

A National Study of Work Characteristics and Work-Family Conflict among Secondary Agricultural Educators

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Abstract

Data from a random sample of secondary school agriculture teachers in the United States were utilized to explore work characteristics and their relationship to work-family conflict, specifically how the work role interfered with the family role. Nine workplace characteristics (i.e., salary, work hours per work week, weekend work hours, years of teaching experience, number of agriculture teachers within the school, school community type, number of students per class, work salience, and perceived family-supportive work culture) were explored by gender. Two of the workplace characteristics, years of teaching experience and salary, were significantly different for male and female agriculture teachers. An analysis was conducted of the relationship between identified workplace characteristics and teachers' perceptions of their work role interfering with their family role. In total, the workplace variables accounted for 22% of the variance in teachers' perceptions of work interfering with their family. Four of the workplace variables (i.e., perceived family-supportive work culture, number of agriculture teachers per school, work salience, and work hours per work week) were statistically significant predictors of work interfering with family. Recommendations and implications for the agriculture teaching profession are discussed in light on these findings.

Keywords: Work-family conflict; work interference with family; work role; family role; work-family balance; role salience; gender; workplace characteristics

Introduction and Need for the Study

The national shortage of agriculture teachers has spurred investigation into reasons why teachers leave the profession (Kantrovich, 2010). Research has identified the interface between work and family roles and teachers' ability to balance these intersecting roles as being related to career commitment (Crutchfield, Ritz, & Burris, 2013; Sorensen & McKim, 2014) and teacher turnover intentions (Sorensen, 2015). In this study, we sought to explore the interface between work and family by investigating the relationships between work characteristics and work-family conflict (WFC) among a national sample of agriculture teachers.

The catalyst for our investigation was the demanding nature of the agriculture teaching profession. Agriculture teachers are expected to complete traditional teacher roles in addition to

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responsibilities associated with total program management (e.g., FFA facilitation, SAE program management, and facilities management; Torres, Ulmer, & Aschenbrener, 2008). The pressure to coordinate and manage these responsibilities pushes many agriculture teachers to work extra hours, limiting the time available for other life roles, including family (Foster, 2001). Research outside of agricultural education has identified this issue, referred to as WFC, as associated with job dissatisfaction, stress, intentions to quit, and actual turnover (Allen, Herst, Bruck, & Sutton, 2000; Bruck, Allen, & Spector, 2002). Studies have just recently emerged showing a significant link between WFC and turnover intentions of agriculture teachers (Sorensen, 2015; Sorensen, McKim, & Velez, 2016). Yet, little is known regarding the degree to which work factors influence WFC among agriculture teachers.

Research on the topic of WFC has expanded immensely over the past few decades (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005); however, little research has been done within education (Cinamon & Rich, 2005). Few studies in agricultural education have measured the relationship between specific work characteristics and work-family conflict, especially at a national level. This study sought to address this critical gap in the literature by utilizing a national sample of agriculture teachers to explore the relationships between specific work characteristics and time-based work-family conflict. As the gender demographics within the agricultural education profession continue to shift, while at the same time society's work and family role expectations continue to change, the need for research examining the work-family interface within agricultural education has never been more important. A more complete understanding of WFC is needed to develop and implement effective strategies to reduce WFC and increase teacher retention. Additionally, exploring the workplace characteristics related to WFC within agricultural education may help identify the aspects of the profession that put agriculture teachers at risk of exiting the profession early.

Theoretical Framework

We utilized the role conflict theory (Greenhaus & Beutell, 1985) to frame the analysis. The role conflict theory states negative psychological effects occur when individuals unsuccessfully attempt to balance work and non-work roles. The inability to balance work and family roles leads to WFC, defined as "conflict in which the role pressures from the work and family domains are mutually incompatible in some respect" (Greenhaus & Beutell, 1985, p. 77). Foundational to the role conflict theory is the scarcity hypothesis, which states limited time and energy resources expended in one role deplete those resources available for other roles, which leads to WFC and diminished role quality in the domain receiving fewer resources. In this study, we explored the relationships between workplace characteristics and WFC among agriculture teachers; this analysis provides insight into the aspects of the agriculture teaching profession pulling resources away from teachers' family lives, causing WFC.

An important characteristic of the role conflict theory is the bi-directional nature of WFC, that is, conflict can take the form of work interference with family (WIF) or family interference with work (FIW). As this study was focused on the relationship between workplace characteristics and WFC, we focused on WIF. An additional characteristic of WFC is its multidimensionality; it can occur as time-based conflict, strain-based conflict, or behavior-based conflict. Due to the large time requirements associated with being an agriculture teacher (Torres et al., 2008), we limited our study to time-based conflict. Time-based conflict occurs when multiple roles compete for a finite amount of time. For example, an agriculture teacher often must choose between staying late at school to coach career development event teams or returning home and taking care of family responsibilities.

Literature Review

With the role conflict theory established as a framework, attention was turned to previous research on two important considerations in our analysis of the relationships between workplace characteristics and WFC. We first explored existing research on the dependent variable in this relationship, WFC. Then we analyzed existing research addressing potential workplace characteristics that should be considered as potential influencers to WFC.

Work-Family Conflict

Since the industrialization period, the interface between work and family domains has become a major concern for employees, families, and society (Westman & Piotrkowski, 1999). As workforce demographics evolved and traditional gender roles changed, the boundaries between work and family have become less defined (Gignac, Kelloway, & Gottlieb, 1996). With advances in technology, more people are now able to work from home. Many in the workplace, including teachers, bring tasks from their job to be completed while occupying the family role. The spillover of work and family roles has increased the potential for WFC (Crouter, 1984).

Research on WFC has expanded over the past few decades due to societal changes in family structures (e.g., men assuming more family responsibilities) and the changing demographic composition (e.g., more females) in the workforce (Eby et al., 2005; Galinsky, Aumann, & Bond, 2011). Studies exploring the impact of WFC identified its relationship to a number of negative workplace outcomes, including low occupational well-being, poor work performance, low organizational commitment, job dissatisfaction, increased job stress, high intentions to quit, and actual turnover (Allen et al., 2000; Bruck et al., 2002; Burke, 1988; Grandey & Cropanzano, 1999; Hepburn & Barling, 1996; MacEwen & Barling, 1994). Among the negative workplace outcomes, turnover intentions and actual turnover have been found to have the strongest relationships with WFC (Allen et al., 2000; Grandey & Cropanzano, 1999; Greenhaus, Collins, Singh, & Parasuraman, 1997; Netemeyer, Boles, & McMurrin, 1996).

It is important to recognize few occupations have a system free of WFC. In fact, research suggests 70 percent of employees do not have a healthy balance between work and personal lives, and the strain associated with the struggle to balance has worsened over the past few decades (Galinsky et al., 2011). Despite the popular idea that teaching is a profession characterized by a schedule and workload enabling balance between work and family roles, research has shown otherwise. A recent study found female teachers experience WFC at the same level and frequency as females in other high stress occupations such as lawyers and computer professionals (Cinamon & Rich 2005). The agricultural education profession is characterized by high work expectations (Torres et al., 2008); therefore, research addressing the time-based WFC experienced by agriculture teachers is essential. Yet, a dearth of literature within agricultural education exists explaining the degree to which specific workplace factors influence the WFC of agriculture teachers.

Workplace Characteristics to Consider

Given that time-based conflict is a foundational component of WFC, it is no surprise research has identified a positive relationship between the number of hours worked and WFC (Duxbury, Higgins, & Lee, 1994; Gutek, Searle, & Klepa, 1991; Mesmer-Magnus & Viswesvaran, 2005). Although operationalized differently, studies in agricultural education have begun to link time commitment and WFC. Specifically, research has identified the amount of work hours an agriculture teacher spends at work is a strong predictor of high teacher stress (Lambert, Ball, & Tummons, 2011; Torres, Lawver, & Lambert, 2009). Newcomb, Betts, and Cano (1987), stated

agriculture instructors complain about having more work to do than is “humanly possible” (p. 26). Furthermore, research suggests working long hours is one of the major challenges faced by agriculture teachers (Miller & Scheid, 1984; Moore & Camp, 1979; Mundt & Connors, 1999). In this study, we included the hours agriculture teachers worked during the week and the weekend as potential variables influencing WFC.

Research has also identified role salience as an important determinant of WFC. Greenhaus and Beutell (1985) proposed WFC grows when either work or family roles become more central to an individual’s life. Research suggests individuals will invest more time and energy into roles they consider to be important to them, allowing less time and energy for other roles. Following this logic, one would assume a positive relationship between work salience and WFC. Given the importance of work salience, we considered agriculture teachers’ work salience in our analysis of the relationship between workplace characteristics and WFC.

In addition to work salience, research suggests perceptions of family support within the workplace to be negatively related to WFC (Booth & Matthews, 2012; Kossek, Pichler, Bodner, & Hammer, 2011; Lapiere & Allen, 2006). In other words, as an individual perceives the workplace to be more supportive of their family role, the less WFC they experience. Scholars suggest the impact of a family-supportive work culture and WFC has been understudied (Kossek et al., 2011). As we explored the relationship between workplace characteristics and WFC, we included teachers’ perceptions of a family-supportive work culture.

Experience within a profession is also important to consider when examining WFC. Grzywacs and Marks (2000) found younger employees reported more WFC than older employees. This research highlights the more experience an employee has the more likely he or she has gained the necessary expertise to manage work demands without infringing upon family responsibilities (Cinamon & Rich, 2005). Therefore, we considered teachers’ years of classroom experience in our analysis of the relationship between workplace factors and WFC.

Due to traditional role expectations that work is more important for men and family more important for women, gender is often considered in studies exploring antecedents of WFC (Pleck, 1977). In the 1970s and 1980s when the influx of women into the workforce escalated, WFC research generally focused on women. However, over the past several decades, WFC research has expanded to include men (Barnett, Marshall, & Pleck, 1992; Morgan, 2014). Within agricultural education, some research suggests females experience more WFC than males (Murray, Flowers, Croom, & Wilson, 2011) while other research suggests gender does not influence an individual’s ability to balance work and family (Sorensen & McKim, 2014). Due to the inconsistencies in agricultural education research, we included gender as a variable within our analysis of the relationship between workplace characteristics and WFC. Additionally, as the proportion of female agriculture teachers in the profession continues to increase (Camp, Broyles, & Skelton, 2002; Foster, Lawver, & Smith, 2014; Kantrovich, 2010), research exploring WFC by gender is timely.

Four additional workplace variables: number of agriculture teachers per school; school community type (Guarino, Santibanez, & Daley, 2006); salary (Gonzales, Brown, & Slate, 2008); and number of students per class (Theobald, 1990) were considered as potential time-based influencers to how agriculture teachers experienced WFC. We felt these additional variables had the potential to influence how secondary agriculture teachers experienced and/or perceived workplace obligations interfering with their family role.

Purpose and Objectives

The purpose of this study was to describe nine workplace characteristics (i.e., salary, work hours per work week, weekend work hours, years of teaching experience, number of agriculture teachers per school, school community type, average number of students per class, work salience, and perceived family-supportive work culture) by gender among secondary school agriculture teachers. Additionally, we sought to determine the relationship between specific workplace characteristics and WFC, specifically work interference with family (WIF). Given the link between WFC and turnover (Allen et al., 2000; Grandey & Cropanzano, 1999; Greenhaus et al., 1997; Netemeyer et al., 1996, Sorensen et al., 2016), this research informed the National Research Agenda Priority three, which calls for research into a “sufficient scientific and professional workforce” (Roberts, Harder, & Brashears, 2016, p. 9). The following research objectives were developed to guide our study.

1. Describe the work domain characteristics of agriculture teachers by gender.
2. Determine the degree to which work-family conflict (WFC) exists amongst agriculture teachers.
3. Determine the relationships between work characteristics and work interference with family (WIF).

Methods

This study utilized survey research to collect information on agriculture teachers' workplace characteristics and WFC. The survey instrument was designed and distributed to a random sample of agriculture teachers in the United States using the online survey system Qualtrics. Online survey methodology was useful for this nationwide study because of the advantages it provided, including low costs, data collection from a large geographical area, and relative ease to input collected data from a large sample (Dillman, 2007).

The target population consisted of all secondary agriculture teachers in the United States during the 2014-2015 school year who self-identified as being active participants in a family role. A secondary agriculture teacher was defined as an individual with a full-time or part-time assignment to teach agriculture courses in middle and/or high schools. Active participation in a family role was defined as “any and all committed relationships that might influence how time is invested in the non-work domain.” This distinction was imperative given our interest in exploring how work characteristics influenced the interaction between work and family roles.

The National FFA Organization was utilized as the source of participant contact information. According to the National FFA Organization, there were over 11,000 agriculture teachers in the United States when the study was conducted (National FFA Organization, 2014). The appropriate sample size was determined based on Cochran's (1977) and Krejcie and Morgan's (1970) sample size determinant formulas. This study targeted a simple random sample from the entire population of secondary agriculture teachers in the United States. A sample frame of 778 agriculture teachers was obtained from the National FFA Organization and consisted only of names and email addresses.

Questions pertaining to the work domain consisted of agriculture teachers' actual time invested in work (weekend hours per month and work hours per regular work week), salary, years of teaching experience, number of agriculture teachers per school, average number of students per class, school community type (i.e., urban, suburban, or rural) as well as two characteristics

measured using constructs, work role salience and perceived family-supportive work culture. Work role salience was measured using a six-item construct adopted from Noor (2004). Participants rated each item on a 6-point scale from 1 (*strongly disagree*) to 6 (*strongly agree*), with higher scores indicating higher work salience. Sample items included “my personal life goals are work-oriented” and “the major satisfaction in my life comes from work.” The work salience construct has been tested for reliability with Cronbach’s alphas ranging from .76 to .78 (Chang, Shen, & Chi, 2014; Noor, 2004). Perceived family-supportive work culture was measured using a seven-item construct adopted from Harrington, Deusen, and Humberd (2011). Participants rated each item on a 6-point scale from 1 (*strongly disagree*) to 6 (*strongly agree*), with higher scores indicating higher perceived family-supportive work culture. Sample items included “my co-workers are understanding when I have family business to take care of” and “I feel comfortable sharing my family issues with colleagues.”

In addition to analyzing workplace characteristics, we analyzed teachers’ perceptions of work interference with family (WIF). We utilized the three item sub-construct of the work family conflict scale (WFCS; Carlson, Kacmar, & Williams, 2000) to measure WIF. Participants rated each item on a 6-point scale from 1 (*strongly disagree*) to 6 (*strongly agree*), with higher scores indicating greater conflict. Sample items for the WIF construct included “my work keeps me from my family activities more than I would like” and “I have to miss family activities due to the amount of time I must spend on work responsibilities.” The WFCS has been used extensively in research and has been found to be reliable and valid (Bruck et al., 2002; Carlson et al., 2000; Fu & Shaffer, 2001; Ogungbamila, 2014; Vieira, 2013).

A panel of experts consisting of doctoral students in the College of Education and professors in the College of Agricultural Sciences at Oregon State University examined and critiqued the instrument for content and face validity. Construct reliability estimates for each construct were estimated using a pilot test of 30 career and technical education teachers in Oregon. Since the survey instrument was administered only once, Cronbach’s alpha coefficients were used for the reliability estimates. According to Nunnally and Bernstein (1994), reliability estimates should meet or exceed an alpha of .70 to be considered reliable. All of the constructs in this study’s instrument exceeded the alpha of .70 (see Table 1).

Table 1

Construct Reliability Estimates of the Survey Instrument (n = 30)

Instrument Construct	Cronbach’s α (Pilot)	Cronbach’s α (Post-hoc)
Work Salience	.81	.83
Family-Supportive Work Culture	.86	.80
Work Interference with Family (WIF)	.91	.92

We followed Dillman’s (2007) tailored design method to collect data from participants. Participants were contacted by email on five separate occasions, encouraging them to complete the survey. Non-response bias was handled using the guidelines outlined by Lindner, Murphy, and Briers (2001). Due to the limited contact information provided in the frame, no attempt was made to contact non-respondents by telephone. Thus, as recommended by Lindner et al. (2001), on-time

respondents ($n = 199$) were compared to late-respondents ($n = 35$) to determine if any systematic differences existed. No statistically significant differences existed between on-time and late respondents within the variables of interest. Therefore, we considered non-response error to be insignificant to this study (Lindner et al., 2001; Miller & Smith, 1983).

Respondents who did not meet the population parameters (i.e., those who were not secondary agriculture teachers and/or who self-reported not being a family role participant) were excluded from the sample frame. In total, 34 participants did not meet the population parameters for the study and a total of 75 participants' emails "bounced." Therefore, these 109 participants were removed from the database prior to analysis. A total of 234 usable surveys were collected, yielding a response rate of 30.08% ($n = 234$). The data were downloaded into the Statistical Package for the Social Sciences (SPSS) version 20.0 for analysis.

Research objective one (i.e., describe work domain characteristics by gender) and research objective two (i.e., describe work-family conflict of agriculture teachers; specifically work interference with family) were accomplished by determining and reporting frequencies, percentages, means, and standard deviations. Where applicable, we performed independent samples *t*-tests and Chi-square tests to determine the statistical significance of differences between male and female respondents. For significant differences, effect sizes were measured and reported using appropriate statistical measures (Cohen, 1988). In order to accomplish research objective three (i.e., determine the relationship between work characteristics and WIF), an ordinary least squares (OLS) regression was performed. The independent variables in the regression included salary, work hours per work week, weekend work hours, years of teaching experience, number of agriculture teachers per school, school community type, average number of students per class, work salience, and perceived family-supportive work culture with the dependent variable being WIF. Gender was also included in the model as a control variable. A total of 10 predictor variables were entered into the regression analysis. According to Green (1991), to ensure stability and sufficient power when testing a model, a minimum sample size of $50 + 8k$ is recommended (where k is the number of predictors). With 10 variables entered, we needed no less than 130 respondents; this criteria was met by our sample size ($n = 234$). Betas, standardized betas, and overall R^2 were calculated and reported for the regression analysis.

Before conducting data analyses, the assumptions of parametric data as well as the assumptions of regression were considered. Regarding the assumptions of parametric data, we found the variances to be the same throughout the data and the data to be independent. However, two variables, monthly weekend work hours and work hours per week, were not normally distributed due to extreme outliers. To deal with this issue, we trimmed and replaced outlier values with the value of the most extreme response that was not identified as a statistical outlier (i.e., four standard deviations from the mean), a method called the semi-Winsorized approach (Guttman & Smith, 1969; Moyer & Geissler, 1991). According to Guttman and Smith (1969), Winsorized means are robust estimators of the population mean. Before data analysis, we also checked the assumptions of regression (e.g., variance, collinearity, homoscedasticity, linearity between predictor and outcome variables) and found the data met all of the assumptions.

Findings

Selected demographic information was collected from respondents ($n = 234$). Of the responding teachers, 40.08% were female and 59.91% were male. This was representative of the national population of agriculture teachers (43% female, 57% male; Foster, Lawver, & Smith, 2014). Respondents ranged from 22 to 69 years old with a mean age of 40.26. Female agriculture teachers tended to be of younger age than their male counterparts. Only 14% of females were 45

or older, whereas 52% of males were 45 or older. Conversely, nearly 64% of females were younger than 35 years old while only 21% of males were younger than age 35. The majority of responding teachers (93.42%) self-identified as “White, European American, Non-Hispanic,” “Hispanic or Latino American” was the next highest reported ethnicity (1.75%). At the time of data collection, 93.24% of responding teachers were married and 72.22% indicated they had children.

Research objective one sought to describe the work characteristics of responding agriculture teachers by gender. Seven of the nine work characteristics were continuous in nature; a summary of these variables are reported in table two.

Table 2

Continuous Work Domain Characteristics by Gender

Variable	Total (<i>n</i> = 227)		Female (<i>n</i> = 91) ¹		Male (<i>n</i> = 136) ¹		<i>t</i>	<i>p</i> -value	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Work Hours per Work Week	55.77	10.34	57.13	8.23	54.82	11.52	1.64	.102	0.23
Monthly Weekend Work Hours	18.07	14.90	18.24	14.62	17.95	15.14	0.14	.891	0.02
Teaching Experience	13.99	10.22	8.62	7.60	17.75	10.15	7.65	<.001	1.02
Number of Agriculture Teachers	1.96	1.31	1.89	1.17	2.01	1.40	0.61	.540	0.09
Students per Class	20.19	7.83	20.14	8.92	20.22	7.01	0.07	.943	0.01
Work Salience	4.05	0.85	4.08	0.76	4.03	0.89	0.39	.694	0.06
Family-Supportive Work Culture	3.96	0.91	3.99	0.89	3.93	0.91	0.49	.628	0.07

Note. Work salience and family-supportive work culture were measured on 6-point scales ranging from 1 (*strongly disagree*) to 6 (*strongly agree*).

¹Seven teachers declined to respond.

For six of the seven continuous workplace variables (i.e., work hours per work week, monthly weekend work hours, number of agriculture teachers within the school, average number of students per class, work salience, and perceived family-supportive work culture), we discovered

no statistically significant differences between male and female respondents. The only continuous variable that differed significantly by gender was years of teaching experience (p -value < .001). Regarding years of teaching experience, males ($M = 17.75$) had, on average, 9.13 more years of experience than females ($M = 8.62$). Furthermore, gender was found to have a large effect (Cohen, 1988) on years of teaching experience (Cohen's $d = 1.02$).

Salary was measured using categorical data to decrease respondent burden (see Table 3). Most of the teachers (78.8%) reported salaries between \$35,000 and \$75,000. Two teachers reported making less than \$25,000, while twelve teachers reported a salary over \$85,000. When comparing salary by gender, males tended to report statistically significant higher salaries than females ($\chi^2(7) = 18.03, p = .012$). More males than females reported earning one of the four highest salary options (i.e., \$55,000 and above) whereas more females than males reported earning one of the four lowest salary intervals (i.e., under \$55,000).

Table 3

Comparison of Responding Teachers' Salaries by Gender

Salary Intervals	Total		Female		Male	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Under \$25,000	2	0.9	1	1.1	1	0.7
\$25,000 - \$34,999	16	7.1	7	7.7	9	6.6
\$35,000 - \$44,999	49	21.7	31	34.1	18	13.1
\$45,000 - \$54,999	56	24.8	25	27.5	31	22.6
\$55,000 - \$64,999	36	15.9	10	11.0	26	19.0
\$65,000 - \$74,999	37	16.4	9	9.9	28	20.4
\$75,000 - \$84,999	18	8.0	7	7.7	11	8.0
\$85,000 or more	12	5.3	1	1.1	11	8.0

School community type was also measured using categorical data. Respondents self-identified the type of community their school was located within. Of respondents, 10.3% indicated their workplace school was located in an urban setting, 23.2% indicated teaching in a suburban setting, and 66.5% indicated teaching in a rural setting. Differences between reported school community type were statistically insignificant for males and females ($\chi^2(2) = 2.20, p = .333$).

The second research objective sought to describe the work-family conflict of agriculture teachers; specifically teachers' perceptions of work interfering with family (WIF). Overall, agriculture teachers reported moderately high levels of WIF ($M = 4.58$). There were no statistically significant differences between male ($M = 4.63$) and female ($M = 4.54$) agriculture teachers regarding their perception of WIF ($t(224) = 0.81, p = .545$). Furthermore, effect size measurements indicated gender had a negligible effect on teachers' WIF (Cohen's $d = 0.08$).

The final objective (i.e., determine the relationships between work characteristics and WIF) was accomplished by running an OLS regression with the workplace characteristics and gender as independent variables and WIF as the dependent variable (see Table 4). The independent variables, in combination, comprised a significant model (p -value < .001) and predicted 22% ($R^2 = .22$) of the variance in WIF. Four independent variables were statistically significant in their prediction of WIF. Using the standardized coefficients (β) to determine the strength of the relationship between independent and dependent variables, we found perceived family-supportive work culture to be the strongest predictor of WIF ($\beta = -.29$). Additionally, the number of agriculture teachers ($\beta = .18$), work salience ($\beta = .17$), and work hours per work week ($\beta = .15$), were identified as statistically significant predictors of WIF.

Table 4

Relationship between Workplace Characteristics and WIF

Variable	Dependent Variable: WIF					
	Zero-order correlation (r)	p -value	B	SEB	β	p -value
Gender	.04	.545	.17	.16	.08	.252
Family-Supportive Work Culture	.30	.004	-.34	.08	-.29	<.001
Number of Agriculture Teachers	.18	.009	.15	.06	.18	.011
Work Salience	.14	.028	.18	.08	.17	.009
Work Hours per Work Week	.27	<.001	.02	.01	.15	.033
Teaching Experience	.04	.586	-.01	.01	-.12	.194
School Community Type	-.02	.755	.20	.17	.09	.239
Monthly Weekend Work Hours	.08	.090	-.01	.01	-.04	.589
Students per Class	.09	.208	-.01	.01	-.03	.672
Salary	.03	.671	.06	.18	.03	.759

Note. $R = .46$, $R^2 = .22$, $F = 5.23$, p -value < .001. Work salience and perceived family-supportive work culture items scaled from 1 (*strongly disagree*) to 6 (*strongly agree*). Gender coded 0 = female, 1 = male. Salary coded 0 = below \$55,000, 1 = \$55,000 or above. School community type coded 0 = urban/suburban, 1 = rural

Conclusions/Implications/Recommendations

The purpose of this research was to provide a national analysis of agriculture teachers' workplace characteristics and the relationship between workplace variables and work-family conflict. Given the strenuous nature of the agricultural education profession (Torres et al., 2008)

and the identified agriculture teacher shortage (Kantrovich, 2010), research exploring the agricultural education workplace and its relationship to WFC is both timely and relevant.

Research objective one sought to describe the workplace characteristics of responding agriculture teachers. Differences between male and female teachers were discovered within teaching experience and salary. These findings are most likely a function of the profession's changing demographics over the past few decades (Camp et al., 2002, Foster et al., 2014, Kantrovich, 2010). The increase in female agriculture teachers has happened slowly over time; therefore, the majority of older and more experienced teachers are male, while the younger teachers are female. As most teacher salaries are largely based on years of teaching experience, it is likely the younger teachers, who are more likely to be female, will report lower salaries than the older teachers, who are more likely to be male. However, caution should be taken to assume the absence of any gender bias in agricultural education in relation to salary (Kelsey, 2006), since the opportunity to receive stipends and extended contracts may not be as defined.

The second research objective sought to describe agriculture teachers' WFC in the form of work interfering with family. Respondents indicated moderately high levels of WIF, suggesting agriculture teachers experience psychological role strain as work demands interfere with family responsibilities. Work as an agriculture teacher is filled with many challenges, including trying to allocate time resources to a demanding work schedule while also attending to family domain responsibilities (Crutchfield et al., 2013; Murray et al., 2011). Given agriculture teachers in our study worked close to 60 hours per week, including weekends, during the school year it is no surprise work interferes with family. Research outside of agricultural education linking WFC and turnover (Allen et al., 2000; Grandey & Cropanzano, 1999; Netemeyer et al., 1996) should serve as a catalyst for research and initiatives focused on developing agriculture teachers' workplace efficiency and/or reducing the time burden of the agriculture teaching profession.

The final research objective sought to determine the relationship between work characteristics and WIF. In combination, the ten predictor variables (i.e., gender, salary, work hours per work week, weekend work hours, years of teaching experience, number of agriculture teachers per school, school community type, average number of students per class, work salience, and perceived family-supportive work culture) predicted 22% of the variance in time-based WIF. Four independent variables (i.e., perceived family-supportive work culture, number of agriculture teachers per school, work salience, and work hours per work week) were found to significantly predict respondents' WIF.

The strongest predictor of agriculture teachers' WIF was perceptions of a family-supportive work culture. Our research indicates as teachers perceived their work culture to be more supportive of families, their WIF decreases significantly. Unfortunately, our study also found respondents reported their work culture was only moderately supportive of the family role. These findings suggest the work culture within agricultural education is less supportive of family roles than is desirable. Research is needed to uncover the specific characteristics of a work culture that led some teachers to perceive their workplace as supportive of their families. Once these characteristics are identified, consideration can be given to the feasibility of implementing these structures within more agricultural education programs and/or schools.

The second strongest predictor of agriculture teachers' WIF was the number of agriculture teachers within the school. Some might expect agriculture teachers in multi-teacher programs would be more likely to share responsibilities and therefore have a less demanding work role. However, our findings suggest more peer agriculture teachers within the school is related to higher WIF. A potential explanation is more agriculture teachers indicate a larger program with perhaps

more responsibilities and more paperwork. Additionally, research has found when tasks are taken off agriculture teachers' workload, like we hope occurs in multi-teacher programs, teachers fill the saved time with more work activities (Lambert et al., 2011). In multi-teacher programs, perhaps the workload becomes an *addition* rather than a *division* of responsibilities. This finding has implications for the expansion of existing programs. Research is needed to understand how work is distributed among multi-teacher programs and how collaborations between agriculture teachers can reduce, rather than fuel, WIF.

In addition to family-supportive work culture and the number of agriculture teachers within the school, our research identified work salience as a significant predictor of WIF. Greenhaus and Beutell (1985) proposed WFC is intensified when either work or family roles are salient to an individual. They argued the more important a role is to an individual, the more time an individual will invest in that role, leaving less time and energy for other roles. The significant, positive relationship between work salience and WIF supports the notion that role salience intensifies WFC (Greenhaus & Beutell, 1985). Professional development and instruction should prepare agriculture teachers to balance work and family roles given fluctuating salience in either role. This could be especially helpful when teachers experience major family events (e.g., marriage, birth of a child) and/or changing expectations within their work role (e.g., leadership position within a professional organization, growing FFA program).

One important finding was that male and female teachers did not differ in work salience, nor was there a difference in the amount of hours worked per week. According to Murray et al., (2011), traditional gender roles still exist within agricultural education, with women handling most of the home and childcare responsibilities, and while both male and female agriculture teachers value and spend similar amounts of time at work, there is perhaps a greater burden placed on women because of the lack of flexibility the home or family role demands. While this assertion is certainly feasible, our findings suggest both male and female agriculture teachers experience the burden of balancing work and family roles similarly. Perhaps, male agriculture teachers are taking on a greater role at home, possibly due to the increase in dual earner households (Galinsky et al., 2011), thus intensifying WFC among both male and female teachers. Perhaps teachers experience more WFC in dual earner households than single earner households. Research should be conducted exploring the mediating and moderating influences of a spouse or partner (i.e., work characteristics, support, etc.) on WFC and role salience among agriculture teachers.

The final significant predictor of WIF within our model was work hours per work week. According to the role conflict theory, the amount of WFC a person experiences increases proportionally with the number of hours he or she spends in either the work or family domain (Duxbury et al., 1994; Gutek et al., 1991; Mesmer-Magnus & Viswesvaran, 2005). Agriculture teachers in this study reported working over 55 hours per week, not including weekends, at their jobs. Therefore, identifying a statistically significant, positive relationship between the number of work hours per work week and WIF supports the role conflict theory. Additionally, this finding supports previous recommendations to develop agriculture teachers' workplace efficiency and/or reduce the time burden of the agriculture teaching profession.

Based on the findings of this research and findings supporting the significant link between WFC and teacher turnover intentions (Sorensen et al., 2016), we propose a model for the influence of work characteristics on work-family conflict and implications for agriculture teacher turnover (see Figure 1).

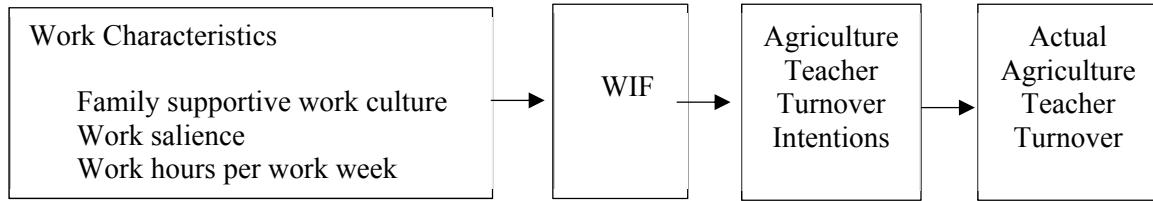


Figure 1. Model for predicting the influence of work characteristics on work-family conflict and implications for agriculture teacher turnover.

This research provides valuable insight, on a national scale, into the relationship between workplace variables and WFC among secondary agriculture teachers. However, this research is only a step toward the agricultural education profession supporting teachers' balance between work and family roles. The importance of the continued viability of the agricultural education profession compels persistent efforts to provide agriculture teachers with the skills and work environment necessary to successfully balance work and family roles.

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