresponded with the identifying and prioritizing potential hazards and training personnel elements of NIOSH's prescribed safety and health model (CDC, 2012). The specific survey items included status of a safety and health program, safety training and assessments completed by students prior to participation within the laboratory

as well as instructor's perceived obstacles to implementing an occupational safety and health program. Additional items included a demographics section within the final portion of the survey. The survey was reviewed for face and content validity by a 15 member panel of current technical educators well versed in proper safety practices, teacher education faculty members, and experts in survey development. After the panel completed the analysis, the primary investigator amended the survey to correspond with the prescribed recommendations.

Following human subjects protocol approval, a pilot study was administered to assess the reliability of the instrumentation as well as determine if there was a need for a formal investigation. Therefore, Agricultural instructors from the same state, which were not a part of the formal study, completed the survey via the web-based assessment platform, "Qualtrics". Upon analysis of the results, the Cronbach's alpha coefficient was determined to be .833 for the items related to the perceived obstacles to implementing an occupational safety and health program. Further analysis of the pilot study revealed a need for a formal investigation into occupational safety and health practices within Agricultural Mechanics.

Target Population of the Formal Study

The target population for the formal study included active educators in Pennsylvania currently teaching Agricultural Mechanics at the secondary level. These instructors were specifically targeted, as they represented one of the most hazardous subject area classifications during the spring of 2014. According to the designated State Department of Education records, there were a combined total of 156 educators teaching Agricultural Mechanics in Pennsylvania during the spring of 2014.

Data Collection

The data collection phase of this research was conducted during the spring of 2014. The appropriate clearance was obtained from the Office for Research Protections regarding the inclusion of human subjects in this research. Like the pilot, the formal study was also conducted using the web-based survey assessment platform, Qualtrics. In order to obtain an acceptable response rate, Dillman's (2000) procedures and timelines for conducting Internet surveys were employed. An email pre-announcement, an initial invitation to participate and three email contacts were sent to non-respondents.

Rate of Return

Sixty-eight out of 156 potential participants responded to the survey, which provided an overall response rate of 44%. Adjusted response rate, due to unexplained nonresponses, was 37%. The statistical technique of comparing early and late respondents (Miller & Smith, 1983) was utilized to control for non-response error. Individuals that responded prior to the third contact were considered to be early respondents, while those who responded after the third contact were considered late. A comparison of early and late responses revealed no statistical difference. This process allowed the researchers to generalize to the non-respondents and provided a methodological basis for assuming that they had responded (Miller & Smith, 1983).

Background of Participants

Demographic data is included in Table 1 to describe the respondents in this study. The majority of participants were male (*n*= 40, 70%), possessed an instructional II teaching certificate (*n*=42, 74%), and taught at a rural school (*n*=46, 81%).

Table 1
Demographic Data of Participants

	N	%
Gender (*n = 57)		
Male	40	70
Female	17	30
Age Range (*n = 57)		
20 to 29 yrs.	10	18
30 to 39 yrs.	16	28
40 to 49 yrs.	9	16
50 to 59 yrs.	21	37
60 or > yrs.	1	2
Level of Teacher Certification (*n = 57)		
Instructional/ Voc. I	15	26
Instructional/ Voc. II	42	74
School Areas (*n = 57)		
Rural	46	81
Urban	4	7
Suburban	7	12
Years of Trade Specific Work Experience (*n = 56)		
1 to 5 yrs.	19	34
6 to 10 yrs.	9	16
11 to 15 yrs.	6	11
16 to 20 yrs.	7	13
21 or > yrs.	5	27

Results

Research Question 1

The first research question sought to identify the distribution of practicing Agricultural Mechanics instructors with a structured occupational safety and health program as an integral component of their curriculum and instruction. This question was answered by calculating the frequencies and percentages of the items related to this query within the survey. The results revealed that 52 (76%) instructors reported having a structured occupational safety and health program as an integral element of the curriculum and instruction while 16 (24%) did not (see Table 2).

Table 2

Participant Response Pertaining to Safety and Health Program Status (n =68)

Question	Participant Response	
	Yes	No
Does your Agricultural Mechanics Program implement a structured Occupational Safety and Health Program as an integral component of the curriculum and instruction?	52 (76%)	16 (24%)

Research Question 2, 3 and 4

The second, third and fourth questions sought to assess the distribution to which students were required to complete safety training and related assessment protocol prior to participation within the agricultural mechanics laboratory. These questions were answered by calculating the frequencies of the data collected from the survey, which related to the training personnel elements of NIOSH's prescribed safety and health practices within the model.

The results for the second research question revealed that 55 (95%) instructors indicated students receive safety training prior to participation in the laboratory, while three did not. Similarly, the results for research question three indicated that 55 (95%) instructors required their students to complete a safety test prior to participation in the laboratory, while three did not. Surprisingly, the findings for the fourth research question revealed that 32 (55%) instructors permitted students to participate in laboratory activities without earning 100% on a safety test (see Table 3).

Table 3
Safety Training, Assessments and Laboratory Participation

Question	Participant Response	
	Yes	No
Do students receive safety training prior to participation within the program laboratory? (*n=58)	55	3
Are students required to complete a safety test prior to participation within the program laboratory? (*n = 58)	55	3
Are students permitted to participate in laboratory activities without earning 100% on a safety test (*n = 58)	32	26

Note. The **n* represents the number of participants in the sample who responded to the given question, out of n = 68).

Research Question 5

The fifth question sought to identify perceived obstacles to implementing an occupational safety and health program via a four point Likert-type scale, as well as a follow-up open-ended text entry item. These questions related to the identifying and prioritizing potential hazards

elements of NIOSH's prescribed safety and health practices within the model. All participants were given the opportunity to respond to this question regardless of how they answered question one within the survey, as per a recommendation from the expert panel responsible for reviewing the survey for content and face validity. The intent behind this recommendation was to capture the full extent of perceived obstacles to implementing an occupational safety and health program.

Upon analysis, the item: *lack of funding* (M=2.79, SD=.89) rated the highest among perceived obstacle, with 25% strongly agreeing (*n*=14) and 39% agreeing (*n*=22). The item*: chronic student absences* (M= 2.58, SD=.78) was also rated higher among perceived obstacles, with 7.4% strongly agreeing (*n*=4) and 48% agreeing (*n*=26). The items rating the lowest in disagreement as perceived obstacles included: *serving as a Career and Technical Student Organization (FFA) advisor* (M=1.67, SD=.74), which was followed by *the demands of state teacher certification requirements* (M=1.91, SD=.79) (see Table 4).

Table 4
Perceived Obstacles to Implementing an Occupational Safety and Health Program

Question	*N*	Mean	SD
Lack of funding	56	2.79	0.89
Chronic student absences	54	2.58	0.78
Lack of adequate classroom/laboratory space	56	2.57	0.92
High student enrollment per class	56	2.54	0.94
The layout of my instructional classroom/laboratory	55	2.50	0.94
Lack of classroom/ laboratory organization	56	2.48	0.91
The demands of new State Department of Education (PDE) initiatives	56	2.47	0.87
The demands of providing adaptations and accommodations for students with special needs	57	2.45	0.87
Lack of classroom/laboratory technology	54	2.39	0.94
The overall physical condition of my classroom/laboratory	54	2.38	0.88
The demands of the integration of academics within curriculum and instruction	56	2.37	0.87
The demands of professional development	56	2.36	0.75
Lack of tools, equipment and/or supplies	56	2.30	0.90
The state assessment accountability demands	56	2.22	0.79
The demands of attending IEP meetings	57	2.08	0.83
Lack of Personal Protective Equipment (PPE)	56	2.01	0.75
The demands of state teacher certification requirements	56	1.91	0.79
Serving as a Career and Technical Student Organization (CTSO) -or- (FFA) Advisor	57	1.67	0.74

Note. Scale used 1 = strongly disagree, 2 = disagree, 3= agree, 4 = strongly agree. In addition to the questions listed on the Likert-type scale, participants were given the opportunity to provide a text response, allowing them to list any other obstacles that they believe hinder their ability to carry out a health and safety program in their CTE program. Other obstacles (differing from Table 4) included: Administrators lack of knowledge and support (mentioned 3 times), lack of time to add/modify safety plans (mentioned 2 times), lack of communication (mentioned 2 times), and "differences in opinion between Ag Educators in the building about how procedures should be done".

Conclusions

Research Question 1

While it might appear logical to assume that agricultural education programs consistently reflects acceptable safety standards to promote enhanced learning and skill development, the results suggested there is need for concern related to occupational safety and health practices within some agricultural mechanics programs. The results for question one revealed that 52 (76%) instructors reported having a structured occupational safety and health program as an integral element of the curriculum and instruction while 16 (24%) did not. Overall, this finding appears to be very positive with a majority of participants reporting an occupational safety and health program as an integral component of the agricultural mechanics program as is recommended within NIOSH's Safety Checklist Model. However, there were 16 (24%) instructors, which reported not having an occupational safety and health program. Thus, increased risk may well be associated with programs, which have instructors that do not implement a safety and health program, as it is an effective way to comply with applicable safety and health standards (OSHA, 2013).

Research Questions 2, 3 and 4

The findings related to safety training and evaluation practices in the agricultural mechanics program, corresponded with research questions two, three and four. When asked if students receive safety training prior to participation in the laboratory, 55 (95%) instructors indicated they did, while three reported their students did not. Similarly, 55 (95%) instructors revealed their students were required to complete a safety test prior to participation in the laboratory, whereas three educators did not require an assessment. While these findings represent a relatively small distribution of participants whom did not require safety training and assessments of students prior to participation in the laboratory, the results are troubling, as providing a safe teaching and learning environment for all students should be the first priority of every educator (CDC, 2012; Zirkle, 2013).

Another notable finding, which corresponds with research question four included 32 (55%) instructors reporting that they permitted students to participate in laboratory activities without earning 100% on a safety test. This finding is noteworthy, as the margin for error within some elements of the agricultural mechanics program can be so small that any form of miscommunication or misstep could be life threating. It could be the one or more items missed on the safety evaluation that causes the greatest harm (Threeton & Walter, 2013). Students could find themselves unable to recognize occupational hazards upon transition to the world-of-work.

Research Question 5

The fifth research question sought to identify perceived obstacles to implementing an occupational safety and health program. The questionnaire gauged instructors' perceptions using a four point Likert-type scale (i.e. 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). At first glance the results for question five are not astounding; the means for each obstacle appear to be somewhat neutral. The instructors' responses, for the most part, appear to "disagree" with the question, meaning that these items do not hinder their ability to implement an occupational safety and health program, as most of the obstacles' means tend to be around a 2 =

disagree. However, a few of the perceived obstacles' means were closer to "agree" than "disagree", such as *lack of funding* (M=2.79, SD=.89), *chronic student absences* (M=2.58, SD=.78), *lack of adequate classroom/laboratory space* (M=2.57, SD=.92) and *high student enrollment per class* (M=2.54, SD=.94). Moreover, instructors were provided with the option to offer an open entry text response, in reference to perceived obstacles. Instructors noted: administrators lack of knowledge and support (mentioned 3 times), lack of time to add/modify safety plans (mentioned 2 times), lack of communication (mentioned 2 times) and differences in opinion between Agricultural Educators in the building about how procedures should be done (mentioned once).

Intervention strategies appear to be needed in these particular areas to support implementation of occupational safety and health programs. Strategies could range from providing alternative pathways of safety programming for absent students, strategies in dealing with high student enrollment per class and limitations in classroom/laboratory space as well as expanded financial revenue in the form of grants and contracts. It is plausible that lack of acknowledged hindrances may be due to the fact that they were not identified in the questionnaire as potential obstacles, and therefore went undisclosed by participants. Conversely, the scarcity of perceived obstacles could also be owed to the diligence that the surveyed instructors have in implementing occupational safety and health programs in their classrooms, and therefore they found no notable hurdles.

Discussion

Scholarly Significance

While a multitude of studies have examined safety and health practices within the workforce (NIOSH, 2004), few have investigated this topic within Agricultural Education. We now know there is need for concern related to occupational safety and health elements within some Agricultural Mechanics programs in Pennsylvania. While 76% of participants within this study reported having a structured occupational safety and health program as an integral element of the curriculum and instruction, the results appear to reveal a subgroup of instructors in need of occupational safety and health remediation.

Instructors identified lack of funding, chronic student absences, lack of adequate classroom/laboratory space, and high student enrollment per class as the highest of perceived obstacles to implementing safety and health programs. However there appears to be an additional area of concern, as the results of research question four revealed, over half of the participants within this study permitted students to participate in laboratory activities without earning 100% on a safety evaluation. This finding is of great importance, as the margin for error could be so small that any form of miscommunication within certain elements of the program could be the difference between life and death. While it may take multiple attempts for some students to earn a perfect score on safety evaluations, investment in the remediation process can safeguard life and limb.

Therefore, the occupational safety and health concerns highlighted within this study should be viewed as critical elements in need of attention. Based on the conclusions of this study the following recommendations are made.

1.) School administration and instructors from the designated programs should seek technical assistance from school safety specialists, OSHA, NIOSH and teacher educators to immediately correct the occupational safety and health concerns highlighted in this study. This support should align with NIOSH's Safety Checklist Model (CDC, 2012).
2.) Professional development opportunities should be provided to the instructors and school administration, which emphasizes interventions to overcome significant obstacles noted within Table 4.
3.) Since there is a dearth of occupational safety and health studies within Agricultural Education this investigation should be replicated on a larger scale within Pennsylvania as well as other parts of the country.

As with any body of research, there are limitations of this investigation including: 1) the results are not generalizable outside of the target population; 2) the instrumentation format was self-reporting in nature and could have been incorrectly reported by participants; and 3) a majority of the survey items were multiple choice, thus some occupational safety and health practices may not have been fully captured. Therefore the results should be viewed as an initial call to action, which promotes further research and professional development to advance proper occupational safety and health practices within Agricultural Education.

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