AN EXAMINATION OF TEXAS AGRICULTURE TEACHER SAFETY ATTITUDES BASED ON A PERSONAL BELIEF SCALE SCORE FROM COMMON SAFETY AND HEALTH PRACTICES

Dan Hubert, Utah State University
Doug Ullrich, Sam Houston State University
Jimmy Lindner, Texas A&M University, College Station
Tim Murphy, Texas A&M University, College Station

Abstract

Agricultural education programs offer many unique hands-on opportunities to develop both valuable academic and vocational skills for its students. A variety of laboratories provide opportunities for students to actively and experientially engage in scientific inquiry and agricultural applications. In the course of skill development, evidence has suggested students will be more safety conscious if teachers also follow proper safety practices, demonstrate accurate safety knowledge, provide a safe laboratory environment, convey a positive safety attitude, and relay safety expectations to students (Harper, 1984). Positive safety attitudes, beliefs and practices of agricultural science teachers are crucial for insuring students’ educational opportunities are not hampered. This unique study assessed general safety and health perceptions, beliefs, and practices of teachers in Texas agricultural education by means of a Personal Belief Safety Scale (PBSS) score based on common safety and health practices used in agricultural settings.

Data were collected from 302, self-selected Texas agriculture teachers, or approximately 20% of all Texas' agriculture teachers in 1999. Results indicated these self-selected Texas agriculture teachers displayed positive agreements toward common measures that exhibit safety consciousness. It was also found that age and years of teaching experience might effect a teacher’s belief or attitude towards agricultural education program safety consciousness. First year teachers and teachers with limited experience appeared more approachable to safety concerns in their programs with female teachers exhibiting a higher conviction towards common safety practices than their male counterparts. Although it was also found that mean PBSS scores by Texas FFA area were significantly different (F=2.13), neither size of school nor the number or students in the agricultural education program had an effect upon teachers’ PBSS scores.

* The research reported in this paper was supported (or in part) by Cooperative Agreement U07/CCU612017 from the National Institute for Occupational Safety and Health (NIOSH). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of NIOSH.
Introduction / Theoretical Framework

During the 1990s agriculture was reported as one of the three most dangerous occupational industries in the United States with approximately 24 deaths per 100,000 workers and over 140,000 disabling farm-related injuries (National Safety Council, 1995). Alarming rates of injury and death continue to be reported even after 10 years of federal programs to combat these tragic occurrences. Hendricks, Myers, & Adekoya (2000) reported greater than 32,000 non-fatal farm related injuries occurred to children under age 20 during 1998. Though the vast majority of these incidents occurred to youth living on farms, over 1 in 5 of the injuries were incurred by youths visiting a farm. This is important data for agricultural education programs where on site visitations to farms or ranchettes by both teachers and students are common.

Agricultural education programs offer many unique hands-on opportunities to develop both valuable academic and vocational skills for its students. Agricultural laboratories provide opportunities for students to actively and experientially engage in scientific inquiry and application. Success of agricultural education programs has been shown to be positively related to the quality of science applications in courses (Osborne, & Dyer, 2000). Agricultural laboratories found in secondary agricultural education programs are diverse. They are a mix of classrooms, greenhouses, agricultural mechanics, aquaculture and food processing laboratories, school farms, and off-campus livestock facilities. While preparing students for progression to the university or community college or careers in the progressive agricultural industry, traditional vocational laboratories of programs are often less than ideal examples of appropriate work environments.

Over the recent past, health and safety concerns for student populations in Texas high schools have grown in importance. Districts have complicated this issue in two regards by increasing demands on teachers to improve scores on state-mandated tests and through Texas policy of local control of state-based educational funding. These decisions have placed career and technology (vocational-based) programs at the bottom of hierarchical importance and resulted in financial neglect of career and technology laboratory facilities by administrators who have been in favor of computer labs or other, core academic courses that emphasize test taking skills. This is notably consequential in the case of student health protection in laboratories stocked with dangerous equipment, as the cause of greatest concern for the health of children and adolescents has become unintentional injuries (U.S. Department of Health and Human Services [DHHS], 1990).

Student popularity of traditional laboratory courses, particularly agricultural mechanics, is substantiated as up to two-thirds of teacher course assignments may be spent in these laboratories (Shinn, 1988). Unfortunately teacher preparation in the area for agricultural mechanics and safety instruction continues to be limited (Hubert, 1996). The quality of agricultural laboratories to support such instruction and a lack of systematic statewide facility and equipment improvement is also problematic.

According to Dyer & Andreason (1999) agricultural education laboratories and shops can be hazardous teaching and learning environments. Injury opportunity and slight mishaps are common in agricultural shops and laboratories. Opportunities, however, for injury and mishaps happening in the other laboratory settings such as greenhouses, animal facilities, aquaculture, foods processing, chemistry, and biology labs are also no less real. In agricultural laboratories, such injuries and mishaps often go unnoticed by the teacher and contribute to inadequate
reinforcement of proper student work habits. This may be especially true in the area of following safety rules and procedures.

In such project-oriented courses, Phipps & Osborne (1988) question whether the primary aim of laboratory instruction is skill development or project construction? Too often project completion timetables are set by fair entry deadlines. Project completion takes precedence over skill development progress. If skill development is the focus of laboratory instruction then thorough attention to all its components including safety instruction is essential. These authors further indicate that teachers need to use the laboratory to help students learn and develop efficient work habits, positive attitude toward working, while also ensuring safe laboratory conditions conducive to the growth of each student. Lack of teacher and administrator safety regulations knowledge, personal safety policies and practices, and positive attitudes toward safety compounds the educational goals in these challenging learning environments. Preservice and in-service attention to increase safety awareness and practice may be one avenue to address this concern. Documented over the years by Johnson (1989), Swan (1993), Thompson & Garton (1997) and others, Dyer & Andreasen (1999) reaffirmed that new teachers were inadequately trained in safety and experienced teachers were even less safety conscious than their professionally young colleagues.

To combat the prospect of student injury in shops or laboratories, a strong safety climate must be instituted in programs. It is recognized that safety is not the most glamorous component of most courses. Safety education is covered, albeit in various degrees, within a lesson for specific tool use or unit of instruction (Hubert, Ullrich & Murphy 2000). Regardless, teacher attitudes toward safety instruction and establishing a pervasive safety climate are requisite in agricultural education programs. Teachers must be aware of what they say and do for they are the ones ultimately responsible for the consequences of their own actions (McCormick, 1994). If teachers fail to promote and follow safety procedures, students may very well likely also follow suit. In a worst-case scenario, the "suit" may be of legal nature against the school district as a result of a personal injury and liability. Both experienced and inexperienced teachers often overlook the significance of safety instruction and supervision in spite of the litigation potential from incurred personal injuries in the laboratory. Newcomb, McCracken & Warmbrod (1993) maintain safety instruction is largely a question of personal attitude and instructional practices that impact the affective domain. From this perspective, one must be mindful of the consequences teachers’ actions and behaviors have on students’ learning and attitudes toward safety.

Adolescents tend to see things in black and white and fail to take into account the perplexities and complexities of the real world (Clark & Starr 1996, p 24). Students do not understand the consequences of foregoing safety procedures. They tend to live in a risk taking world where ignoring the rules adds to the excitement of the moment. Frequent risk-taking is “normative, healthy, developmental behavior for adolescents” (Ponton, 1997, p.6). Such risk-taking, however, often results in unintended consequences and must not be allowed to stand as the norm in career and technology programs. Agricultural education programs supported with laboratories are designed to present real world situations to students in safe learning environments. The primary focus of laboratory instruction should be to develop students’ ability to perform the skills needed in real occupational settings. In the course of skill development, evidence suggests that students will be more safety conscious if teachers also follow proper safety practices, demonstrate accurate safety knowledge, provide a safe laboratory environment, convey a positive safety attitude, and relay safety expectations to students (Harper, 1984).
Phipps & Osborne (1988) asserted a major portion of laboratory supervision by the teacher is to emphasize and demonstrate safety and provide feedback on students’ safety procedures and provide relevant feedback and reinforcement. No teacher wants to be the defendant in a negligence lawsuit brought against his or her district. Teachers of vocational agriculture, school administrators, and boards of education were found extremely vulnerable to being found negligent and liable if a student were injured in the agriculture shop (Gliem & Hard, 1988). Crunkilton & Krebs (1982) asserted that a person learns what is practiced, whereas McCormick (1994) stressed learning connotes a change of behavior. Unsafe student behaviors put a program at risk. Sullivan (1990) concluded that modeling safe behavior is one of the sixteen actions necessary to protect the students from injury. Thus, a student injured from an unsafe practice demonstrated by the teacher could result in costly and preventable consequence to the teacher, program, school, and district. We must remember the teacher is responsible for promoting desirable attitudes that assist pupils in developing a proper respect for safety (Kigin, 1983).

Agricultural education laboratories and shops require teachers to exhibit proper safety behaviors, as these behaviors are influential on student behavior/performance. Newcomb, et al. (1993) reinforced the need for teachers to demonstrate the specifics of safe, psychomotor operations and for students to be reminded throughout the course of safe practices. They indicated that teachers must set a good example, serve as role models, and practice what they preach. It is unfortunate for students that they may end up injured later from unsafe practices modeled by the teacher. Frank, Hubert, & Gilmore (2000) and others have alluded to agricultural safety practices that have been related to decreasing injury in agricultural work settings. These included shops having properly working fire extinguishers; posting of emergency numbers by the phone; wearing proper protective equipment when doing agricultural work; wearing seatbelts and safety devices when operating tractors/farm machinery; maintaining a clean and well-organized shop; fencing around farm ponds/stock tanks and lagoons; and establishing mandatory age requirements to operate tractors and/or equipment.

Today's litigious legal environment, combined with teaching and student injury rates, illustrates the need to ensure teachers and administrators are practicing proper safety practices, following applicable safety laws, exhibiting positive attitudes toward safety, and providing safe teaching and learning environments. Rinato (1998) recommends eliminating motivation for litigation (i.e. recognizing and eliminating problems) and creating awareness of potential problems with administrators would lessen school litigation concerns. However, teachers in agricultural education programs appear to be still the largest deterrent to safety practice adherence. Dyer & Andreasen (1999) concluded teachers’ personal attitudes and beliefs towards safety might be indicative of their practices in the classroom and laboratory. Further identification of the less safety conscious beliefs and practices of teachers is necessary. That is, those teachers who believe safety is important, are more willing to adhere to safety laws, policies, and practices, thereby, resulting in safer teaching and learning environments, lower student injury rates, and decreased legal liability.

Purpose / Objectives

The purpose of this study was to assess Texas agricultural science teachers’ general agricultural safety and health perceptions, beliefs, and attitudes by means of a Personal Belief Safety Scale score (PBSS). Summarized responses would portray the general safety climate and attitudes of
the self selected Texas agricultural science teachers. Five objectives were developed to guide this study.

1. To describe Vocational Agricultural Teachers Association of Texas (VATAT) teachers by personal beliefs’ pertaining to common agricultural safety practices.
2. To examine differences by Personal Belief Safety Scale (PBSS) scores and teacher age and teaching experience.
3. To ascertain differences by Personal Belief Safety Scale (PBSS) scores and gender.
4. To assess differences by Personal Belief Safety Scale (PBSS) scores and FFA area and FFA membership in participants agriculture program.
5. To examine differences by Personal Belief Safety Scale (PBSS) scores and number of students in participants’ agriculture program and school classification.

Methods / Procedure

The target population of this study was agricultural science teachers attending the 1999 Texas Agriculture Teachers Professional Improvement Conference. Utilizing descriptive research methodology, a researcher-developed, booklet-type survey instrument was distributed to conference attendees in order to gather needed data. The instrument contained five sections. However, only the following sections were analyzed and used for this manuscript: Demographics, Personal Beliefs, and Personal Practices. Teacher educators, and state agricultural education staff from Texas and Oklahoma served as a panel of experts to review the instrument for face and content validity. Consensus was achieved that these Personal Beliefs and Personal Practices items would provide adequate data to assess general safety attitudes and perceptions of agriculture teachers in Texas. Appropriate revisions were completed based on comments. To insure reliability, the instrument was pilot tested with agricultural science teachers in southeast Texas. Instrument reliability was estimated by calculating a Cronbach’s alpha coefficient (r = .61). Following final review and revision the instrument was distributed to the target population.

Data were collected from 302 completed instruments returned by Texas agriculture teachers over the course of the conference. These 302 teachers represented approximately 20 percent of the total VATAT membership in 1999. Descriptive statistics, analysis of variance, t-tests, and regression procedures were conducted. Results were analyzed at the .05 level of significance.

Results

The first objective was to describe Vocational Agricultural Teachers Association of Texas (VATAT) teachers by personal beliefs’ pertaining to common agricultural safety practices. The range of PBSS scores was 3.8 to 2.8 under the following agreement Likert-type scale: 4 = highly agree; 3 = agree; 2 = disagree; and 1 = highly disagree. Mean PBSS scores and standard deviations are presented in rank order in Table 1.
Table 1.
Ranked teacher Personal Belief Safety Scale (PBSS) scores.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Personal Belief of Selected Positive Safety Practices</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>All shops should have a properly working fire extinguisher.</td>
<td>3.8</td>
<td>.7</td>
</tr>
<tr>
<td>2</td>
<td>Emergency numbers posted by the phone are a good idea</td>
<td>3.6</td>
<td>.7</td>
</tr>
<tr>
<td>2</td>
<td>Proper protective equipment should always be worn when doing agricultural work.</td>
<td>3.6</td>
<td>.7</td>
</tr>
<tr>
<td>3</td>
<td>Seatbelts should be worn and safety devices in place when operating tractors/farm machinery.</td>
<td>3.5</td>
<td>.7</td>
</tr>
<tr>
<td>3</td>
<td>A clean and well-organized shop reflects a safe environment</td>
<td>3.5</td>
<td>.6</td>
</tr>
<tr>
<td>4</td>
<td>Fences around farm ponds/stock tanks and lagoons are an effective safety precaution.</td>
<td>2.9</td>
<td>.7</td>
</tr>
<tr>
<td>5</td>
<td>Mandatory age requirements should be established to operate tractors and/or equipment.</td>
<td>2.8</td>
<td>.7</td>
</tr>
</tbody>
</table>

PBSS score (M = 23.7)

Note: 1=highly disagree; 2=disagree; 3=agree; 4=highly agree.

An overall personal safety belief scale score (M = 23.7) was computed by averaging all individual personal belief item responses. Personal Belief Safety Scale (PBSS) item means were ranked by perceived safety importance. The safety and health belief teachers felt most strongly towards was “All shops should have a properly working fire extinguisher” (3.8/4.0). The range of personal belief scores was 3.8 to 2.8. Ranking second with a mean of 3.6/4.0 were the personal beliefs of “Posting emergency phone numbers by the phone are a good idea” and “Personal protective equipment should always be worn when doing agricultural work.” “Seatbelts should be worn and safety devices in place when operating tractors/farm machinery” and “A clean and well-organized shop reflects a safe environment” were ranked third with a mean score of 3.5/4.0. Finally, the personal beliefs with the lowest cumulative score rankings, 2.9 and 2.8 respectively, were “Fences around farm ponds/stock tanks and lagoons are an effective safety precaution” and “Mandatory age requirements should be established to operate tractors and/or equipment.”

Objective 2 sought to examine differences by PBSS scores and teacher age and years of experience. It was found that summated personal safety belief score scale was significantly impacted by both age and teaching experience. These results are presented in Tables 2, 3 and 4, respectively.

Table 2 illustrates the PBSS scores ranged from 24.9 for the 20 to 29 year old teachers to 22.7 for teachers 50 years old or greater. As presented in Table 2, the mean PBSS score for respondents was significantly related to age, F (3, 297) = 18.7. Teachers 20-29 years old tended to have higher safety personal belief scores than teachers 40 years old and older.
Table 2.

Age by Personal Belief Safety Scale (PBSS) scores

<table>
<thead>
<tr>
<th>Age</th>
<th>n</th>
<th>Mₘ</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-29</td>
<td>98</td>
<td>24.9</td>
<td>2.4</td>
<td>7.43*</td>
</tr>
<tr>
<td>30-39</td>
<td>84</td>
<td>23.7</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>40-49</td>
<td>69</td>
<td>22.9</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>50 and over</td>
<td>46</td>
<td>22.7</td>
<td>3.2</td>
<td></td>
</tr>
</tbody>
</table>

Note: Mₘ = Overall PBSS score; *p < .05

The analysis of teaching experience by PBSS scores showed first year teachers had a heightened sensitivity towards safety as compared to veteran teachers. In Table 3, t-test confirmed mean PBSS scores of first year teachers (24.7) were significantly greater than those scores for teachers not in their first year (23.3), t(297) = 3.95, p < .05

Table 3.

Year Teaching By Personal Belief Safety Scale Score (PBSS)

<table>
<thead>
<tr>
<th>Year teaching</th>
<th>n</th>
<th>Mₘ</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1ˢᵗ year</td>
<td>76</td>
<td>24.7</td>
<td>2.4</td>
<td>3.95*</td>
</tr>
<tr>
<td>Not 1ˢᵗ year</td>
<td>223</td>
<td>23.3</td>
<td>2.7</td>
<td></td>
</tr>
</tbody>
</table>

Note: Mₘ = Overall PBSS score; *p < .05

Finally to complete Objective Two remarks, results posted in Table 4 demonstrated mean PBSS score for respondents were significantly related to years of experience, F (6, 289) = 2.44. Teachers with experience of 0-4 years tended to have higher PBSS scores than teachers with 10-19 and 30 or more years of experience. PBSS scale scores ranged from 24.3 for teachers with 4 years or less experience to 22.3 for teachers with 30 or more years of experience.

Table 4.

Years of experience by Personal Belief Safety Scale (PBSS) scores

<table>
<thead>
<tr>
<th>Years of experience</th>
<th>n</th>
<th>Mₘ</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>121</td>
<td>24.3</td>
<td>2.5</td>
<td>2.44*</td>
</tr>
<tr>
<td>5-9</td>
<td>42</td>
<td>23.9</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>10-14</td>
<td>38</td>
<td>23.1</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>15-19</td>
<td>33</td>
<td>23.0</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>20-24</td>
<td>22</td>
<td>23.4</td>
<td>2.3</td>
<td></td>
</tr>
<tr>
<td>25-29</td>
<td>24</td>
<td>23.3</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>30 and more</td>
<td>15</td>
<td>22.3</td>
<td>3.4</td>
<td></td>
</tr>
</tbody>
</table>

Note: Mₘ = Overall PBSS score; *p < .05

Objective 3 was to ascertain differences by PBSS scores and gender. Results detailed in Table 5 indicate a mean PBSS score for female teachers (25.1) as significantly greater than the mean scale score for male teachers (23.4), t (294) = -3.80, p < .05.
Table 5.
Gender By Personal Belief Safety Scale (PBSS) Score

<table>
<thead>
<tr>
<th>Gender</th>
<th>n</th>
<th>Mₙ</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>43</td>
<td>25.1</td>
<td>2.8</td>
<td>-3.80*</td>
</tr>
<tr>
<td>Male</td>
<td>253</td>
<td>23.4</td>
<td>1.9</td>
<td></td>
</tr>
</tbody>
</table>

Note: Mₙ = Overall PBSS score; *p < .05

The fourth objective was to evaluate differences by PBSS scores and FFA area and the size of FFA membership in participants’ agriculture programs. As shown in Table 6 respondents’ mean PBSS scores were significantly related to FFA area, F (9, 285) = 2.13. Teachers in FFA area VI tended to have lower safety personal belief scores than teachers in other FFA areas. Teachers in FFA area III tended to have higher safety belief scores than teachers in other FFA areas.

Safety beliefs of teachers were not based on chapter FFA membership numbers, however. Respondents’ mean PBSS scores were not significantly related to number of student FFA members in participants agriculture programs, F (98, 177) = 1.21.

Table 6.
FFA Area By Personal Belief Safety Scale (PBSS) Score.

<table>
<thead>
<tr>
<th>FFA Area</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>53</td>
<td>24.6</td>
<td>2.4</td>
<td>2.13*</td>
</tr>
<tr>
<td>IX</td>
<td>38</td>
<td>23.9</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>VIII</td>
<td>39</td>
<td>23.8</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>30</td>
<td>23.8</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>20</td>
<td>23.8</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>16</td>
<td>23.6</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>23</td>
<td>23.6</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>VII</td>
<td>25</td>
<td>23.5</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>V</td>
<td>22</td>
<td>23.3</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>VI</td>
<td>29</td>
<td>22.0</td>
<td>2.8</td>
<td></td>
</tr>
</tbody>
</table>

Note: M = Overall PBSS score; *p < .05

Finally, Objective 5 sought to examine differences by PBSS scores and school size and the number of students enrolled in the agricultural education program. Comparisons of PBSS scale scores indicated means were not significantly related to school size, F (4, 287) = 1.22 or to the number of students enrolled in the agricultural education program, F (85, 192) = 1.17.

Conclusions and Recommendations

Positive safety attitudes, beliefs and practices of agricultural science teachers are crucial for insuring students’ educational opportunities are not hampered. This unique study assessed
general agricultural education safety and health perceptions, beliefs, and practices of teachers in Texas agricultural education by means of a PBSS score. The teachers participating in this study displayed positive concurrence toward common measures to exhibit safety consciousness.

Secondly, it may be inferred from this sample of teachers that age and years of experience may have an effect on one’s belief or attitude towards agricultural education program safety consciousness in Texas. First year teachers and teachers with less experience appear more approachable to safety concerns in their programs. And although they registered generally higher belief scores, the instrument did not lend itself to explore reasoning to each response. This reasoning should be further explored through additional investigation. One possibility may be due to them receiving additional pre-service teacher training. Additional investigation with Texas’ agriculture teacher education programs may elicit the needed information to verify this consideration.

Female teachers in this Texas’ study have a higher conviction towards common safety practices than their male counterparts. This is consistent with the positive affects of women’s coalitions efforts to increase health and safety attentiveness in Texas and Kentucky farming communities (Skarke, 2000; Jones, S., McClellan, V., & Koetke, C., 1998). Since the numbers of female teachers continue to rise in Texas, empowering the female agriculture teachers to persuade their male colleagues of its importance may be a viable response to attitudinal differences observed in this study.

It was interesting that mean scores by Texas FFA area were found significant. Do the programs in various Areas provide safety and health challenges that may shape the attitudes and beliefs of the respective teachers? It may be beneficial towards addressing poor belief scale scores in other areas by investigating the environments and working conditions of those teachers from Area III. Likewise, the scores of Area VI draw concern for placing so low within the group of means.

Finally, it was deduced that neither size of school nor the number or students in the agricultural education program had an effect upon the teachers’ Personal Belief Safety Scale scores. Continued efforts should be guided towards exploring the significant group differences found in beliefs and attitudes towards simple and common sense safety measures considered by this instrument. Additional efforts are also needed to improve instrument reliability. The results of this study should be shared with preservice teachers, distributed to all VATAT members, and conducted periodically with current teacher members of the organization.

Implications

When agricultural education teachers get into the habit of repeating unsafe acts and these unsafe acts are consistently demonstrated to students in their charge a dangerous precedent is established. All teachers and teacher educators must develop a positive attitude about safety in order to be the role model that the community expects.

This study exposes several concerns and creates the opportunity for further dialogue about safety and health issues involving agricultural education programs, teacher preparation programs and professional improvement activities.

If agricultural educators are to complete their moral and legal obligation to the students in their charge it is essential for agriculture teachers to exhibit safe practices and behaviors thus creating a positive safety climate, is important to reduce future preventable injuries, not only
while the student is in school, but also when they enter the workforce (Ullrich, Hubert and Murphy 2000).

References


