Journal of Agricultural Education,
56(4), 31-46. doi: 10.5032/jae.2015.04031

Career and Family Balance of Texas Agricultural Science Teachers by Gender

Mark S. Hainline[1], Jonathan D. Ulmer[2], Rudy R. Ritz[3], Scott Burris[4], Courtney D. Gibson[5]

Abstract

With the high rates of agricultural teacher burnout and attrition in the United States, the need for teachers to strike a balance between their work and family responsibilities is imperative. The purpose of this research study was to explore the influence of gender on Texas agricultural teachers' perceived job obligations and family responsibilities. Utilizing an online survey instrument, a census of agricultural science teachers in Texas for the 2013-2014 school year was attempted. A total of 567 Texas agricultural educators completed the instrument, for a response rate of 30.8%. The teachers' involvement in household responsibilities accounted for an average of 22.63 hours per week. In addition to the hours teachers spent on their family responsibilities, an average of 58.65 hours per week were expended on the total agricultural education program (classroom instruction, FFA, and SAE). When comparing genders, female agricultural teachers, on average, reported exerting a surplus of 7.5 hours per week on family responsibilities as compared to male teachers. Findings of this study indicated female teachers' spouses worked an average of 8.65 more hours per week outside of the home, in comparison to the spouses of their male counterparts.

Keywords: agricultural education; career-life balance; career and family; gender; agricultural science teachers

Agricultural teachers' struggle to balance their career and family life is a chronic problem nationwide (Bruening & Hoover, 1991; Coughlin, Lawrence, Gartin, & Templeton, 1988; Murray, Flowers, Croom, & Wilson, 2011; Odell, Cochran, Lawrence & Gartin, 1990). With agricultural science teachers' work hours continuing to climb (Cooper & Nelson, 1981; Murray et al., 2011), time allotted to fulfill family responsibilities is reduced.

In the 1980s, a demographical shift took place in the United States when the women's workforce began mimicking the traditional male workforce (USDL Women's Bureau, 2000). This growth of female participation in the workforce was also experienced in the field of agricultural education (Camp, Broyles, & Skelton, 2002; Kantrovich, 2007). Past research on female

[1] Mark S. Hainline is a Graduate Teaching and Research Assistant in the Department of Agricultural Education and Communications at Texas Tech University, Box 42131, Lubbock, TX 79409, mark.hainline@ttu.edu.
[2] Jonathan D. Ulmer is an Associate Professor of Agricultural Education in the Department of Agricultural Education and Communications at Texas Tech University, Box 42131, Lubbock, TX 79409, jon.ulmer@ttu.edu.
[3] Rudy R. Ritz is an Associate Professor of Agricultural Education in the Department of Agricultural Education and Communications at Texas Tech University, Box 42131, Lubbock, TX 79409, rudy.ritz@ttu.edu.
[4] Scott Burris is an Associate Professor of Agricultural Education in the Department of Agricultural Education and Communications at Texas Tech University, Box 42131, Lubbock, TX 79409, scott.burris@ttu.edu.
[5] Courtney D. Gibson is an Assistant Professor of Agricultural Communications in the Department of Agricultural Education and Communications at Texas Tech University, Box 42131, Lubbock, TX 79409, courtney.d.gibson@ttu.edu.

agricultural teachers indicate certain family responsibilities are unique to women (Johnson, 1997; Kelsey, 2006), which has the potential to further intensify the balancing act between the home and work life domains. To diminish agricultural teacher attrition and burnout caused by the imbalance existing between career and family life domains, the profession must continue to examine the challenges teachers face in balancing their home and work responsibilities. The purpose of this study was to assess the priorities of Texas agricultural science teachers in balancing the home and work life domains, particularly as it relates to gender.

Theoretical Framework and Literature Review

Engels (1892), who studied the working class of the United Kingdom, observed that the environment an employee encounters in the workplace spills over into his/her leisure time. This phenomenon was further explored by Wilensky (1960) who coined the term "spillover effect" which implied the nature of one's work experience transmits into the non-work domain affecting the behavior and attitude of the worker in their home life. The concept of the spillover effect was later defined by Googins (1991) as the attitudes, behaviors, and feelings that could potentially emerge in one domain and are then carried over into the other. Along with spillover's influence on one's behavior and attitude, Netemeyer, Boles, and McMurrian (1996) argued outcomes such as teacher attrition, burnout, job dissatisfaction, marital dissatisfaction, and psychological distress are a result of this phenomenon. Further studies have indicated this phenomenon can be broken down into physiological and educational categories (Crouter, 1984).

Early research conducted on the spillover effect implied the presence of conflict or interference existing between family and work life domains; however, positive terms, including enrichment, enhancement, and facilitation have been associated with this relationship as well (Greenhaus, Collins, & Shaw, 2002; Kelloway, Gottlieb, & Barham, 1999; Staines, 1980). Further research has elaborated on the aspects of positive spillover, suggesting one domain of family and work life balance can potentially have a positive effect on the other (Pajak & Blasé, 1989; Voydanoff, 2002). According to Rogers and May (2003), experiences in one domain which lead to feeling stimulated, competent, and joyful, can spillover into positive experiences in another role. In Murray et al.'s (2011) study, the researchers attempted to identify certain family responsibilities which served as barriers to accomplishing job responsibilities. Out of the seven family responsibilities observed in the study, only two were perceived to be legitimate barriers to fulfilling job responsibilities (Murray et al., 2011). The five items Georgia agricultural teachers indicated to be low barriers might imply that certain family responsibilities have a positive effect on job responsibilities.

The effects of negative spillover and stress on agricultural educators have the propensity to increase teacher burnout (Cherniss, 1980; Clark, 1985; Igodan, 1984; Maslach, 1982). Extensive research indicates teacher attrition and burnout is a serious concern in the field of agricultural education (Bennett, Iverson, Rohs, Langone, & Edwards, 2002; Berns, 1990; Birkenholz, 1986; Boone & Boone, 2007; Cole, 1984; Dillon, 1978; Froehlich, 1966; Jewell, Beavers, Kirby, & Flowers, 1990; Knight & Bender, 1978; Mattox, 1974; Miller, 1974; Moore & Camp, 1979). Without a viable solution to this issue, agricultural educators will have to tolerate the ongoing struggle of balancing their home and work lives (Buehler, 2009).

In the field of agricultural education, the struggles encountered in the attempt to balance family and work life are amplified for female teachers raising children. Even though both females and males take part in parenting, mothers are the major caregiver and provide nurturing to their children (Johnson, 1997). The home life obligations of females could potentially explain the underrepresentation of female agricultural teachers seen in the past. In 1987, Knight discovered a total of 5.1% of agricultural education teaching positions nationwide were held by women. This percentage increased to 15.8% by 1998 (Camp, 1998). Camp (1998) also indicated that 41% of

recently qualified teachers were female indicating a shift in the demographics of our nation's vocational agricultural teachers.

Kelsey (2006) set out to determine the cause of the under-representation of females in the field of agricultural education and found women had contextually-rich agricultural education experiences and were well prepared to teach, yet only a fraction enrolled in the pre-service program and went on to teach agricultural education. Factors identified as causes of under-representation of females in the field included the influence of gender bias, a lack of commitment to teaching agricultural education, and being place-bound (Kelsey, 2006). In regard to gender bias, further research indicated the severity of gender bias was mitigated for female agricultural teachers as their self-efficacy and time spent in the profession increases (Foster, Pikkert, & Husmann, 1991; Kelsey, 2007). Similarly, Ricketts, Stone, and Adams (2006) did not indicate gender as being a barrier for females in agricultural education, but rather validated the importance of female teachers having a close mentor teacher.

Keene and Reynolds (2005) sought to determine the ways in which family demands alter their performance at work. Their findings indicated female teachers, among married workers, were twice as likely to perceive family obligations as having a negative effect on their performance at work. Keene and Reynolds (2005) attributed this phenomenon to the additional adjustments females make on their workloads, including the refusal of overtime and turning down assignments for family reasons.

Foster (2001a) investigated the differentiation of roles and responsibilities between male and female vocational agriculture teachers. According to this study, certain job responsibilities are unique to women, and the sentiment of female teachers indicated it was difficult to maintain societies' definition of a "normal household" while obtaining a "successful career" (Foster, 2001a, p. 6). This problem is further exacerbated by the strenuous work demands of agricultural science teachers (Foster, 2001b).

In comparison to the United States average work week of 47 hours (Weiss, 2014), the average hours expended by agricultural science teachers is substantially higher. Cooper and Nelson (1981) reported that vocational agriculture teachers worked a total of 55 hours a week. A later study coincided with these findings by indicating Georgia agricultural teachers averaged a 57 hour work week (Murray et al., 2011). To explain the excess hours worked by agricultural science teachers on a weekly basis, Murray et al. (2011) observed the number of hours the agricultural teachers devoted to classroom instruction, lab preparation, FFA activities, facilities maintenance, and paperwork. Murray et al.'s (2011) research indicated the greatest amount of time invested by agricultural teachers involved classroom instruction followed by participation in FFA activities. With the strenuous hours demanded of vocational agriculture teachers, Buehler (2009) suggested agricultural education is not only a career, but a lifestyle, as well.

Along with the grueling hours agricultural teachers expend at work, family responsibilities and obligations also demand time from teachers' strained schedules. National reports indicated men and women both take part in household activities; yet, family responsibilities are predominantly tasked to women (USBLS, 2013). Agricultural educators in Georgia reported devoting an average of 21 hours a week to fulfilling their family responsibilities (Murray et al., 2011). Female teachers in this study reported having double the responsibility for meal preparation and grocery shopping, in comparison to male respondents. Conversely, the percentage of responsibility for completing "yard work, farm work (when applicable), and home maintenance" (p. 45) was twice as great for male agricultural educators. Findings from Murray et al.'s (2011) study also indicated female teachers' spouses worked an average of 12 more hours per week outside the home than the spouses of male teachers.

Purpose and Objectives

The struggle to establish a balance between the work and family life domains has continued to be an issue for dedicated agricultural science teachers (Buehler, 2009). This study sought to assess the priorities of Texas agricultural science teachers in balancing the home and work life domains, as it relates to gender. The following objectives were used to guide this study:

1. Describe the perceived job expectations of both male and female Texas agricultural teachers.
2. Describe the responsibilities of both male and female Texas agricultural educators related to personal and family commitments.

Methods and Procedures

Population and Sample

A census was attempted, which encompassed all agricultural science teachers in the state of Texas during the 2013-2014 calendar years. The frame used to determine the assessable population (N = 1,921) was the Texas Agricultural Teacher Directory on judgingcard.com. Although the directory is the best available list, it is not considered to be comprehensive. After removal of duplicates, non-high school teachers (e.g., teacher educators), and undeliverable emails, the frame was reduced to 1,876. At the conclusion of the data collection, 567 responses were received resulting in a response rate of 30.8%.This group was comprised of respondents was comprised of 385 (67.90%) male and 182 (32.10%) female agricultural science teachers. The 41 to 50-year-old age range contained the highest frequency of male agricultural teachers (n = 104, 27.23%), whereas more than 60% (n = 109) of the female teachers reported belonging to the 22 to 30-year-old age range.

More than over 64% of the female teachers reported teaching agriculture for less than five years (n = 117). The greatest observed frequency for years of teaching among male teachers was 21 years or more (n = 105, 27.56%). More than 80% of the sample indicated that they were currently married (n = 430), while less than 15% of the respondents reported they have never been married (n = 76). The marriage rate was 19.36% higher for male agricultural educators (n = 320, 86.02%), in comparison to married female teachers (n = 110, 66.66%). The percentage of teachers who had experienced divorce was slightly higher for female teachers (n = 23, 13.93%) as compared to males (n = 49, 13.17%).

Design

A descriptive, exploratory design was used in this quantitative study on home and work life balance of Texas agricultural science teachers. Gall, Gall, and Borg (2007) defined descriptive research as a form of "quantitative research that involves making careful descriptions of educational phenomena" (p. 300). This study sought to describe gender differentiation in responsibilities in both the home and work life domains. Various items on the instrument pertained exclusively to teachers in a traditional relationship, yet all Texas agricultural science teachers were included in this study. For example, single teachers were asked to omit the questions inquiring about their spouses.

The independent variable in this research study was gender, whereas job expectations and family responsibilities were the dependent variables. Responsibilities and expectations of both the family and work life domains were examined, because attitudes, behaviors and feelings have the propensity to be carried over from one domain to the other (Googins, 1991). An online survey instrument was used to collect data for this descriptive study. The survey instrument was constructed in Qualtrics and was the same for all participants.

Instrumentation

The survey instrument utilized in this research study was originally developed by Murray et al. (2011) and contained a total of thirty-one questions. Murray et al.'s (2011) original questionnaire was comprised of Likert-type scales, multiple choice questions, and short answer responses. For the purpose of this study, only the demographic questions and short answer items inquiring about the teachers' agricultural education program were utilized. To understand the schedule of the participants, the agricultural educators were questioned about their allotment of time devoted to various aspects of the total agricultural education program (classroom instruction, FFA, and supervised agricultural experience programs). More specifically, teachers were asked about their involvement in classroom and lab preparation, FFA activities, SAE project visits, single- and multiple-day livestock shows, performance of facilities maintenance, and summertime work assignments.

Participants were asked to specify the number of hours per week they devoted to family responsibilities, identify their percentage of responsibility of various family tasks, specify number and seasonality of vacations taken, and indicate the number of hours their spouse worked outside the household per week. The demographic questions in this study sought to ascertain the participants' gender, age, years of teaching experience, and current marital status.

Murray et al. (2011), the original creator of the instrument, established face validity for the career and home life survey instrument. To establish validity on the original instrument, Murray et al. (2011) disseminated the instrument to be reviewed by "agricultural education professors at three universities, as well as by professors with expertise in family life and the Department of Family and Consumer Sciences at North Carolina State University" (p. 31). Due to similar populations and the fact that no significant changes were made to the original instrument, validity is implied for the instrument used in this study.

Data Collection

In April of 2014, a recruitment email, which included a link to access the Qualtrics survey instrument, was sent to the accessible population of Texas agricultural science teachers. The recruitment email included an explanation of the study, information about the instrument, and a clause of confidentiality. Subsequent emails were sent to non-respondents to encourage participation in the study on May 6th, 13th, 21st, and 27th. Dillman, Smyth, and Christian's (2009) survey distribution schedule was utilized to develop the email distribution schedule in this study. Dillman et al.'s (2009) original schedule was developed for mail-based surveys; therefore, modifications were made to account for expedited delivery time of online survey instruments. A total of 30 randomly selected non-respondents were contacted via email and asked the questions from the instrument to control for non-response error. Gall, Borg, and Gall (1996) recommend a random sample of 20 non-respondents should be contacted if a study's response rate is less than 80% to control for non-response error. Questioning the non-respondents was conducted to determine if differences existed between respondents and non-respondents. No differences were identified between the two groups. Warner (2013) stated that statistical power is the probability of obtaining a value large enough to reject the null hypothesis when the null hypothesis is actually false. While Cumming (2012) does not recommend post hoc power analysis, he does recommend G*Power3 (Buchner, Erdfelder, Faul, & Lang, 2013) as a tool for calculating statistical power. Post hoc analysis of power was conducted on all comparison items between the respondents and non-respondents. Results of G*Power3 indicate that the statistical power of the sample was below the recommended .80. In response to the statistical power estimates, it can be concluded that the responding sample may not represent the population.

Data Analysis

The data collected on the Qualtrics online instrument was imported into IBM Statistical Package for Social Sciences (SPSS) version 20.0. To analyze the descriptive measures of the data, frequencies, percentages, and measures of central tendency and variability were computed. To identify gender's influence on career and home life balance of agricultural educators, data were analyzed both separately by gender, as well as collectively.

Results and Findings

The purpose of objective one was to determine the perceived job expectations of agricultural science teachers in Texas, as indicated by gender. Time spent in the classroom demanded the greatest number of hours per week for both male (M = 27.54, SD = 11.66) and female (M = 29.37, SD = 12.89) teachers in this study (see Table 1). Additionally, participants in this study invested an average of 58.65 (SD = 21.97) hours per week on the total agricultural education program (classroom, FFA, and SAE). Male teachers' average number of hours worked per week (M = 59.33, SD = 19.32) slightly exceeded the average hours worked by female teachers (M = 57.96, SD = 24.61).

Table 1

Mean Hours of Work Spent by Texas Agricultural Teachers

	Male			Female			Total		
Activity	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*
Hours Per Week									
Classroom/Lab	385	27.54	11.66	182	29.37	12.89	567	28.46	12.28
FFA Activities	385	9.09	8.01	182	10.26	8.12	567	9.68	8.07
Preparation	385	8.41	6.76	182	8.96	6.31	567	9.68	6.54
Paperwork/ Reports	384	5.04	4.40	181	6.12	5.92	565	5.58	5.16
Routine Maintenance	385	4.01	3.74	182	3.19	3.08	567	3.60	3.41
Other	378	2.39	5.94	180	1.61	4.16	558	2.00	5.05
Total Program Hours/Week	381	59.33	19.32	179	57.96	24.61	560	58.65	21.97

Male teachers indicated they advised a slightly greater number of students who exhibited livestock projects (M = 46.59, SD = 18.26) compared to female teachers (M = 44.09, SD = 38.90) (see Table 2). Male teachers also reported attending a greater number of single-day (M = 3.39, SD = 3.78) and multiple-day livestock shows (M = 4.72, SD = 2.58) in comparison to the number of single- (M = 3.21, SD = 3.30) and multiple-day shows (M = 4.46, SD = 3.00) female teachers attended.

Table 2

Mean Livestock Show Participation

	Male			Female			Total		
Activity	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*
No. of Students Exhibiting Livestock	369	46.59	18.26	172	44.09	38.90	541	45.34	28.58
No. of Single Day Livestock Shows	366	3.39	3.78	172	3.21	3.30	538	3.30	3.54
No. of Multiple Day Livestock Shows	372	4.72	2.58	178	4.46	3.00	550	4.59	2.79

On average, 74.07% (n = 420) of the participants in this study indicated that their SAE project visits occurred as needed or requested (see Table 3). Female teachers indicated a greater percentage of visits on a schedule (n = 92, 50.55%) and during the summer (n = 26, 14.28%), whereas male teachers, on average, reported a greater percentage of visits on holidays (n = 182, 47.27%) and during concentrated parts of the year (n = 137, 35.58%).

Table 3

Frequency and Percentage of Teachers' SAE Project Visits

	Male (n = 385)		Female (n = 182)		Total (n = 567)	
Activity	*f*	%	*f*	%	*f*	%
As Needed or Requested	289	75.06	131	71.98	420	74.07
On School Holidays	182	47.27	77	42.31	259	45.68
On a Schedule	182	47.27	92	50.55	274	48.32
Concentrated During Certain Times of the Year	137	35.58	57	31.32	194	34.22
During the Summer	51	13.25	26	14.28	77	13.58
Do Not Conduct	8	2.08	8	4.40	16	2.82
Other	61	15.84	22	12.09	83	14.64

In regard to the seasonality and occurrence of facility maintenance, 84.48% (n = 479) of participants indicated they performed the maintenance as needed (see Table 4). On average, male teachers reported performing higher percentages of facilities maintenance as needed (85.97%) in the summer (45.45%) and on a regular basis (30.13%).

Table 4

Frequency and Percentages of Teachers' Facilities Maintenance

	Male (n = 385)		Female (n = 182)		Total (n = 567)	
Time	*f*	%	*f*	%	*f*	%
As Needed	331	85.97	148	81.32	479	84.48
In Summer	175	45.45	54	29.67	229	40.39
Routine or Regular Basis	116	30.13	52	28.57	168	29.63

Both male (M = 15.61, SD = 33.19) and female participants (M = 12.86, SD = 29.21) indicated working the greatest number of summer days involved with SAE projects. Female teachers indicated spending more time in the summer participating in FFA camps (M = 4.62, SD = 8.63), teacher in-service (M = 12.45, SD = 21.73), officer training (M = 5.17, SD = 8.24), CDE preparation (M = 6.55, SD = 14.96), and attending Washington Leadership Conference (M = 0.25, SD = 1.18) than male teachers (see Table 5). Male teachers, on average, worked more summer days involved with SAE visits (M = 15.61, SD = 33.19), facilities maintenance (M = 11.81, SD = 13.64), livestock shows (M = 4.18, SD = 11.20), and the canning plant (M = 0.09, SD = 0.86).

Table 5

Mean Number of Days Worked in the Summer

	Male			Female			Total		
Activity	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*
SAE Visits	384	15.61	33.19	181	12.86	29.21	565	14.24	31.20
Teacher In-Service	385	8.74	11.18	181	12.45	21.73	566	10.59	16.46
Facilities Maintenance	384	11.81	13.64	182	7.86	12.25	566	9.84	12.95
CDE Preparation	383	3.99	7.68	181	6.55	14.96	564	5.27	11.32
Livestock Shows	385	4.18	11.20	181	3.90	8.53	564	4.04	9.87
FFA Camp	384	3.38	4.53	182	4.62	8.63	566	4.00	6.58
Officer Training/ Leadership Retreats	385	3.23	3.78	181	5.17	8.24	566	4.2	6.01
Washington Leadership Conference	385	0.16	0.97	181	0.25	1.18	564	0.21	1.08
Canning Plant	383	0.09	0.86	181	0.01	0.07	564	0.05	0.47
Other	384	1.49	4.85	179	1.82	4.34	563	1.66	4.60

Both male (*M* = 15.61, *SD* = 33.19) and female participants (*M* = 12.86, *SD* = 29.21) indicated working the greatest number of summer days involved with SAE projects. Female teachers indicated spending more time in the summer participating in FFA camps (*M = 4.62, SD = 8.63),* teacher in-service (*M = 12.45, SD = 21.73),* officer training (*M = 5.17, SD = 8.24),* CDE preparation (*M = 6.55, SD = 14.96),* and attending Washington Leadership Conference (*M* = 0.25, *SD* = 1.18) than male teachers (see Table 5). Male teachers, on average, worked more summer days involved with SAE visits (*M* = 15.61, *SD* = 33.19), facilities maintenance (*M* = 11.81, *SD* = 13.64), livestock shows (*M* = 4.18, *SD* = 11.20), and the canning plant (*M* = 0.09, *SD* = 0.86).

The second research objective was to describe the Texas agricultural educators' responsibilities related to family and personal commitments by gender. On average, female

participants spent 7.73 more hours-per-week on family responsibilities, compared to the 18.76 hours per week (*SD* = 13.65) male teachers exerted on family commitments (see Table 6).

	Male			Female		
Activity	*n*	*M*	*SD*	*n*	*M*	*SD*
Hours Given to Family Responsibilities/ Week	364	18.76	13.65	160	26.49	33.47
Percentage of Responsibility						
Home Maintenance	385	80.44	33.01	182	42.84	36.94
Yard Work	385	77.42	32.18	182	43.66	39.49
Farm Work	385	57.21	44.52	181	23.40	34.40
House Cleaning	385	56.36	32.18	182	80.69	26.78
Meal Preparation	384	41.28	33.16	182	77.95	28.47
Grocery Shopping	384	35.87	34.12	182	84.10	26.54
Laundry	385	33.90	59.38	182	78.19	28.39
Child Transportation	383	25.47	30.93	182	34.97	41.61
Childcare	385	22.38	26.58	181	32.35	38.32
Helping With Homework	385	18.39	27.38	182	28.47	7.28
Hours/Week Spouse Works Outside Home	335	38.47	18.17	131	47.12	26.16

With a mean of 80.44 and a standard deviation of 33.01, male teachers indicated their greatest percentage of involvement in household activities was devoted to home maintenance. Male teachers also reported having a higher involvement percentage than females on yard (*M* = 77.42, *SD* = 32.18) and farm work (*M* = 57.21, *SD* = 44.52). Female teachers indicated grocery shopping as their highest percentage of involvement of household activities, with a mean of 84.10 (*SD* = 26.54). The involvement percentages were greater for female teachers in all other categories. In regard to the average hours the teacher's spouse worked outside the household, female teachers' spouses, on average, worked in excess of 8.65 hours a week (*M* = 47.12, *SD* = 26.16) compared to the spouses of the male teachers (*M* = 38.47, *SD* = 18.17).

When questioned about the number of vacation days the teachers took, male participants took five more days of vacation per year in contrast to female teachers. The teachers were also asked about the timing of their vacation days, and both male (*n* = 276, 71.69%) and female (*n* = 137, 75.27%) teachers reported taking over 70% of their vacation days in the summer (see Table 7). Although, male teachers utilized more vacation days per year, a greater percentage of female teachers took vacations during the summer (*n* = 137, 75.27%), during school holidays (*n* = 57, 31.32%), and on weekends (*n* = 53, 29.12%).

Table 7

Family Vacation Frequencies and Percentages

	Male (*n* = 385)		Female (*n* =182)		Total (*N* =567)	
Timing	*f*	*%*	*f*	*%*	*f*	*%*
During the Summer	276	71.69	137	75.27	413	72.84
On Weekends	111	28.83	53	29.12	164	28.92
During School Holidays	107	27.80	57	31.32	164	28.92
Don't Take Vacations	70	18.20	22	12.09	92	16.23

Conclusions, Implications, and Recommendations

The purpose of this study was to describe the influence of gender on Texas agricultural science teachers' priorities in balancing their home and work life domains. A total of 567 participants were involved in this research study, comprised of 385 male and 182 female teachers. In regard to the age of the teachers, more than 60% of the female teachers were in the 22 to 30 year-old age range in comparison to the 23% of male teachers belonging to this age range. Almost 65% of female agricultural educators had taught agriculture for five years or less. The age and years of teaching experience of the participants in this study were similar to the demographics of Murray et al.'s (2011) study of Georgia agricultural science teachers.

When participants were asked about their current marital status, more than 70% of the respondents indicated they were currently married; whereas, being divorced was reported by only 13.41% of educators in this study. The percentage of married agricultural teachers in this study coincided with Murray et al.'s (2011) study, but the incidence of divorce was 6.14 percentage points greater amongst the teachers in this study. This also exceeds the state divorce rate of 3.3 divorces per 1,000 residents (United States Census Bureau, 2012). Agricultural educators' divorce rate surpassing the average state divorce rate is cause for concern. Additionally, the divorce rate reported in this study also exceeded the national divorce rate of secondary teachers (12.62%) (McCoy & Aamodt, 2010). Although the divorce rate in this study exceeded the rate of secondary teachers, McCoy and Aamodt (2010) identified over a hundred professions with greater divorce rates than agricultural education. To counteract this finding, agricultural teachers should consider increasing prioritization of family matters and obligations. Tausing and Fenwick (2001) suggested that adults should manage their role commitments in each domain, by explicitly structuring time devoted to each sphere of social activity. Furthermore, Tausing and Fenwick implied that the perception of schedule control, increases overall perceived balance. Agricultural educators should utilize explicit scheduling to ensure ample time is spent with family, and on family responsibilities.

The teachers in this study indicated they worked an average of 58.65 hours per week in their agricultural education program. These findings are comparable to the hours of work per week indicated by agricultural educators in other studies (Cooper & Nelson, 1981; Murray et al., 2011). With the myriad of hours devoted to work by both genders, it appears time for accomplishing family responsibilities may be limited.

The hours spent at work by Texas agricultural science teachers exceeds the 50.56 average American work week (USBLS, 2013). The excessive time devoted to their careers could potentially cause adverse effects on the teachers' family life and lead to attrition or burnout (Kelsey, 2006). According to Torres, Lambert, and Lawver (2008), the number of hours a teacher spent at work is the strongest predictor of high teacher stress. Furthermore, Moore and Camp (1979) found working long hours was the main reason rendered by teachers for leaving the profession. The association of long work hours with teacher stress and attrition might indicate this aspect of their work lives could be negatively spilling over into the home life. To reduce the long hours spent at work, teachers should eliminate non-obligatory duties from their schedule and utilize more delegation to lighten their workload.

The breakdown of job responsibilities of agricultural educators in this study indicated both genders expended the largest percentage of their workday in the classroom. Research has shown that of the domains on the three-circle agricultural education model, classroom instruction occurs most frequently (Croom, 2008). Along with hours spent in the classroom, research indicated the expectations for agricultural educators to perform other duties have increased throughout the years (Lambert, Henry, & Tummons, 2011; National Research Council, 1988). With increasing demands on agricultural educators, it is implied that agricultural science teachers need to establish a rigid schedule. This implication is supported by Lawver and Smith (2014) who indicated that time management plays an intricate role in the amount of stress an agricultural teacher experiences. To mitigate the effects of Texas agricultural educators' stress, attrition rate, and burnout, teachers must

identify pertinent work responsibilities that should be retained in the schedule, and responsibilities of lower priority that could potentially be cut.

Female agricultural teachers in this study reported spending seven-and-one-half more hours per week on family responsibilities, in comparison to their male counterparts. Female agricultural teachers reported a greater responsibility in the household setting, which is consistent with the finding in Murray et al.'s (2011) study. The imbalance of gender roles in the household implies that traditional gender roles are still evident in the agricultural educator's home life. Although, both male and female agricultural educators share similar work responsibilities, a difference can be found in their role of home life responsibilities. Murray et al. (2011) indicated certain family responsibilities were tasked to females (i.e., grocery shopping, meal preparation, house cleaning, and childcare), whereas other responsibilities were tasked to males (i.e., yard work and farm work).

In regard to females in agricultural education, Foster (2001a) stated that females struggle to maintain what society views as a normal household and have a prosperous career. Findings from Keene and Reynolds' (2005) study indicated that women make more sacrifices in their careers and make more adjustments to their workloads for the sake of their family. This is evident in the findings based on number of hours per week the teachers' spouses worked outside of the household. Female teachers might feel obligated to allot more time to family responsibilities to compensate for the absence of their spouse. The issue of extended hours spent on family responsibilities for female teachers is a family life concern; therefore, little action can be taken in the work life domain to mitigate this issue. If female teachers feel extended family life responsibilities are having a negative effect on their work life, they should discuss their home life responsibilities with their spouse and determine how to evenly delegate the home life responsibilities. Furthermore, Treas and Tai (2012) indicated if couples interpret "what they do as sharing, couples display commitment to a companionate marriage model, rather than framing household management as the prize or penalty of self-interested struggles between husband and wife (p. 24)."

Conversely, the additional hours female agricultural science teachers devoted to family time might be associated with positive spillover. Previous research indicated activities in one domain could potentially enrich, enhance, or facilitate the other domain (Greenhaus et al., 2002; Kelloway et al., 1999; Staines, 1980). Furthermore, if the female agricultural science teachers feel stimulated, competent, and joyful (Rogers and May, 2003) from fulfilling family responsibilities, this might enrich their work life responsibilities.

Texas agricultural science teachers spend an average of 36 more hours a week on job obligations compared to time spent fulfilling family responsibilities. The amount of time spent on family responsibilities coincides with previous research (Murray et al., 2011; USBLS, 2013). The lopsided allotment of the teachers' time between family and work may imply that Texas agricultural teachers prioritize their career over their family. The results from the American Time Use Survey (USBLS, 2013) indicated that other professions (e.g., management, service, sales, Agriculture, construction, and transportation) reported devoting more time to their work lives, in comparison to time devoted to home responsibilities. The greater prioritization of work responsibilities in this study might be linked to the teachers' age and stage of life. Fagen, Lyonette, Smith, and Saldaña - Tejeda (2011) indicated expectations about what constitutes satisfactory work and family balance may vary according to life stage (i.e., early period of working life, core working years, and period approaching retirement). As the age of the worker and age of their children increases, the work-family conflict decreases (Higgins, Duxbury, & Lee, 1994). More than 65% (n = 369) of agricultural science teachers in this study indicated being over the age of 30 which might imply they identify with a later stage of life. Consequently, the teachers might place a lower priority on their home life. Differences in the stages of life also vary by gender in this study. More than 60% of the female teachers indicated being below the age of 30 which might indicate they face a higher level of work-family conflict in the early period of their working life.

Another potential culprit of the imbalance between the work and home life domains is the nature of agriculture itself. The culture of agriculture, along with the ideals which it exemplifies, such as the aspiration to be jack-of-all trades (Dohm, 2005) and exuding strong work ethic, could potentially be a reason agricultural science teachers work long hours.

Recommendations for Further Research

To increase the generalizability of this study, similar studies should be conducted in other states, with more representative samples. It is common practice to use the double dip (Linder, Murphy & Briers, 2001; Miller & Smith, 1983) method to account for non-response error. It is recommended that researchers use caution when determining the number of non-respondents to sample. Several factors such as alpha level, true population effect size, and the sample size (Warner, 2013), impact statistical power. Researchers should estimate statistical power on the double dip sample to reduce their potential of committing a Type II error. Further studies on agricultural science teachers' career and family balance would continue to progress the body of knowledge surrounding gender differences in the field of agricultural education. To analyze the influence of gender over time on career and family life balance, a five year follow-up study should be conducted on this matter. Other variables that impact family and career balance of agricultural educators, including marital status, should be studied as well. To reduce female teacher attrition in agricultural education, studies should be conducted to determine which job responsibilities cause the greatest amount of job dissatisfaction, potentially leading to burnout.

This study of the career and family life balance was observed through the lens of a traditional family situation (i.e., married, heterosexual, and children); although, this lens does not account for the agricultural science teachers who identify with alternate family situations. To account for the various family situations (e.g., co-habitation or homosexual), future studies should explore the career and family life balance of agricultural science teachers through the lens of various family situations.

References

Bennett, P. N., Iverson, M. J., Rohs, F. R., Langone, C. A., & Edwards, M. C. (2002, February). Job satisfaction of agriculture teachers in Georgia and selected variables indicating their risk of leaving the teaching profession. *Paper presented at the Southern Agricultural Education Research Conference*, Orlando, FL.

Berns, R.G. (1990, December). The relationship between vocational teacher job satisfaction and teacher retention using discriminant analysis. *Paper presented at the Annual Convention of the American Vocational Association*, Cincinnati, OH.

Birkenholz, R. J. (1986). Five-year follow-up of bachelor degree graduates in agricultural education. *The Journal of the American Association of Teacher Educators in Agriculture, 27*(3), 49-58. doi: 10.5032/jaatea.1986.03050

Boone, H. N., & Boone, D. A. (2007). Problems faced by high school agricultural education teachers. *Journal of Agricultural Education, 48*(2), 36-45. doi: 10.5032/jae.2007.02036

Bruening, T. H., & Hoover, T. S. (1991). Personal life factors as related to effectiveness and satisfaction of secondary agricultural teachers. *Journal of Agricultural Education, 32*(4), 37-43. doi: 10.5032/jae.1991.04037

Buchner, A., Erdfelder, E., Faul, F., & Lang, A-G. (2013). G*Power: Statistical power analysis for windows and mac [Computer Software]. Retrieved from http://www.gpower.hhu.de/

Buehler, D. B. (2009, September). Agricultural education: career or lifestyle? Making a difference. Retrieved from http://www.ffa.org/ageducators/mad/issues/0909/story2.cfm

Camp, W.G. (1998). *A national study of the supply and demand of teachers of agricultural education in 1996-1998.* Virginia Polytechnic Institute and State University, Blacksburg, VA. Retrieved from http://www.aged.vt.edu/pubs/s-d-98.pdf

Camp, W. G., Broyles, T., & Skelton, N. S. A. (2002). *National study of the supply and demand for teachers of agricultural education in 1999-2001*. Retrieved from http://aaaeonline.org/.

Cherniss, C. (1980). *Professional burnout in human service organizations.* New York: Praeger.

Clark, R. W. (1985). Burnout and associated factors among administrators/mid-managers of the cooperative extension service in the north central region. *Unpublished doctoral dissertation*, The Ohio State University, Columbus, OH.

Cole, L. (1984). Oregon vocational agriculture teacher placement and retention factors. *The Journal of the American Association of Teacher Educators in Agriculture, 25*(3), 2-12.

Cooper, E. L., & Nelson, C. L. (1981). Professionalism: spouse and house. *The Agricultural Education Magazine, 54*(1), 17-18.

Coughlin, M. T., Lawrence, L. D., Gartin, S. A., & Templeton, M. E. (1988). Benefits and problems experienced by spouses of vocational agriculture teachers in West Virginia. *Journal of the American Association of Teacher Educators in Agriculture, 29*(1), 53-57. Retrieved from http://pubs.aged.tamu.edu/jae/pdf/Vol29/29-01-53.pdf

Croom. D. B. (2008). The development of the integrated three-component model of agricultural education. *Journal of Agricultural Education*, *49*(1), 110-120.

Crouter, A. C. (1984). Spillover from family to work: the neglected side of the work-family interface. *Human Relations, 37*(6), 425-440. doi:10.1177/001872678403700601

Cumming, G (2012). *Understanding the new statistics: Effect sizes, confidence intervals, and meta-Analysis.* New York: Taylor & Francis Group, LLC.

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, mail, and mixed-mode surveys*. (3rd ed.). Hoboken, NJ: John Wiley & Sons, Inc.

Dillon, R. D. (1978). Identification of factors influencing vocational agriculture teachers to leave teaching. *The Journal of the American Association of Teacher Educators in Agriculture, 19*(3), 34-39. doi: 10.5032/jaatea.1978.03034

Dohm, A. (2005). Farming in the 21st century: A modern business in a modern world. *Occupational Outlook Quarterly*, 49(1). Retrieved from http://www.bls.gov/opub/ooq/2005/spring/art02.pdf

Duxbury, L., Higgins, C., & Lee, C. (1994). Work-family conflict a comparison by gender, family type, and perceived control. *Journal of Family Issues, 15*(3), 449-466.

Engels, F. (1892). *The condition of the working-class in England in 1844* (Florence Kelley Wischnewetzky Trans). Edinburgh: Riverside Press.

Fagan, C., Lyonette, C., Smith, M., & Saldaña-Tejeda, A. (2012). *The influence of working time arrangements on work-life integration or 'balance': a review of the international evidence*. International Labour Office, Conditions of Work and Employment Branch. Geneva: ILO.

Foster, B. B. (2001a). Choices: A dilemma of women agricultural education teachers. *Journal of Agricultural Education, 42*(3), 1-10. doi: 10.5032/jae.2001.03001

Foster, B. B. (2001b). *Women in agricultural education: Who are you?* Paper presented at the 28th Annual National Agricultural Education Research Conference, New Orleans, LA.

Foster, R., Pikkert, J., & Husmann, D. (1991). Self-perception of gender bias among women agriculture teachers. *Proceedings of the National Agricultural Education Research Meeting*. (238-245).

Froehlich, L. H. (1966). *Factors related to the tendency of Iowa state university agricultural education graduates to not enter or to leave the vocational agriculture teaching profession*. (Agricultural Education research publication No. 17.). Ames: Iowa State University, Department of Agricultural Education.

Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction.* Longman Publishing.

Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational Research: An introduction*. Boston, MA: Pearson Education.

Greenhaus, J. H., Collins, K. M., & Shaw, J. D. (2002). The relation between work family balance and quality of life. *Journal of Vocational Behavior, 63,* 510-531

Googins, B. K. (1991). *Work/family conflicts: Private lives-public responses.* New York, NY: Auburn House.

Igodan, O. C. (1984). *Factors associated with burnout among extension agents in the Ohio cooperative extension service*. Unpublished doctoral dissertation, The Ohio State University, Columbus.

Jewell, L. R., Beavers, K. C., Kirby, B. J. M., & Flowers, J. L. (1990). Relationships between levels of job satisfaction expressed by North Carolina vocational agriculture teachers and their perceptions toward the agricultural education teaching profession. *Journal of Agricultural Education*, *31*(1), 52-57**.** doi: 10.5032/jae.1990.01052

Johnson, A. G., (1997). *The Gender Knot*. Philadelphia: Temple University Press.

Kantrovich, A.J. (2007). *A national study of the supply and demand for teachers of agricultural education from 2004-2006.* AAAE. Retrieved from http://aaae.okstate.edu/files/supplydemand07.pdf

Keene, J. R., & Reynolds, J. R. (2005). The job costs of family demands: Gender differences in negative family-to-work spillover. *Journal of Family Issues*. *26*(3), 275-299.

Kelloway, K. E., Gottlieb, B. H., & Barham, L. (1999). The source, nature, and direction of work and family conflict: A longitudinal investigation. *Journal of Occupational Health Psychology, 4*(4), 337-346.

Kelsey, K. D. (2006). Teacher attrition among women in secondary agricultural education. *Journal of Agricultural Education*. *47*(3), 117-129. doi: 10.5032/jae.2006.03117

Kelsey, K. D. (2007). Overcoming gender bias with self-efficacy: A case study of women agricultural education teachers and preservice students. *Journal of agricultural education, 48*(1), 52-63. doi: 10.5032/jae.2007.01052

Knight, J. (1987). Current status of women teachers of vocational agriculture in Ohio and their perception of their place in the profession. *Proceedings of the National Agricultural Education Research Meeting*. (223-236)

Knight, J. A., & Bender, R. E. (1978). Why vocational agriculture teachers in Ohio leave teaching. *The Journal of the American Association of Teacher Educators in Agriculture, 19*(3), 11-17. doi: 10.5032/jaatea.1978.03011

Lambert, M. D., Henry, A. L., & Tummons, J. D. (2011). How do early career agriculture teachers talk about their time? *Journal of Agricultural Education, 52*(3), 50-63. doi: 10.5032/jae.2011.03050

Lawver, R. G., & Smith, K. L. (2014). Coping mechanisms Utah agriculture teachers use to manage teaching related stress. *Journal of Agricultural Education, 55*(1), 76-91. doi: 10.5032/jae.2014.01076

Linder, J. R., Murphy, T. H., & Briers, G. E. (2001). Handling nonresponse in social science research. *Journal of Agricultural Education, 42*(4), 43-53. doi: 10.5032/jae.2001.04043

Maslach, C. (1982). *Burnout: The cost of caring*. Englewood Cliffs, NJ: Prentice-Hall.

Mattox, K. E. (1974). Why teachers quit. *Agricultural Education Magazine, 47*(6), 140-142.

McCoy, S. P., & Aamodt, M. G. (2010). A comparison of law enforcement divorce rates with those of other occupations. *Journal of Police and Criminal Psychology, 25*(1), 1-16. doi: 10.1007/s11896-009-9057-8

Miller, L. E. (1974). A five-year follow-up study of the non-teaching agricultural education graduates: 1968-73. Washington, DC: U. S. Department of Education (ERIC Document Reproduction Service No. ED112 163).

Miller, L. E., & Smith, K. L. (1983). Handling nonresponse issues. *Journal of Extension, 21*(5) 45-50.

Moore, G. E., & Camp, W. G. (1979). Why vocational agriculture teachers leave the profession: A comparison of perceptions. *The Journal of the American Association of Teacher Educators in Agriculture*, *20*(3), 11-18.

Murray, K. A., Flowers, J. L., Croom, D. B., & Wilson, E. B. (2011). The agricultural teacher's struggle for balance between career and family. *Journal of Agricultural Education*, *52*(2). doi: 10.5032/jae.2011.02107

National Research Council. (1988). *Understanding agriculture: New directions for education*. Washington D.C.: National Academy Press.

Netemeyer, R. G., Boles, J. S., & McMurrian, R, (1996). Development and validation of work-family conflict and family-work conflict scales. *Journal of Applied Psychology, 82,* 400-410.

Odell, K. S., Cochran, J. E., Lawrence, L. D., & Gartin, S. A. (1990). The job and marital satisfaction of secondary agriculture teachers and their spouses. *Journal of Agricultural Education*, *3*(3), 14-18. Retrieved from http://pubs.aged.tamu.edu/jae/pdf/Vol31/31-03-14.pdf\

Pajak, E. F., & Blase, J. J. (1989). The impact of teachers' personal lives on professional role enactment: A qualitative analysis. *American Educational Research Journal, 26*, 283-310. doi: 10.3102/00028312026002283

Ricketts, J. C., Stone, R., & Adams, E. (2006). Female agricultural educators in Georgia. *Journal of Southern Agricultural Education Research*, *56*(1), 52-61. Retrieved from http://pubs.aged.tamu.edu/jsaer/pdf/Vol56/56-01-052.pdf

Rogers, S. J., & May, D. C. (2003). Spillover between marital quality and job satisfaction: Long-term patterns and gender differences. *Journal of Marriage and Family, 65*(2), 482-495. doi: 10.1111/j.1741-3737.2003.00482.x

Staines, L. G. (1980). Spillover versus compensation: A review of the literature on the relationship between work and nonwork. *Human Relations, 33,* 111-129.

Tausig, M., & Fenwick, R. (2001). Unbinding time: Alternate work schedules and work-life balance. *Journal of Family and Economic Issues*, *22*(2), 101-119.

Torres, R. M., Lambert, M. D., & Lawver, R. G. (2008). Predictors of job stress among agriculture education teachers. *Proceedings of the NC AAAE Research Conference,* (6), 204-216. Retrieved from http://aaaeonline.org/allconferences.php?show_what =NorthCentral

Torres, R. M., Lawver, R. G., & Lambert, M. D. (2009). Job-related stress among secondary agricultural education teachers: A comparison study. *Journal of Agricultural Education, 50*(3), 100-111. doi: 10.5032/jae.2009.03100

Treas, J., & Tai, T. O. (2011). How couples manage the household: Work and power in cross-national perspective. *Journal of Family Issues, 1*(29), 1-29. doi: 10.1177/0192513X11426700

U.S. Census Bureau. (2012). *Marriages and divorces- number and rate by state: 1990 to 2009*. Retrieved from https://www.census.gov/compendia/statab/2012/tables/12s0133.pdf, September 29, 2014.

U.S. Department of Labor, Bureau of Labor and Statistics (USBLS). (2013). *American time use survey- 2012 results* (USDL Publication No. 13-1178). Retrieved from http://www.bls.gov/news.release/archives/atus_06202013.pdf

U.S. Department of Labor, Women's Bureau. (2000). *Women at the millennium, accomplishments and challenges ahead, facts on working women*. Retrieved from http://www.dol.gov/dol/wb/public/wb_pubs/millennium52000.htm

Voydanoff, P. (2002). Linkages between the work-family interface and work, family, and individual outcomes. *Journal of Family Issues, 23*(1), 138-164.

Warner, R. M. (2013) *Applied statistics from bivariate through multivariate techniques.* Thousand Oaks, CA: SAGE Publications, Inc

Weiss, G. (2014). The average american works 47 hours per week, gallup finds. Retrieved from http://www.entrepreneur.com/article/237075

Wilensky, H. L. (1960). Work, careers, and social integration. *International Social Science Journal, 12*(4), 543-560.