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Resilient Agricultural Educators: Taking Stress to the Next Level

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The goal for this research synthesis was to introduce the concept of resilience to agricultural education and determine if further research is warranted on resilience and positive psychology as they relate to the agricultural educator. The current environment of public schools coupled with the ever-burgeoning responsibilities placed upon the shoulders of educators makes resilience an increasingly vital characteristic to the classroom teacher. Teachers who are resilient are able to persevere through adversity and overcome stress to find success. The study of resilience has a theoretical base in positive psychology (Snyder & Lopez, 2009). Effective coping behaviors used to manage daily stress are essential to teacher retention and job satisfaction for teachers (Carmona, Buunk, Peiro, Rodriguez, & Bravo, 2006). Based on this synthesis of research, a conceptual framework visualizing the relationship between teacher resilience and agricultural educator stress and burnout was developed as well as a list of recommendations for further research.

Keywords: teacher resilience; educator stress; educator burnout; agricultural education

Introduction

"Resilience does not come from rare and special qualities, but from the everyday magic of ordinary, normative human resources in the minds, brains, and bodies of [people]…"(Masten, 2001, p. 235)

The announcement of a nation-wide shortage of agricultural educators is not headline news; in fact it has not been news for over four decades. This has led to a domino effect that could portend teacher shortages of "epidemic proportions" for the future (Kantrovich, 2007, p. 37). Two major components of the shortage of agricultural educators include the following statistics: roughly more than half of trained teacher graduates do not enter into the profession of teaching and agriculture teacher attrition rates have been steadily increasing since 1990 (Boone Jr. & Boone, 2010; Kantrovich, 2007; Myers, Dyer, & Washburn, 2005). Teacher retention is of vital importance to schools, as attrition causes monetary losses for the district as well as the cost to students through decreased educational quality (Guglielmi & Tatrow, 1998). Effective coping behaviors used to manage daily stress are essential to teacher retention and job satisfaction for teachers (Carmona, et al., 2006).

Teaching has been described as one of the most stressful professions of the 21st Century (Kyriacou, 2000) The current environment of public schools is one of constant educational reform, increased scrutiny by the public, expectation of teachers to tackle social issues some view as belonging in the home or larger community, focus on day-to-day activity, isolation from other adults, and few opportunities for reflection (Fullan, 2001; Guglielmi & Tatrow, 1998; Patterson, Collins, & Abbott, 2004). This can present challenges for educators, especially when coupled with the ever-burgeoning responsibilities placed upon the shoulders of even the most novice educators (Tait, 2008). Stress and burnout are words that have commonly become associated with the profession of teaching and more specifically agricultural education (Anderson, 2010; Croom, 2003; Straquadine, 1990; Torres, Lambert, & Lawver, 2009; Walker, Garton, & Kitchel,

2004). Stressed and burned out teachers show more instances of inappropriate behaviors (such as yelling in conflict with students), display frequent cognitive misfunctions (incorrectly marking a written test), and lack social functioning (charisma, warmth, and involvement) when compared to their peers at lower levels of stress and burnout. These behaviors can potentially compromise the quality of education being provided to students (Byrne, 1998). Resilient teachers are better able to employ coping mechanisms to combat the daily challenges previously mentioned, allowing teachers to effectively perform in today's school environment.

Theoretical and Conceptual Framework

Stress in the teacher has been defined as a perceived idea that the workplace is a threat to self-esteem or well-being, which in turn creates a negative emotional experience (Kyriacou, 2001). The causes of teacher stress have been found to be generally agreed upon across available literature (Howard & Johnson, 2004). Typically, studies focused on sources of teacher stress (Anderson, 2010; Kyriacou, 2001; Lazarus & Folkman, 1984; Montgomery & Rupp, 2005; Mundt & Connors, 1999; Torres, et al., 2009; Torres, Lawver, & Lambert, 2008), and the symptoms as well as causes of burnout (Byrne, 1998; Croom, 2003; Evers, Tomic, & Brouwers, 2004; Freudenberger, 1974; Maslach, 1982; Straquadine, 1990; Zunz, 1998). Through a cursory analysis of contemporary literature regarding teacher stress, it is revealed that daily activities of the classroom have an overall greater effect on stress than the significant life events that happen sporadically(Admiraal, Wubbels, & Korthagen, 2000; Anderson, 2010; Knobloch & Whittington, 2003; Kyriacou, 2001; Lazarus & Folkman, 1984; Mundt & Connors, 1999).

However, as many people will attest to through personal experiences, stress is not always a bad influence. Olpin and Hesson (2010) designated stress as having two categories: *good* and *bad.* Bad stress may cause reactions of emotional exhaustion, illness, and ultimately burnout. Good stress is related to performance--as the good stress increases, so will performance, this relationship can ultimately deteriorate when good stress becomes bad stress. There is also a difference between stress and distress. Distress in the workplace is defined in the *Job Stress Survey* manual as a stress score that is above the 70th percentile when compared to the norm data based on the results of an individual's Job Stress Survey questionnaire (Spielberger & Vagg, 1999). Exposure to stress is only one component of the greater picture of the effects of stress on an individual, the next layer being how one responds to the stressor(s) present.

Coping is an "effort to master, reduce, or tolerate the demands that are created as a consequence of a stressful transaction" (Carmona, et al., 2006, p. 87) and is essential to handling the daily stress in an individual's life and career. There are two identified categories of teacher coping behaviors: *emotion-focused* (palliative) and *problem-focused* (direct action) (Admiraal, et al., 2000; Kyriacou, 2001; Leiter, 1991). Problem-focused coping behaviors are the most effective for teachers as they include strategies of action, such as defining the problem, developing alternative solutions, evaluating the alternatives, selection of a solution, and finally taking action. Teachers who use problem-focused coping behaviors see conditions as changeable and are thus empowered (Kyriacou, 2001). By contrast, emotion-focused coping behaviors consist of defensive or escapist strategies including avoidance, minimization, and distancing. Emotion-focused strategies focus more on dealing with the emotions associated with the stress, rather than handling the source of the stress (Kyriacou, 2001). Individuals using emotion-focused coping strategies believe the environmental conditions are unchangeable. Emotion-focused coping is cyclical in nature--the escapist-type reactions to the chronic stress found in the workplace have a cumulative effect of burnout, which in turn cues further escape-type reactions (Bandura, 1997).

Coping with stress in ineffective ways can lead to burnout. *Burnout* is a syndrome that typically affects people in jobs with high levels of social and ethical responsibility and is described as a state of emotional, physical, and attitudinal exhaustion (Freudenberger, 1974; Guglielmi & Tatrow, 1998; Maslach, 1982). A breakdown of a teacher's effective coping mechanisms or ineffective coping mechanisms (Montgomery & Rupp, 2005; Vandenberghe & Huberman, 1999), paired with the strain of constant stress on the psyche (Hobfoll &

Shirom, 1993) often will lead to burnout. Teacher burnout is characterized by a decreased sense of personal accomplishment through the perception of lack of efficacy and depersonalization. Burned out teachers often develop a calloused, cynical, and negative attitude towards students, parents, and colleagues (Vandenberghe & Huberman, 1999). Teacher burnout can lead to psychosomatic and psychological illness, absenteeism, and early retirement (Virnich et al., 2006).

The phenomena of *resilience*, defined by success in spite of adversity, is indicated as the secret behind the success, or lack of success, of individuals (Bandura, 1997; Luthans, Youssef, & Avolio, 2007; Masten, 2001; Reivich & Shatte, 2002). In the 1970's, psychologists and therapists began observing the success of children faced with genetic and experiential adversity overcoming the odds. This phenomenon was labeled as resilience. Bandura (1997) described instances where children growing up in chronic poverty, victims of many forms of abuse, poor parenting, and mental disorders somehow manage to overcome these factors to become socially competent, academically achieving, and fulfilled adults contributing positively to society. These observations drew the interest of researchers, whose investigations have produced much data as well as many models and methods about the phenomena of resilience (Masten, 2001).

The study of resilience has a theoretical base in positive psychology which focuses on the positive attributes and potential, rather than the negative aspects of an individual (Snyder & Lopez, 2009). Two theoretical approaches to teacher resilience have been defined. Gu and Day (2007) described a multidimensional approach in which personal and environmental factors merge to compose teacher resilience. Patterson, Collins, and Abbot (2004) described a strategic approach in which teacher resilience is a process of adaptation in which different strategies are engaged. Castro, Kelly, and Shih (2010) adopted a position utilizing aspects from both the multidimensional approach and the strategy approach. They identified teachers as "active agents, adopting various strategies to find balance and achievement in the face of adversity, often caused by minimal resources and challenging working conditions" (Castro, et al., 2010, p. 623).

Teachers work in a stressful environment, those who are unable to effectively cope and adapt will find the workplace to be particularly stressful. Teacher resilience is operationally defined for this study by the authors as *the capacity to adjust to adverse conditions to increase one's competence, achieve school goals, and remain committed to teaching*. Teacher resilience is essential to teacher and student success in the classroom, as well as retention of teachers (Bobek, 2002; Brunetti, 2001; Patterson, et al., 2004). The current environment of public schools makes resilience vital to teachers; however, there is an overarching lack of understanding of the resilience development of adults in the workplace setting (Bobek, 2002; Luthans, et al., 2007). Teachers working in inner city high schools face great challenges within the diversity of the student body that require resilience (Brunetti, 2001). Bobek (2002) described the importance of resilience in teachers in order to be able to cultivate that trait in students. Brunetti (2001)found resilience to be a critical factor in teacher productivity in an inner city classroom. When the information gleaned from the study of teacher resilience is applied to the specific context of agricultural education, the importance of resilience in this field is very obvious when the nature and responsibilities of the occupation of agricultural educators are considered (Anderson, 2010; Croom, 2003; Straquadine, 1990; Torres, et al., 2009; Walker, et al., 2004).

Information related to the relationship of coping mechanisms and resilience of agricultural educators and how these phenomena relate to burnout and stress of agricultural educators is difficult to find. This review seeks to determine where the gaps exist and to bring to the forefront the increasingly important characteristic of resilience that new teachers must possess in order to not only survive, but thrive in the constantly changing and dynamic world that is the contemporary educational system.

Purpose and Objectives

The purpose for this research synthesis was to introduce the concept of resilience to agricultural education and define how the phenomena of resilience can contribute to the study of agricultural educator stress and burnout. The research questions included:

1. What contemporary literature exists regarding agricultural educator stress and burnout?
2. What contemporary literature exists concerning teacher resilience?
3. How does the concept of teacher resilience inform what we know about agricultural educator stress and burnout?

Procedures

Research syntheses are essential to the progression of a particular field of research because they are a collection of past research that is necessary for the systematic construction of knowledge. The necessity for these collections is heightened due to the ever-increasing level of specialization within the field of social science research (Cooper, 2010).

This research synthesis focused on the characteristic of teacher resilience as a dynamic of agricultural educator stress and burnout. Inclusion criteria for this synthesis included two categories: teacher resiliency and agricultural educator stress and/or burnout. Inclusion criteria for studies in the teacher resiliency category were: subjects included secondary educators and the primary focus of the study was to examine resiliency and/or effectiveness. Inclusion criteria for studies in the agricultural educator stress and/or burnout category were: subjects included secondary agricultural educators and the primary focus of the study was to examine stress or burnout in the educator. Studies from before the year 1999 were not considered for the synthesis in attempt to keep this review more contemporary and as a result of a natural break of several years lacking published research in the literature being found. Due to the limited amount of research in the area of teacher resiliency, no geographical restrictions were considered.

Research Synthesis and Meta-Analysis (Cooper, 2010) was consulted for search and inclusion methods. Search strategies included a comprehensive search of reference and citation databases using Google Scholar, Summon@MU, Merlin, WilsonWeb, ERIC, and PsychINFO. Reference lists of all studies considered in the synthesis were also searched. Keywords and phrases utilized in the search process included "teacher/educator resilien*," "agricultur* teacher/educator stress," and "agricultur* teacher/educator burnout". Articles that included the topics of stress, burnout and resiliency in relation to educators were printed to be analyzed. Also included in the search process were consultations with agricultural education faculty members.

Upon completion of the comprehensive search on teacher resiliency and agricultural educator burnout and stress many books, dissertations, theses, articles, and conference proceedings were examined. Seven articles were selected belonging to the category of teacher resilience and nine articles were chosen to fill the agricultural educator burnout and stress category for a total of 16 articles to be used for analysis. Limitations to this review include the narrow focus on articles regarding specifically secondary agricultural educators, therefore findings should not be generalized beyond that group.

Findings

From Stress to Burnout

Figure 1 displays a summary of literature on agricultural educator stress and burnout. Agriculture teachers are at a high risk for teacher burnout as a result of the many extra responsibilities that they were assigned, such as coaching career development event teams, supervising student projects outside of the classroom, preparation of lesson plans, and student evaluation (Straquadine, 1990). Croom (2003) identified that agriculture teachers experience work related emotional exhaustion with younger teachers experiencing higher levels of depersonalization. Teaching is a profession in which there are ups and downs on a daily basis leading to an almost constant exposure to stress.

Several factors were indicated in agricultural educators as stressors and ultimately causes of burnout. Indicators of burnout found to be displayed in agricultural educators were moderate levels of emotional exhaustion (Chenevey, Ewing, & Whittington, 2008; Croom, 2003). Precursors to burnout in the agricultural educator were found to be: high levels of emotional exhaustion, high levels of occupational stress, and high levels of personal strain (Chenevey, et al., 2008). Sources of stress for agricultural educators included: classroom management and student discipline, time management and work-life balance,

occupational competence, program budgets and finances, working overtime, sex of teacher, work load, and lack of colleague and administrator support (Anderson, 2010; Mundt & Connors, 1999; Torres, et al., 2009; Torres, et al., 2008; Walker, et al., 2004). Factors found to decrease levels of burnout and in turn increase retention included: monetary benefits (salary, retirement, and insurance), adequate materials and facilities, positive work climate, administrator and colleague support, adequate time allotted for job responsibilities, advancement and security, and factors internal to the teacher such as inner sense of competence and effectiveness through observing student success (Morris, 2006; Walker, et al., 2004).

Researchers have posited many recommendations on how to equip pre-service and in-service teachers to handle stress and adversity. Many researchers recommend that teacher education programs and administrators should proactively educate teachers on coping resources, time management, and stress management techniques (Chenevey, et al., 2008; Croom, 2003; Howard & Johnson, 2004; Mundt & Connors, 1999; Torres, et al., 2008). Agricultural educators should be encouraged to seek opportunities to network and build a support group through professional opportunities and organizations (Torres, et al., 2008). There is a need for an awareness of the issues of burnout as they relate to agricultural educators among the agricultural educators themselves (Chenevey, et al., 2008; Croom, 2003). Those involved in the agricultural education profession must become active advocates for the improvement of the educational environment in which teachers work (Croom, 2003; Torres, et al., 2009; Torres, et al., 2008). An atmosphere of support from teacher leaders and administrators needs to prevail to ensure teacher needs are being met (Torres, et al., 2008).

Researchers identified a definite need for further investigation on the subject of educator agricultural educator stress. The recommendation was made to examine stressors and job satisfaction for teachers across the continuum of service, from pre-service to retirement (Anderson, 2010; Walker, et al., 2004). Analysis of stress by gender was called for, as it is posed that men and women may have different perceived stressors (Anderson, 2010; Torres, et al., 2009). Further analyses of stress and the ways that teachers cope and struggle was described as needed to provide greater depth on the subject (Anderson, 2010; Torres, et al., 2009; Torres, et al., 2008). The process of burnout should be investigated in those who have exited the profession, as there has been a focus on those who remain (Chenevey, et al., 2008; Croom, 2003; Walker, et al., 2004). Research is needed on deterrents to stress; and burnout of agricultural educators should be investigated so that preventive measures can be investigated (Chenevey, et al., 2008). Croom (2003) indicated the effects of school reform on teacher burnout should be examined as well as the effectiveness of induction programs in teaching pre-service teachers to successfully cope with the demands of being an agricultural educator.

Agricultural Educator Stress and Burnout

Author (Year)	Study Purpose	Participants	Context of Stress/Burnout	Indicators of Resilience	Results/Themes
Anderson (2010)	Identify stressors of 2010 agricultural student teachers	39 Agriculture student teachers from UK and OSU 14 Females, 25 Males	Beginning agriculture teachers experience the stress of adjusting to the occupation	N/A	*--Stressors:* 1) Classroom management / discipline 2) Time management 3) Technical competency in all areas of agriculture
Chenevey, Ewing, & Whittington (2008)	Describe the occurrence & level of burnout of agricultural teachers.	145 Ohio agriculture teachers	Increased demands on teachers & decreased funding	N/A	*--Precursors to burnout:* 1) High levels of emotional exhaustion 2) High levels of occupational stress 3) High levels of personal strain --Ag teachers in this study were not experiencing occupational stress
Croom (2003)	Determine the level of burnout experienced by agriculture teachers using the MBI.	164 agriculture teachers in the southeastern US 39 Females, 125 Males	Emotional exhaustion and depersonalization	Personal Accomplishment	*--Negative impact:* 1) Moderate levels of emotional exhaustion *--Positive impact:* 1) Low levels of depersonalization 2) High levels of personal accomplish at work

Crutchfield (2010)	Identify factors related to career retention and to explore factors related to the decision to remain in the agricultural teaching profession.	Southern agriculture teachers serving 4 or more years 62 Females, 252 Males	Degrees of work engagement, work-life balance, & occupational commitment.	Decision to continue to teach	*--Negative impact:* 1) Slight to moderate conflict of work interfering with family *--Positive impact:* 1) Overall work engagement high (vigor, dedication, & absorption) 2) Moderate to strong commitment to occupation
Morris (2006)	Analyze the retention factors that influence secondary career and technical education teachers to remain in the teaching profession	154 Georgia career and technical education teachers	Teacher retention is important to the success of a school	Retention Influences of Georgia's Secondary Career and Technical Education Teachers	1) Retirement benefits and health insurance 2) Salary 3) Adequate materials and facilities 4) Positive work climate 5) Positive teaching experience 6)Adequate time to complete job responsibilities 7) Advancement 8) Security 9) Seeing students comprehend concepts 10) Inner sense of knowledge of doing a good job 11) Support from administration (was not indicated 30 years ago by teachers)
Mundt & Connors (1999)	Identify problems and challenges associated with the first years of teaching agriculture.	54 US Agriculture teachers, NVATA Outstanding Young Members	Beginning agriculture teachers experience the stress of adjusting to the occupation	N/A	*--Stressors:* 1) Curriculum issues 2) Time management 3) Classroom management and student discipline 4) Program budgets and funding
Torres, Lambert, & Lawver (2009)	Explain & predict job stress among secondary agriculture teachers.	370 Agricultural educators from Missouri & North Carolina 105 Females, 247 Males	Lack of Support Index, Job Pressure Index, & Job Stress Index	N/A	*--Job Stress Indicator (70%=distress)*: Job Stress Index: 60%ile Job Pressure Index: 67%ile Lack of Support Index: 56%ile ---Women are more stressed than men.
Torres, Lawver, & Lambert (2008)	Explore and describe the level of job stress among secondary agriculture teachers.	252 Agriculture teachers from Missouri 65 Females, 174 Males	High stress items (above norm data) evaluated by Job Stress Index	N/A	*--High Stress (Highest=1):* 1) Excessive paperwork 2) Working overtime 3) Meeting deadlines 4) Insufficient personal time 5) Co-workers not doing job 6) Critical on-the-spot decisions 7) Inadequate/poor quality equipment 8) Poorly motivated co-workers
Walker, Garton, & Kitchel (2004)	Determine the change in level of job satisfaction over time and if differences existed among those who stayed at the same school, moved schools, & left the profession.	123 Missouri secondary agricultural educators	Agricultural education teachers have many responsibilities associated with their occupation	Job satisfaction & perceived like/dislike for specific responsibilities associated with the occupation	*--Leavers:* 1) Lack of administrative support most common reason for leaving 2) Family issues ranked second 3) Enjoyed FFA/Leadership activities *--Movers & Stayers:* 1) Most enjoy tasks directly involved with students (Class/lab instruction, managing students, FFA Leadership activities, adult instruction) 2) Least enjoy administrative-type tasks

Figure 1. Summary of research on agricultural educator stress and burnout.

Resilience

The results from the synthesis of seven studies from the category of teacher resilience is displayed in the Figure 2. Teachers who are resilient are able to persevere through adversity and overcome stress to find success. Thus arises the question, *Why do some people achieve success while others do not, when faced with the same stressors?* Characteristics of resilience found to be employed by teachers in the classroom included: help seeking and a strong system of support, advanced problem solving skills, effective management of difficult relationships, a sense of occupational agency, occupational competence, pride in achievements, flexible and adaptive, and effective time management strategies leading to a positive work-life balance (Brunetti, 2001; Castro, et al., 2010; Gu & Day, 2007; Howard & Johnson, 2004; Patterson, et al., 2004; Roberts, Dooley, Harlin, & Murphrey, 2006; Tait, 2008).

It was noted in the literature that school professionals need to recognize that teachers in different phases of their lives have differing professional and personal needs (Gu & Day, 2007; Patterson, et al., 2004). Administrators should work to recruit and retain teachers with high resilience (Brunetti, 2006; Patterson, et al., 2004; Tait, 2008). Teacher preparation programs should implement more strategic admission processes to choose candidates who will be successful as teachers (Tait, 2008). As a follow-up, design of an instrument to measure teacher resilience would be useful in the selection of applicants for teacher preparation programs as well as educator positions in the schools (Tait, 2008). The ability to work with diverse students as a competency of effective agricultural educators was identified by Roberts et al. (2006). Teacher preparation programs should integrate problem-solving strategies and techniques into the educational process through teaching case studies, action research oriented projects, and encourage more advanced problem solving skills. Teacher educators should initiate discussions concerning professionalism, managing parent and colleague relationships, and the school as a workplace. Teacher preparation programs should also consider implementing a cohort system to foster the concept of peer-support and foster an atmosphere of support that encourages students to seek advice and guidance (Castro et al., 2004). Schools should implement school-wide behavior management programs to support teachers through common and emergency situations (Howard & Johnson, 2004). Achievements of teachers should be celebrated and recognized (Howard & Johnson, 2004).

The knowledge of teacher resilience as a concept is very limited, and even more restricted in the field of agricultural education. Brunetti (2006) called for further investigation to determine if resilience is an inherent personality characteristic or a predisposition. Many researchers indicated a high need for research that focuses on the resilience of particularly effective teachers in comparison to those who are not as successful and leave the profession (Brunetti, 2006; Castro et al., 2010; Roberts et al., 2006). The working conditions and support necessary for teachers to perform at their optimum needs to be investigated (Brunetti, 2006; Torres et al., 2009). Agricultural educators at all levels should be called upon to assess the total agricultural education and FFA program to determine the magnitude of the program and determine the capacity for teachers to effectively manage all components (Mundt & Connors, 1999; Torres et al., 2009). One study noted a need for more research on the ability of agricultural educators to work with diverse students as well as the preparation that teacher educators are providing for preservice teachers (Roberts et al., 2006).

Teacher Resilience					
Author (Year)	**Study Purpose**	**Participants**	**Context of Stress/Burnout**	**Indicators of Resilience**	**Results/Themes**
Brunetti (2006)	Describe what motivates experienced inner city high school teachers to remain in the classroom.	California inner city high school teachers Surveyed: 33 Interviewed: 4 Females, 5 Males	Student body: high poverty, 33% ELL, >91% ethnicity other than Caucasian, bottom 10% of state in achievement	Motivators for remaining in the inner city classroom	*--Motivators* 1) Devotion to students 2) Pursuit of professional fulfillment 3) Support received from administrators, peers 4) Organization and management of school
Castro, Kelly, & Shih (2010)	Describe resilience strategies employed by first-year teachers in high-needs areas.	15American first-year teachers in high-needs areas 5 rural, 5 Urban, 5 Special Education	Challenges &/or major concerns during first year of teaching	Resources and strategies relied upon by new teachers in response to challenges a	*--Resilience strategies:* 1) Help seeking: difficult for new teachers 2) Problem solving: learn more advanced techniques 3) Managing difficult relationships: with adults inside & outside of school
Gu & Day (2007)	Investigate factors contributing to variations in teachers' effectiveness in different phases of their professional lives working in a range of schools in different contexts.	300 British teachers (VITAE Study)	Teachers are teaching in societies that are observing high rates of change in expectations, norms and behaviors	Teacher motivation, commitment, & effectiveness	*--Negative impact:* 1) Poor student behavior 2) Heavy workloads / additional responsibilities 3) Work-life tensions 4) Excessive paperwork 5) Adverse personal events 6) Frequent change with new educational initiatives 7) Poor health 8) Lack of in-school support *--Positive impact:* 1) Positive support from colleagues & administration 2) Promotion/Recognition 3) Quality personalized professional learning activities 4) Positive teacher-pupil relationships 5) Balancing personal & work life
Howard & Johnson (2004)	Determine if resilience as a concept is relevant to teachers.	10 Australian teachers 9 Females 1 Male	Coping effectively in high stress conditions & resisting burnout for an extended period of time	Protective factors of resilience used by teachers.	1) sense of agency 2) strong support group 3) pride in achievements 4) competence in areas of personal importance
Patterson, Collins, & Abbott (2004)	Examine strategies used by classroom teachers and leaders in building resilience and factors that influence the decision to remain in large urban school environments.	8 teachers & 8 teacher leaders from urban districts with at least 3 years of service	Urban schools = context of ongoing adversity	Characteristics of resilient teachers	1) Have a set of personal values that guides their decision-making. 2) Place a high value on professional development &find ways to get it. 3) Provide mentoring to others. 4) Are not victims—they take charge & solve problems. 5) Stay focused on the children 6) Do whatever it takes to help children be successful. 7) Support network of friends/colleagues 8) Flexible 9) Know when to get involved and when to let go.
Roberts, Dooley, Harlin , & Murphrey (2006)	Identify the required competencies & traits of successful agricultural science teachers.	40 American preservice and inservice agricultural educators	Agricultural education teachers have many responsibilities associated with their occupation	Characteristics of effective teachers	1) Caring/understanding 2) Internal motivation 3) Enthusiasm 4) Open-mindedness 5) Planning/organizing skills 6)Time Management 7) Resourceful 8) Responsibility 9) Creativity 10) Patience 11) People skills
Tait (2008)	Explore the relationships among resilience, personal efficacy, & emotional competence and their impact on first-year teachers' sense of success, confidence, & commitment to the profession	4 Canadian first-year teachers 3 Females, 1 Male	Rating of "quite" or "very" for the stressfulness of the first year of teaching	Rating of "quite" or "very" for satisfaction with choice of career in spite of a stressful first year	*--Stressors:* 1) Concerns related to parents . 2) Concern for students with special education needs. 3) Frustrated with school bureaucracy. *--Resilience:* 1) Recognized the signs of stress. 2) Utilized a variety coping strategies. 3) Sought social support. 4) Cared for health.

Figure 2. Summary of research on teacher resilience.

Conclusions and Recommendations

Resilience is a complex and multi-faceted phenomenon of which researchers and practitioners lack a comprehensive understanding. Neither group can deny the integral nature of resilience in the daily work of educators. Resilience is essential for teacher success, which in turn leads to student success through increased retention rates and job satisfaction. To bring further weight to the importance of teacher resilience is the matter of high teacher resilience leading to student resilience. In the modern-day era of constant evolution and change, resilience is a key factor in determining the future success of a teacher or a student.

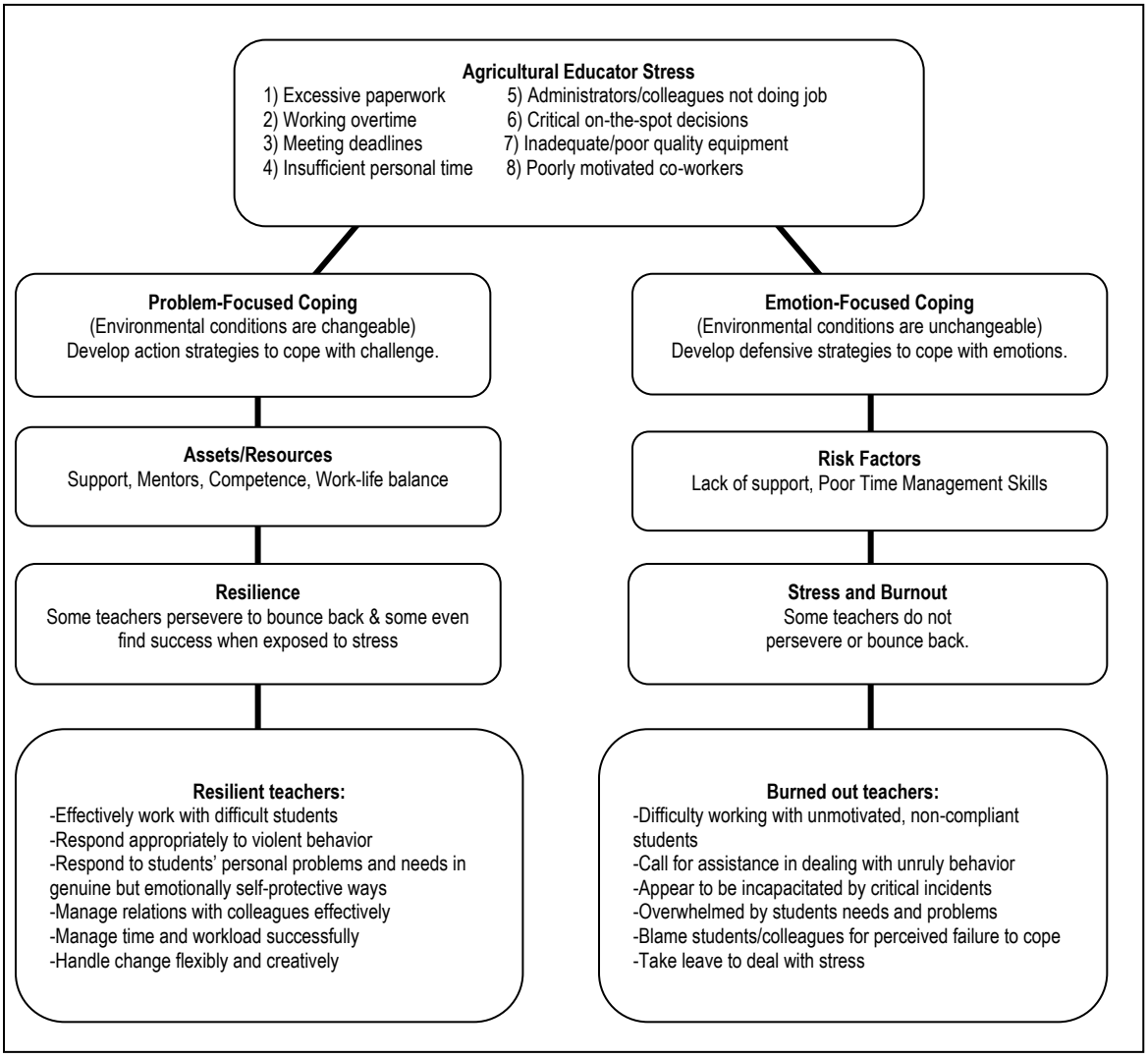

Figure 3. Conceptual framework of the relationship between teacher resilience and agricultural educator stress and burnout. Adapted from "Resilient Teachers: Resisting Stress and Burnout," by S. Howard, and B. Johnson, 2004, *Social Psychology of Education, 7,* p. 406.

Exposure to stress, unique types of stressors, coping mechanisms, assets/resources and risk factors are all major components of an individual's teacher resilience. Stressors indicated by Torres et al. (2008) were utilized as the common thread between teachers who are

resilient and those who are burned out. Figure 3 is a visual conceptualization of the relationship between stress, resilience, coping style, and burnout. Through this synthesis of research, a relationship was found between teacher resilience, a problem-focused coping style and essential assets and resources. When exposed to stress, resilient teachers are more likely to use problem-focused coping strategies and actually seek out resources, therefore developing assets to provide scaffolding as they navigate themselves through the stressful experience. These teachers are able to effectively work with difficult students, respond appropriately in most situations, manage both personal and professional relationships effectively, have effective time management practices in place and are able to handle change with flexibility and creativity.

A relationship was also found between teacher burnout, an emotion-focused coping style and existing risk factors. Burned-out teachers often have a history of employing emotion-focused coping strategies when encountering stress, which are typically defensive in nature and only cope with the emotion resulting from the stress. A lack of support and increased number of risk factors with a lack of seeking support are often markers of someone who is less resilient, which may lead to burnout. These teachers will indicate higher stress levels and are more likely to burnout than more resilient teachers. Burned out teachers have a marked higher difficulty in working with unmotivated and non-compliant students, often call for assistance in management of student behavior, appear incapacitated during critical incidences, get overwhelmed by student needs and problems, cast blame upon others for perceived failures, and are incapable of effectively coping with the stress resulting in leave-taking in order to cope.

The study of resilience and development of resilience in adults is in its infancy, but holds much promise to add valuable information to the body of knowledge for teachers, administrators, teacher educators, as well as those interested in organizational health. Maslach, Jackson, and Leiter (1996)stated that there is little need for more studies that examine relationships between teacher demographics and burnout, as an expansive body of knowledge exists. They call for more studies to determine the processes through which the variables of burnout function within the teacher.

Based on this research synthesis on the relationship of teacher resilience and agricultural educator stress and burnout, the following recommendations for further research are presented:

1. The influence of the two types of coping mechanisms on agricultural educator retention, stress, and burnout through investigating teachers who are successful and thriving compared to those who leave the profession.
2. Methods for improving the coping mechanisms employed by teachers to aid in preventing burnout and attrition.
3. The influence of resilience of agricultural educators on effectiveness, retention, stress, and burnout.
4. Characteristics and qualities of effective and resilient agricultural educators.
5. The impact of agricultural educator resilience, teacher stress, and burnout on student outcomes.
6. Development of an instrument to accurately measure resilience of both pre-service and in-service agricultural educators.

Teachers, administrators, and teacher educators should be concerned with the resilience of our agricultural education teachers in order to ensure that students are getting an optimal education from teachers who are performing at their full potential. If the agricultural education community is to meet the needs of the nation-wide secondary agricultural educator shortage, resilience and retention of effective and successful teachers must become a focus for researchers as well as practitioners, administrators, and teacher educators.

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