

Teachers' Stress, Coping Strategies, and Job Satisfaction in COVID-induced Teaching Environments

Catherine W. Shoulders¹, Christopher M. Estep², Donald M. Johnson³

Abstract

School based agricultural education has long been associated with teacher stress, burnout, and attrition, and the onset of the COVID-19 pandemic has likely exacerbated these conditions. Thus, the purpose of this study was to determine the differences in Arkansas SBAE teachers' stress, coping strategies, and job satisfaction based on teaching environment, and demographic variables during the pandemic. Results showed that respondents experienced fatigue, frustration, worrying, forgetfulness, and impatience, and that these symptoms of stress along with related sources of pressure were negatively correlated with job satisfaction. However, teaching environment resulting from the pandemic was not shown to predict job satisfaction. Nonetheless, results showed that teaching is stressful regardless of situation, and respondents who utilized coping strategies were found to have higher levels of job satisfaction. Therefore, we recommend that administrators work with teachers to develop coping strategies for dealing with stress.

Keywords: COVID-19 pandemic; agricultural education; teacher stress

Introduction

The job of the school based agricultural education (SBAE) teacher has long been associated with concerns of high stress levels, burnout, and limited opportunity for self-care (Smith & Smalley, 2018), and multiple studies within agricultural education have focused on teacher stress and burnout as contributors to the ongoing teacher shortage (Cheveney et al., 2008; Graham et al., 2016; Smith & Smalley, 2018). While teachers have reported that job satisfaction is attained through their daily teaching tasks (Klassen & Chiu, 2010), some have noted that these same daily tasks have also contributed to teacher stress (Smith & Smalley, 2018). Recent shifts in aspects of teachers' daily tasks due to the COVID-19 pandemic may exacerbate stressors, shift their implementation of coping strategies, and impact teacher job satisfaction. COVID-19 has created unprecedented teaching environments, altered teacher routines, and added additional responsibilities and technologies to teachers' already overloaded workdays in areas in which they are unfamiliar (Daniel, 2020).

Researchers, administrators, and educators have long focused on ways to support SBAE teachers. The National Association of Agricultural Educators (NAAE)'s Ag Teacher Life Cycle

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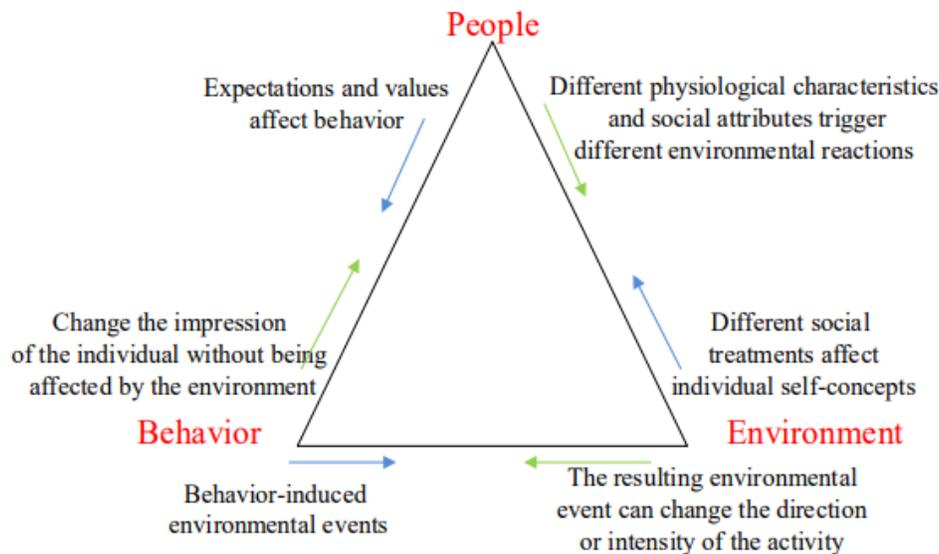
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included recommendations on the types of support needed by teachers as they progress through their careers; support for early-career teachers should focus on teacher leadership and work/life balance, support for mid-career teachers should focus on the building of community support, and support for late-career teachers should focus on staying enthusiastic and engaged (NAAE, 2016). However, the recent pandemic has upended teachers' normal day-to-day responsibilities, which may have shifted the stressors experienced by teachers (Lindner et al., 2020). By understanding the stress, coping mechanisms utilized, and job satisfaction of SBAE teachers working during the COVID-19 pandemic, targeted efforts can focus on supporting teachers in ways critical to retaining them in agricultural education during and beyond the pandemic **Theoretical and Conceptual Frameworks**

This study was guided by Bandura's Triadic Reciprocal Determinism Theory (1978), which posits individuals are influenced by a combination of their environment, their personal factors, and their own behavior (Figure 1). According to the theory, the environment can influence people's attitudes, as well as change the direction or intensity of an individual's behavior. Behavior can alter one's environment, as well as change the attitudes of the individual. Finally, individuals' attitudes and values influence their behavior, and trigger different environmental reactions.

Figure 1

Model of Triadic Reciprocal Determinism (Zeng et al., 2020)



In the present study, SBAE teachers serve as the individuals. Within the socially distanced, hybrid, or remote work environments created by the COVID-19 pandemic, teachers' coping strategies and perceptions of stress can influence their behavior, which in turn further shape the environments in which their students are learning.

Numerous factors have been found to influence teacher stress and job satisfaction, including work experience (Huberman, 1989), gender (Tran, 2015), personal environment (Fessler, 1985), and organizational environment (Fessler, 1985). Additionally, the methods by which teachers cope with stress can influence their management of stress and, in turn, job satisfaction. Each of the above factors was considered in the design of this study, as they could play a role in how teachers experience and

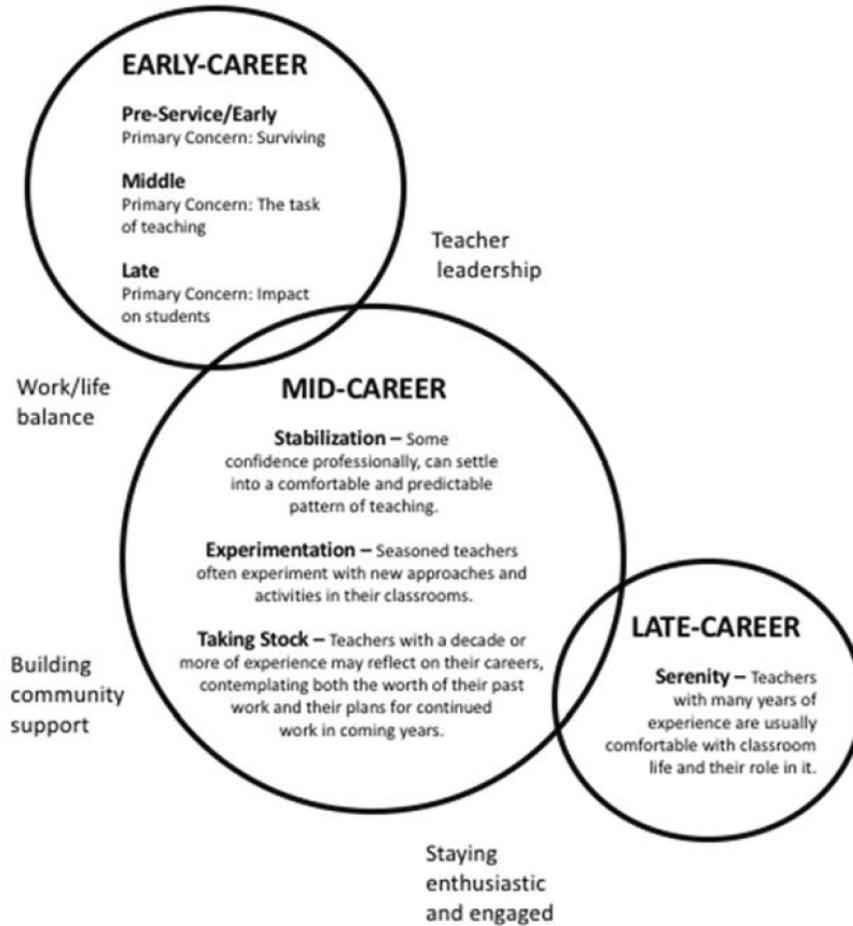
manage stress, perceive their job satisfaction, and ultimately, decide whether to remain in the teaching profession beyond the pandemic.

Symptoms of Stress

Work stress can be expressed through varied physiological, emotional, and behavioral symptoms (Steinmetz et al, 1982). Physical stress symptoms include conditions of which the individual would likely be aware (Spector & Jex, 1998) and include headaches, stomachaches, backaches, neck stiffness, elevated blood pressure, and fatigue (Steinmetz et al., 1982). Occupational stress has been found to be a significant catalyst in the development of physical stress symptoms (Nixon et al., 2011), specifically for teachers (Blatchford, 2020). Emotional stress symptoms, including worrying, depression, impatience, frustration, loneliness, powerlessness, and inflexibility (Steinmetz et al., 1982), have been reported among teachers at rates of close to 50% (Hadi et al., 2008). Behavioral stress symptoms include the immediate external behaviors manifested in response to stress such as, crying, forgetfulness, yelling, blaming, bossiness, gum chewing, compulsive eating, agitation, anger, compulsive smoking, and teeth grinding (Steinmetz et al., 1982). While limited research has been conducted on prevalence of behavioral stress symptoms in teachers, studies focusing on teacher education students have reported employment of behavioral stress symptoms including smoking and alcohol consumption (Gustems-Carnicer et al., 2019). Removing occupation as a variable altogether, Steinmetz et al. (1982) found differences among employees who externalize and internalize their stress. Those who blamed the organization and others for their stress tended to smoke, chew gum, and grind their teeth, while employees who took personal ownership in their stress experienced more neck stiffness, compulsive eating, worrying, depression, agitation, and anger.

Work Experience

Work experience has been found to be a factor influencing teacher job stress; as teachers advance in their careers, their perspectives, motivators, and focus can shift. Huberman's career cycle model for teachers (1989) suggested that teachers engage in five phases as they progress through their careers: discovery and survival (1-3 years), stabilization (4 to 6 years), experimentation/diversification (7-18 years), serenity (19 to 30 years), and disengagement (31 years and beyond). The NAAE's (2016) Ag Teacher's Life Cycle displayed similar categories to Huberman's model, but omitted the notion that late-career teachers may start to disengage (Figure 2).

Figure 2*Ag Teacher Life Cycle (NAAE, 2016)*

Regardless of their career state, teachers' job satisfaction and stress levels can shift as a result of their daily tasks (Klassen & Chiu, 2010; Smith & Smalley, 2018). McKim and Sorenson (2020) found SBAE teachers experienced a significant decline in job satisfaction due to changes in their daily tasks as a result of the pandemic. More specifically, they reported that tasks such as hands-on learning experiences and face-to-face FFA events, which normally contributed to SBAE teachers' job satisfaction were altered or cancelled during the pandemic.

Gender

While not strictly focused on teachers, the World Health Organization (2017) reported anxiety as an emotional stress symptom twice as common among females than among males. Within K-12 education, women have reported lower satisfaction than their male counterparts regarding work conditions, leading to overall reduced job satisfaction (Liu & Ramsey, 2008). Reports have also found female teachers experienced higher stress than male teachers (Chaplain, 2008). Klassen and Chiu (2010) detailed that females higher stress levels resulted from student behavior and greater workload stress. More recently, Tanwar and Garg (2020) found that while levels of job satisfaction and stress did not vary between males and females teaching in higher education, the components leading to job satisfaction were different; males

reported satisfaction in pay, promotion, and supervision, while females reported satisfaction with their work and co-workers.

Personal Environment

Struggles to balance work and home responsibilities have been shown to negatively influence teachers' job satisfaction (Sorenson et al., 2017). Moreover, external crises, such as the COVID-19 pandemic, require teachers to support the mental and scholastic needs of students while simultaneously managing their own emotional and physical needs, which can lead to increased stress (Kuriansky, 2013). Nonetheless, a recent study found SBAE teachers worked fewer hours and reported less conflict between work and family responsibilities during the pandemic (McKim & Sorensen, 2020).

Organizational Environment

Both within and outside of agricultural education, organizational environment has contributed to beginning teachers' job satisfaction, with higher attrition resulting from those with negative school cultures and lowered sense of belonging within a school (Clark et al., 2014; DeLay & Washburn, 2013; White, 2009). Additionally, poor work conditions have been reported to have a strong influence on teachers' job satisfaction (Liu & Ramsey, 2008). Included in these conditions are demands from administrators, colleagues, students, and parents; student misbehavior; low autonomy; role ambiguity; lack of recognition (Greenglass & Burke, 2003); low financial reward (Boone & Boone, 2009); inadequate time for planning (Liu & Ramsey, 2008); and a heavy workload (Greenglass & Burke, 2003; Liu & Ramsey, 2008). The multi-faceted role of the SBAE teacher may cause the organizational environment to be particularly critical, as SBAE teachers have reported the responsibilities of managing a full agricultural education program as a major cause of stress (Smith & Smalley, 2018). Further, Hasselquist, Herndon, and Kitchel (2017) posited that, "if the unique needs of agriculture teachers are not met by the administration and colleagues they work with, it could contribute to our profession's high attrition rate" (p. 268). Alternately, positive relationships between colleagues have been associated with increased job satisfaction (DeLay & Washburn, 2013).

Coping Strategies

While there has been no agreement among researchers on what specific actions constitute coping strategies, many identified behaviors have been linked with higher perceptions of stress. Steinmetz et al. (1982) established eleven coping strategies employed to reduce the symptoms of stress. These included taking aspirin, using tranquilizers or medication, drinking coffee or soft drinks, using formal and informal relaxation techniques, exercising, talking to someone you know, leaving your work area, smoking, using humor, and drinking alcohol. Employing the Coping Style Inventory (Cooper et al., 1988), Zurlo et al. (2007) found that teachers most frequently utilized coping strategies focusing on innovation and effective time management, while mobilization of social support and delegation were used least frequently. Similarly, Travers and Cooper (1996) established that teachers delegated least frequently and did not buy time or stall the issue. According to their study, teachers dealt with stress by making efforts to have stable relationships, dealing with problems immediately as they occur, and having a home that is a refuge.

Purpose and Objectives

The purpose of this study was to determine the differences in Arkansas SBAE teachers' stress, coping strategies, and job satisfaction based on teaching environment, and demographic variables. To meet this purpose, the following objectives were developed:

1. Describe Arkansas school-based agricultural education (SBAE) teachers by the demographic variables of gender, highest degree earned, and years of SBAE teaching experience and by their fall 2020 teaching situation (face-to-face, virtual, or hybrid);
2. Describe Arkansas SBAE teachers' symptoms of stress (SOS), sources of pressure (SOP), coping strategies (CS), and job satisfaction;
3. Describe the relationships between Arkansas SBAE teachers' demographic characteristics, fall 2020 teaching situation, SoS, SoP, CS, and job satisfaction; and
4. Determine if a single or linear combination of respondent demographic characteristics, fall 2020 teaching situation, SOS, SOP, and CS explained a significant ($p \leq .05$) portion of the variance in job satisfaction among Arkansas SBAE teachers.

Methods

The population for this study included all SBAE teachers in Arkansas ($N = 292$) during the fall 2020 semester. A census was conducted; the sampling frame was created using the Arkansas SBAE teachers directory. Individual links to the electronic questionnaire were sent to teachers, and a reminder was sent one week after the initial invitation. A total of 123 responses were collected, yielding a response rate of 42.1%. In order to address nonresponse bias, respondents' geographic location was compared to that of the population to determine whether each of the FFA designated areas were proportionately represented among the sample. No significant differences were found between the sample and the population; therefore, we determined the findings herein can be generalized to the population (Israel, 2012).

In order to meet the objectives of the study, the components of several questionnaires were adapted and combined to create one instrument. Stress symptoms were measured using the Symptoms of Stress portion of Steinmetz et al.'s (1982) Conflict-Stress Questionnaire. This questionnaire was originally constructed in 1976 and has been adjusted periodically to increase the instrument's validity, reliability, and generalizability among various occupations. The 24 items are rated on a Likert-type scale for frequency (1 = never; 5 = multiple times per day). Factor analysis conducted by Steinmetz et al. (1982) yielded three factors among symptoms of stress: emotionality (worry, depression, agitation, impatience, anger, frustration, powerlessness, stiffness of neck, and fatigue), behavioral manifestations of anxiety (yelling, blaming, bossiness, inflexibility, crying, and elevated blood pressure), and specific somatic complaints (headaches, stomachaches, and backaches). Sources of pressure were measured using Travers and Cooper's (1996) Sources of Pressure in Teaching Scale. While this scale initially included 98 items, we included only the top 10 sources experienced by teachers (Zurlo et al., 2007) in order to reduce respondent fatigue. These items are evaluated on a 6-point Likert-type scale, with 1 indicating low pressure and 6 indicating high pressure. Because a single list of coping strategies is not prevalent within the literature, we measured teachers' use of coping strategies via Cooper et al.'s (1988) Coping Style Inventory and Steinmetz et al.'s (1982) Methods of Relaxation portion of their Conflict-Stress Questionnaire. The Coping Styles Inventory measures the ways in which an individual reacts to stressful situations using 28 items scored on a Likert-type scale, with 1 indicating fully disagree and 6 indicating fully agree. Steinmetz et al.'s (1982) factor analysis of Methods of Relaxation utilized 11 items on a 5-point Likert type scale (1 = never to 5 = almost all the time) and resulted in three factors: avoidance of the situation (drinking coffee, exercise, talking, leaving work, using humor, and drinking alcohol), dealing directly with symptoms of anxiety (using tranquilizers or medications and using formal or informal relaxation techniques), and substances taken through the mouth (aspirin, tranquilizers or medication, smoking, and drinking alcohol). Job satisfaction was measured using Warr et al.'s (1979) Job Satisfaction Scale. This instrument included 15 items on a Likert-type scale ranging from 1 (fully disagree) to 7 (fully agree). Scores below 4 indicate dissatisfaction, while scores above a 5 indicate high satisfaction. Because this study was conducted amid constantly evolving educational

situations as a result of the COVID-19 pandemic, the researchers determined the time required to conduct a pilot study could negatively impact their ability to conduct the research while teachers were experiencing modified learning settings. This need for immediate data collection, paired with the well-established validity and reliability of each of the instruments with teachers, led the researchers to omit a pilot test from the study's methods.

Data for objectives one through three were analyzed using descriptive and correlational statistics. Data for objective four were analyzed using complete case multiple regression. The .05 alpha level was selected *a priori* for all tests of statistical significance.

Prior to multiple regression analysis, data were examined for outliers and influential observations, linearity of the predictor and criterion variables, multicollinearity, normality of residuals, and homogeneity of the variance of the residuals. One outlier was identified (studentized residual $>|3|$) and removed from the data set (Field & Miles, 2012). Linearity of the predictor and criterion variables was verified using scatterplots. Variance inflation factors of <5.0 indicated multicollinearity was not a threat (Field & Miles, 2012). The Shapiro-Wilk test was used to test the assumption of normality of residuals and results indicated this assumption was not violated, $w(89) = 0.99, p = .47$. The assumption of homogeneity of variance of the residuals was assessed by White's test and the results indicated this assumption was not violated, $\chi^2(9) = 17.28, p = .20$.

Results

Of the 117 survey respondents, slightly more than one-half were male (56.0%) and 93.6% held either the bachelor's (52.2%) or master's (41.4%) as their highest degree. The respondents reported a mean of 12.39 ($SD = 10.36$) years of experience in teaching SBAE. Years of teaching experience ranged from beginning teachers (0 years of experience, $n = 3$) to one teacher with 39 years of experience. The median teacher had 10.0 years of experience.

A majority (75.0%) of respondents were teaching hybrid classes in fall 2020, 23.3% were teaching face-to-face classes, and 1.7% were teaching classes virtually. Respondents teaching hybrid classes were asked to describe their hybrid teaching situation. The most common hybrid teaching situations involved (a) classes where one cohort of students attended face-to-face while another cohort attended virtually, and (b) various systems where students attended face-to-face on certain days (e.g., M, W, F) and virtually on other days (e.g., T, Th).

Teachers' symptoms of stress (SoS) were assessed by the self-reported frequencies of 24 specific physical and psychological stress indicators, rated on a scale of 1 = never to 5 = multiple times per day. Five SoS were rated as occurring at least daily by 40% or more of respondents; fatigue (54.8%), frustration (48.6%), worrying (48.1%), forgetfulness (47.7%), and impatience (42.9%). Conversely, eight SoS were reported by over 50% of respondents as never occurring; compulsive smoking (92.4%), teeth grinding (70.5%), crying (69.5%), gum chewing (61.9%), loneliness (61.0%), blaming (67.1%), stomach aches (56.3%), and elevated blood pressure (50.6%). The mean for SoS was 2.27 ($SD = 0.66$), indicating the typical symptom occurred approximately monthly.

Teachers' sources of pressure (SoP) were measured by responses to 11 identified teacher stressors measured on a 1 to 5 Likert scale, where 1 = strongly disagree [this is a source of pressure], and 5 = strongly agree [this is a source of pressure]. The specific items with the highest means were; lack of value placed on actual 'teaching' itself ($M = 4.21, SD = 0.94$), a workload that is out of proportion with salary ($M = 4.20, SD = 0.94$), knowing that my absence will create problems for other staff ($M = 4.20, SD = 0.97$), lack of time to resolve problems with individual students ($M = 4.17, SD = 0.95$), having to teach in settings with challenging conditions ($M = 4.07, SD = 0.98$), and society's

diminishing respect for my profession ($M = 4.00$, $SD = 1.00$). The only SoP rated below 3.0 was 'lack of support from school administration' ($M = 2.92$, $SD = 1.25$). The mean for SOP was 3.88 ($SD = 0.67$), indicating overall agreement that these were stressors for SBAE teachers.

Teachers' coping strategies (CS) were assessed by the self-reported frequency with which teachers used 28 positive and negative strategies, measured on a 1 – 5 Likert scale (1 = never and 5 = almost all the time). The five CS items with the highest mean scores were, stay busy ($M = 4.61$, $SD = 0.71$), have stable relationships ($M = 4.19$, $SD = 0.84$), look for ways to make the work more interesting ($M = 3.97$, $SD = 0.74$), plan ahead ($M = 3.86$, $SD = 0.80$), and deal with problems immediately as they occur ($M = 3.73$, $SD = 0.88$). The five CS items with the lowest means were: buy time and stall the issue ($M = 2.49$, $SD = 0.96$), force one's behavior and lifestyle to slow down ($M = 2.61$, $SD = 1.08$), try to avoid the situation ($M = 2.67$, $SD = 1.09$), seek support and advice from my superiors ($M = 2.68$, $SD = 1.05$), and seek as much social support as possible ($M = 2.82$, $SD = 0.90$). After reverse-coding negative coping strategies, the mean for CS was 3.39 ($SD = 0.38$), indicating that, overall, the typical coping strategies were used 'sometimes.'

Teachers' job satisfaction was measured by their responses to 15 items measured on a 1 – 5 Likert scale (1 = extremely dissatisfied and 5 = extremely satisfied). As shown in Table 1, fellow teachers, job security, variety in the job, physical working conditions, and the opportunity to use their talents were the highest rated aspects of job satisfaction. Chances for promotion, hours of work, recognition, and rate of pay were the lowest rated aspects of job satisfaction. The mean level of job satisfaction was 3.38 ($SD = 0.75$), indicating the typical teacher was slightly satisfied with their job.

Table 1

Job Satisfaction of Arkansas SBAE Teachers by Item and Overall

Item	<i>n</i>	<i>M</i>	<i>SD</i>
Your fellow teachers	100	3.92	0.98
Your job security	100	3.89	1.12
The amount of variety in your job	100	3.89	1.07
The physical working conditions	100	3.81	1.01
Your opportunity to use your abilities	100	3.64	1.01
Your supervisor	100	3.60	1.25
The freedom to choose your own method of working	100	3.30	1.21
Relations between management and staff in your school	99	3.24	1.18
The way your school is managed	100	3.21	1.28
The amount of responsibility you are given	99	3.15	1.19
The attention paid to suggestions you make	100	3.12	1.12
Your rate of pay	99	3.08	1.18
The recognition for your good work	100	3.04	1.16
Your hours of work	100	2.84	1.23
Your chance of promotion	100	2.74	1.07
Overall Job Satisfaction	97	3.38	0.75

Note. Mean and standard deviation for Job Satisfaction construct shown in bold.

The third objective was to determine the relationships between selected teacher demographic characteristics, fall 2020 teaching situation, and SoS, SoP, CS, and job satisfaction. For this and subsequent analyses, respondents teaching virtually in fall 2020 ($n = 2$) were removed from the data set, leaving two methods for analysis (Face-to-face, $n = 27$, and hybrid, $n = 75$). In addition, the

demographic variable, highest degree earned, was dichotomized and recoded (B.S. or less = 0, and master's or above = 1).

As shown in Table 2, three variables, SoS, SoP, and CS, were significantly related to job satisfaction. Using descriptors suggested by Davis (1971), SoS and SoP had substantial and very strong, respectively, negative correlations with job satisfaction. CS had a moderate positive correlation with job satisfaction. SoP and SoS had a substantial positive correlation; the intercorrelations between all other pairs of potential predictor variables were negligible to moderate. Of particular interest, fall 2020 teaching situation was not significantly ($p < .05$) correlated to any teacher demographic characteristic, or SoS, SoP, or job satisfaction.

Table 2

Intercorrelations among Variables

	X1	X2	X3	X4	X5	X6	X7	X8
Teaching method ^f (X1)	1.0	.02 ^{aNS}	.06 ^{bNS}	.06 ^{cNS}	.16 ^{bNS}	.08 ^{bNS}	.06 ^{bNS}	-.10 ^{bNS}
Gender ^g (X2)		1.0	.31 ^{d**}	-.10 ^{eNS}	-.29 ^{e**c}	-.15 ^{eNS}	.05 ^{eNS}	.04 ^{eNS}
Yrs. teaching SBAE (X3)			1.0	.02 ^{dNS}	-.30 ^{e**}	-.21 ^{e*}	.17 ^{eNS}	.10 ^{eNS}
Highest degree ^h (X4)				1.0	.16 ^{bNS}	.19 ^{bNS}	.06 ^{bNS}	-.15 ^{dNS}
Stress symptoms (X5)					1.0	.66 ^{e***}	-.22 ^{e*}	-.57 ^{e***}
Sources of pressure (X6)						1.0	-.30 ^{e**}	-.75 ^{e***}
Coping strategies (X7)							1.0	.41 ^{e***}
Job satisfaction (X8)								1.0

^a Phi coefficient. ^b Biserial correlation. ^c Spearman correlation. ^d Point biserial correlation. ^e Pearson correlation. ^f Coded as face-to-face = 1 and hybrid = 2. ^g Coded as female = 0 and male = 1. ^h Coded as B.S. or less = 0 and MS or higher = 1. ^{NS} Not significant ($p > .05$). * $p < .05$. ** $p < .01$. *** $p < .001$.

The final objective was to determine if a single or linear combination of teacher demographic characteristics, fall 2020 teaching situation, SoP, SoS, or CS could explain a significant ($p < .05$) portion of the variance in teacher job satisfaction. Based on the results of the bivariate correlations, SoS, SoP, and CS were retained as potential predictor variables for multiple regression. Because Fall 2020 teaching situation was a specific variable of special interest in this study, it was also retained.

The regression model was significant, $F(4, 74) = 32.65, p < .001$. Two variables, CS and SoP, entered into the model (Table 3) and explained 61.9% of the variance in job satisfaction. The regression coefficient for CS was positive indicating higher CS scores were associated with higher job satisfaction. Conversely, the regression coefficient for SoP was negative indicating higher SoP scores were associated with lower job satisfaction. Fall 2020 teaching situation and SoS were not statistically significant and did not enter into the regression model.

Table 3*Regression Model Predicting Job Satisfaction from Fall 2020 Teaching Situation, SoS, CS, and SoP*

Variable	<i>df</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Intercept	1	5.67	0.66	8.60	<.001
Fall 2020 teaching situation	1	-0.05	0.06	-0.85	.40
SoS	1	-0.21	0.11	-1.82	.07
CS	1	0.31	0.14	2.23	.02
SoP	1	-0.71	0.11	-6.60	<.001

Squared semi-partial correlations (ΔR^2) were calculated for CS and SoP to determine the amount of unique variance accounted for by each predictor when controlling for the other. The results indicated that SoP ($\Delta R^2 = .44$) was a much more robust predictor of job satisfaction than was CS ($\Delta R^2 = .03$).

Conclusions and Implications

Slightly more than half of the respondents in this study were male, slightly less than half of teachers held higher than a bachelor's degree, and the average length of teaching was 12.39 years. Three quarters of the teachers reported teaching hybrid courses, which included either fully face-to-face and virtual cohorts or alternating students between face-to-face and virtual formats. As did many of the nation's teachers, Arkansas SBAE teachers' roles and responsibilities shifted considerably as a result of the COVID-19 pandemic; nearly all teachers taught in strictly face-to-face settings before the pandemic (Daniel, 2020; McKim & Sorensen, 2020).

The most cited sources of pressure (SoP) by teachers were the lack of value placed on teaching, a workload out of proportion with salary, knowledge that being absent creates problems for other staff, lack of time to resolve problems with individual students, teaching in settings with challenging conditions, and diminished societal respect for the teaching profession. The lack of value and diminished respect for teaching has long been documented (Ingersoll & Collins, 2018) and was cited as the largest source of pressure by the teachers in this study. While this study did not specifically examine what constituted a heavy workload or challenging conditions, previous research has shown that secondary agricultural educators' workloads can lead to stress and burnout (Smith & Smalley, 2018). Conversely, the stressor least reported by teachers was lack of support from school administration. This result is encouraging, as the NAAE (2016) model illustrates that community support in the teacher's building is an important part of a teacher's growth.

Regarding symptoms of stress (SoS), teachers reported experiencing fatigue, frustration, worrying, forgetfulness, and impatience daily, which are primarily symptoms of emotional stress (Steinmetz et al., 1982). However, most teachers reported never engaging in or experiencing compulsive smoking, teeth grinding, crying, gum chewing, loneliness, blaming, stomach aches, and elevated blood pressure. Whereas several of these behavioral stress symptoms have been previously associated with feelings of occupational stress (Blanchford, 2020; Nixon et al., 2011; Steinmetz et al., 1982), teachers in this study reported lack of support from school administration least frequently, further suggesting organizational stress stemming from administrative support was not a concern.

The coping strategies (CS) most frequently used by teachers were staying busy, having stable relationships, looking for ways to make the work more interesting, planning ahead, and dealing with problems immediately as they occur. This finding is positive in that teachers in this study were not frequently relying on negative coping strategies, as preservice teachers (Gustems-Carnicer et al., 2019) and employees of other industries (Steinmetz et al., 1982) have done. However, two positive coping strategies used infrequently by the teachers in this study were seeking support and advice from superiors and seeking as much social support as possible. According to Huberman's (1989) model, building

community support is an important part of the life cycle of the teacher, especially for mid-career teachers, which were the majority of this sample.

Overall, teachers in this study reported being somewhat satisfied with their jobs. Specific attributes of the job found most satisfying by teachers were their colleagues, job security, variety in the job, physical working conditions, and the opportunity to use their talents. On the other hand, chances for promotion, hours of work, recognition, and rate of pay were the lowest rated aspects of job satisfaction. Changes in work responsibilities as a result of the pandemic may have negatively impacted teachers' work hours and variety in their work, as the hands-on learning experiences and face-to-face FFA events that traditionally allowed variety in the workday were replaced with increased synchronous and asynchronous remote lesson planning and delivery (McKim & Sorensen, 2020).

Regarding the relationships among variables, SoS and SoP were found to be positively related to one another and were both negatively related to job satisfaction. In line with Smith and Smalley (2018), the results of this study showed that agriculture teachers experienced greater sources of pressure, they experienced significantly higher symptoms of stress and lower levels of job satisfaction. Conversely, coping strategies were found to have a positive relationship with job satisfaction. In the context of this study, teachers who stayed busy, maintained stable relationships, found ways to make their work interesting, planned ahead, and dealt with problems immediately found more satisfaction in their jobs than those who did not. The relationships among gender and other variables indicated that males exhibited slightly higher symptoms of stress than females, which is contrary to previous findings (Chaplain, 2008; Klassen & Chiu, 2010).

The results of this study illustrated that SBAE teachers are stressed; however, teachers' working conditions necessitated by the pandemic were not related to any of the other variables of interest, indicating that teaching via hybrid or remote methods was not related to higher sources of pressure, greater symptoms of stress, or reduced job satisfaction. This finding is divergent from McKim and Sorensen's (2020) study that found a decrease in SBAE teacher satisfaction as a result of the pandemic. Perhaps timing of the studies might have played a role in this difference, as McKim and Sorensen's study was conducted during the early stages of the pandemic, while data for the current study was collected almost 10 months after the pandemic began. According to Bandura's (1978) model, SBAE teachers may have had sufficient time to adjust to the environmental pressures of COVID-19 by this time.

The regression analysis indicated that coping strategies and sources of pressure explained 61.9% of the variance in job satisfaction. When parsed out, sources of pressure was the better predictor of job satisfaction, showing that teachers who experienced higher sources of pressure reported lowered job satisfaction. Further, teachers who were able to utilize coping strategies were found to have higher levels of job satisfaction. Teaching environment did not enter into the model and was not a predictor of job satisfaction. This finding is interesting because one of the sources of pressure reported by teachers was "teaching in challenging conditions." It is plausible that the pandemic played a role as a source of pressure; however, regardless of whether teachers teach hybrid or face-to-face, they considered both challenging during this time.

Recommendations

First and foremost, the results of this study indicated that teaching during a pandemic, regardless of the instructional format, is stressful. Therefore, we recommend administrators continue to consider remote, hybrid, and face-to-face instructional environments as viable options for educating students during a pandemic, as none was deemed more stressful on teachers than another. Further research should be conducted on the impact of these three teaching environments on students' learning

in order to better determine whether one method might be preferable to another. We also found that teachers employing coping strategies experienced less stress than those who did not. We therefore recommend administrators explore options to offer teachers training and opportunities to practice coping strategies with their fellow teachers and at home. As the pandemic continues, further research should be conducted to gather students' levels of satisfaction, sources of pressure, and symptoms of stress, as their interactions with teachers can impact the behavior of both parties.

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