

A Critical Study of Women Graduate Student Experiences in Agricultural and Extension Education

Lauren Lewis Cline¹, Haley Rosson², and Penny Pennington Weeks³

Abstract

The American Association for Agricultural Education (AAAE) aims to build a more inclusive and collaborative organizational culture. In 2017, women faculty and graduate students comprised 37.8% of the total AAAE membership. The need to recruit and retain diverse faculty and students in agricultural and extension education (AEE) remains if the AAAE organization is to achieve its goal. Women faculty experiences in AEE were studied previously, yet less attention was given to women graduate students. The purpose of this critical inquiry study was to develop a profile of women graduate students in postsecondary AEE by describing the mentoring experiences and organizational climate for women graduate students in the profession. Four emergent themes described women graduate students' experiences in AEE: (a) reflections on graduate school, (b) realities of graduate school, (c) future in academia, and (d) the pursuit of mentorship. Participant reflection on the graduate school experience was conflicting. The realities of graduate school in AEE described a man's world, the Good Ol' Boys Club, microaggressions toward women, and the questioning of women's competency. Participants seemed confident, unsure, or concerned about a career in postsecondary AEE. Faculty and fellow graduate students are considered encouraging mentors, but a void of women leaders to serve as role models in AEE was identified. AAAE should promote a more positive, inclusive, and intentionally mentored graduate school experience to retain more women in postsecondary AEE. More critical research related to graduate student experiences is encouraged to improve the inclusivity of the AEE profession.

Keywords: critical inquiry; diversity; graduate students; inclusion; women; women in agriculture

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Introduction

According to the National Center for Education Statistics (NCES, 2018), 56.7% of college students enrolled in the U.S. during 2019 are female. Sixty percent of all master's degrees and 54% of all doctoral degrees were awarded to women in 2019-2020 (NCES, 2018). According to the *Graduate Enrollment and Degrees: 2007 to 2017* report from the Council of Graduate Schools (2018) women in the U.S. earned the majority of graduate certificates (64%), master's degrees (57.3%) and doctoral degrees (53%) in the fall of 2017. Additionally, they earned the overwhelming majority of graduate

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certificates in education (78%) and doctoral degrees in public administration (76%) (Council of Graduate Schools, 2018). Although women have now matched and even surpassed men in terms of educational attainment, men have continued to constitute the majority of graduate degrees in engineering, mathematics and computer sciences, physical and earth sciences, and business (Bettinger & Long, 2005; Bradley, 2000; Council of Graduate Schools, 2018).

Extensive literature surrounds the *leaky educational pipeline* metaphor (Blickenstaff, 2005; Gasser & Shaffer, 2014; Massachusetts Institute of Technology, 1999; Pell, 1996), suggesting that over the progression of women's lives, fewer and fewer remain involved in the sciences, and even fewer reach the eventual level of a tenured faculty member. Many of the "leaks" are attributed to an early lack of self-esteem beginning in elementary school and continuing through adolescence, into college, and later into graduate school and the job entry period (Pell, 1996). It is estimated that at least 40% of students who begin a doctoral program fail to complete it and little information is available about the reasons students leave these programs (Golde, 2005). Many efforts have been made by government, companies, and schools to increase female representation in male-dominated fields, with a particular focus on hiring more female faculty to serve as role models to students (Bettinger & Long, 2005).

Another phenomenon that has recently emerged is that female students require additional time to complete a doctoral degree (Maher et al., 2004), particularly in education and other non-science as well as engineering degrees (National Science Foundation [NSF], 2018). For example, in 2017, it required women on average 12 years to complete a doctoral degree in education, compared to a science and engineering majors that completed their programs in six to eight years (NSF, 2018). Further, this time constraint results in women not earning their full potential, thereby widening the gender parity in the labor market (Bradley, 2000; Maher et al., 2004). Reasons attributed to this extenuating length of time include "the availability of funding resources, the nature of the advising relationship, the extent to which students receive research preparation and opportunities, and individual student concerns about marital, family, or health problems" (Maher et al., 2004, p. 387).

Workforce and workplace misalignment is another contributing factor to the leaky pipeline phenomenon (Cabrera, 2009). Today's workplace environment is very different from that of the idealized worker of the past- an environment usually idealized as a man able to dedicate himself completely to his job because a spouse was at home taking care of the home and children (Cabrera, 2009). According to the Bureau of Labor Statistics (2019), the labor force participation rate of mothers with children under age six was 69%, compared to the participation rate for married fathers, at 94%. Although men may take on more household responsibilities in recent eras, women still shoulder the brunt of these duties and often cannot compete with escalating work demands (Cabrera, 2009).

Women in the agricultural education discipline, a historically male-dominated realm of education (Enns & Martin, 2015), have been significantly under-represented, particularly at the secondary and postsecondary education levels (Foster & Seevers, 2003; Kelsey, 2006b; Seevers & Foster, 2003). One of the factors attributed to women's late entrance into the field is a lack of strong female role models to advocate in higher educational levels (Enns & Martin, 2015; Seevers & Foster, 2003). Despite women in the discipline being committed to their role within the profession when properly encouraged, a lack of mentoring and/or support networks has been noted and called for within the profession (Baxter et al., 2011; Foster & Seevers, 2003).

One study recently examined both the challenges and opportunities experienced by women faculty within agricultural and extension education (AEE) (Cline et al., 2019). However, a disparity of knowledge exists in regard to the experiences of women graduate students in the discipline. A notable lack of discipline-specific graduate attrition data in AEE also exists. Because many women faculty

referenced their own graduate experiences in the recent 2019 study, exploration of this phenomenon among women graduate students in AEE was promoted.

Purpose

The purpose of this study was to describe AEE women graduate students' mentoring experiences and views on the organizational climate for women graduate students in the profession. The study was conducted as a component of a larger study to update the profile of women in AEE (Cline et al., 2019; Foster & Seevers, 2003; Seevers & Foster, 2003). Further, the investigation was guided by two research objectives related to the perceptions of women graduate students regarding the unique challenges and opportunities in AEE and their mentoring experiences.

Epistemological and Theoretical Perspective

Constructionism, which considers knowledge as truth co-created between individuals within a social context (Crotty, 1998), was the epistemological perspective guiding this study. The collective experiences of the individual participants provided meaning to address our research objectives. A variety of angles used to study women experiences in AEE at the secondary and postsecondary level suggest forces of influential power among genders in the profession (Baxter et al., 2011; Cline et al., 2019; Foster, 2011a; Kelsey, 2006a; Kleihauer et al., 2013; Murphrey et al., 2016; Stephens et al., 2017). Critical inquiry as a theoretical perspective is used to identify power dynamics and better understand how predominant social beliefs, practices, and organizations can be transformed (Kincheloe et al., 2018; Patton, 2015). We utilized critical theory (Patton, 2015) to evaluate the lived experiences of women graduate students in AEE. Crucial to the study's problem was the meaning of women graduate students in AEE.

Methods

This study was a component of a larger survey conducted to update the profile of women faculty in postsecondary AEE (Cline et al., 2019). The original research protocol (Foster & Seevers, 2003; Seevers & Foster, 2003) was followed closely. After obtaining the original questionnaire, we adapted it for electronic administration through the Qualtrics survey platform. Some items were slightly modified to improve the meaningfulness and relevancy of the questionnaire (e.g., agricultural communications was added as a possible course type selection because it was not included in the original instrument). Male and female faculty members in AEE from various universities served as a panel of experts to assess its face and content validity. Likert-type and open-ended questions comprised the five sections of the questionnaire: a) educational and professional background, (b) current professional status, (c) mentoring, (e) professional treatment, and (f) demographics. Instrument reliability was not addressed due to this study's focus on the 10 open-ended mentoring and professional treatment questions and the use of qualitative analysis.

Participants

The population for this study consisted of all women graduate students in AEE programs. The 2017 American Association of Agricultural Education (AAAE) member directory provided an initial list of 91 women graduate students (15.9% of the total membership). We searched university websites listed by AAAE as having an agricultural education, communication, extension, leadership or similar program to identify AEE women graduate students not included in the AAAE membership, resulting in an additional 17 participants included in the study. It was important to include AAAE and non-AAAE members from agricultural education, extension, communications, and leadership as participants to conduct a census ($N = 108$) of women graduate students representing the extensiveness

of postsecondary agricultural education (Barrick, 1993; Mannebach, 1990; Newcomb, 1993). Ten women (9.2%) opted out of the study. We agreed to remove responses that had less than 50% completed *a priori*, which resulted in the removal of five participants (4.6%). The final response rate of 43.5% ($n = 47$). Although we contacted non-respondents ($n = 46$; 42.6%), we did not receive additional responses to compare early and late respondents (Lindner et al., 2001).

Most women graduate students reported they received their master's degree ($n = 29$; 61.7%). Two women (4.3%) earned doctoral degrees. Almost half of the participants reported being involved in agricultural education classes ($n = 24$; 51.1%), FFA ($n = 26$; 55.3%), and/or 4-H ($n = 21$; 44.7%) during high school. Thirty-two (68.1%) women graduate students were graduate assistants at the time of the study. Thirty-eight (80.9%) participants self-identified as members of AAEE, representing 41.8% of the women graduate student membership for the year 2017.

Analysis of Data

Common themes and patterns were identified to describe the perceptions of women graduate students following basic interpretive qualitative methodology (Merriam, 2002). We independently analyzed 267 responses to the open-ended questions. Concept coding was used as a first cycle coding approach, which allowed us to understand how power manifested as a social construct – a key aim of critical inquiry (Saldaña, 2016). Code mapping was then used to compare and sort initial concept codes into emergent categories (Saldaña, 2016). Axial coding was determined as the second cycle coding method based on its ability to scrutinize relationships between categories and subcategories according to shared characteristics, attributes, and dimensions (Saldaña, 2016). Final data analysis resulted in six main categories and 21 sub-categories represented by four emergent axial codes with 13 dimensions and properties. We kept and reflected on detailed analytic memos during the interpretation to systematically guide the analysis (Saldaña, 2016). By maintaining member voice and analyzing the positionality of truth, we maintained trustworthiness in this critical inquiry study. We also intentionally featured differing views among the women graduate students in order to not imply universal or majority viewpoints among the participants (Lincoln, 1995).

Statement of Subjectivity

We wish to acknowledge our personal perspectives regarding this study, understanding that subjectivity is inherent in the qualitative research process (Peshkin, 1988). Each of us has personal experience in AEE at the university level as women graduate students, instructors, and faculty in agricultural leadership. We pursued this line of inquiry because of our commitment to fostering inclusive environments in the profession. Our personal experiences have included positive and negative graduate school memories and realities, gender-based microaggressions, and varying quality of mentors in the AEE profession. We also acknowledge the influence of societal women empowerment movements since 2017. We recognize the lens we used to interpret the data in this study may have been impacted by these influences and took steps to mitigate biases before, during, and after data collection and interpretation. To ensure data interpretation was as neutral as possible, our biases were noted, discussed, and challenged throughout the process. We believe the findings for this investigation fully reflect the perceptions and experiences of the AEE women graduate student participants.

Limitations

Generalization of findings is not suggested in qualitative research (Patton, 2015), and is the case in this study because the responses to the open-ended questions did not provide contextual information. The constraint of resources and the desire to include as many viewpoints in the study as possible prevented us from conducting one-on-one interviews or focus groups with women graduate

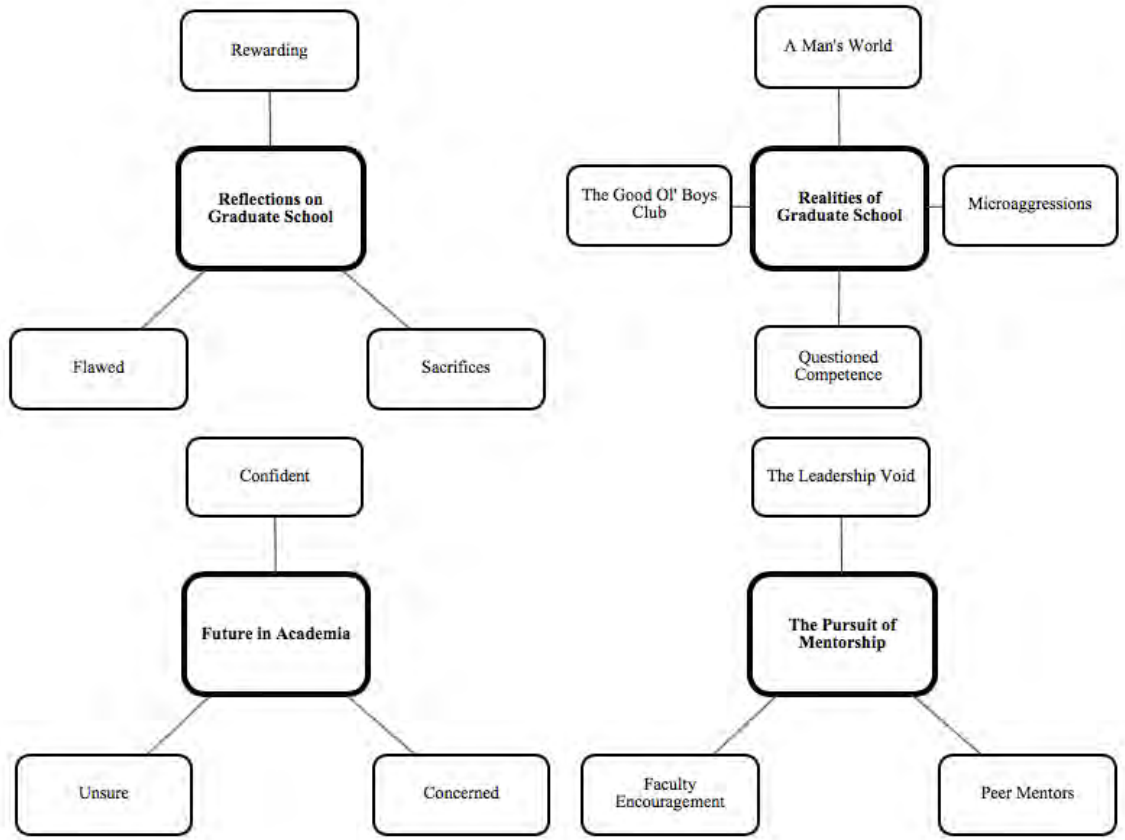
students. It is also noted that while the entire questionnaire was administered as a census among women graduate students in AEE, the entire population did not respond. Therefore, this study’s findings cannot be generalized to the entire population of women graduate students in AEE. Readers are encouraged to assess the findings to determine transferability within their context.

Findings

Four axial codes with 13 properties and dimensions emerged during the analysis to describe the perceptions of the unique challenges, opportunities, and mentoring experiences of women graduate students in AEE: (a) *reflections on graduate school*, (b) *realities of graduate school*, (c) *future in academia*, and (d) *the pursuit of mentorship* (see Figure 1). Direct quotes from the participants are included with the interpretation of findings to support the emergent themes. Participant names and potential identifiable information were removed to maintain confidentiality.

Figure 1

Axial Codes with Properties and Dimensions Describing the Experiences of Women Graduate Students in Agricultural and Extension Education



Note. Four emergent themes and 11 categories synthesize the experiences of women graduate students in postsecondary agricultural and extension education as *reflections on graduate school*, *realities of graduate school*, *future in academia*, and *the pursuit of mentorship*.

Reflections on Graduate School

The first major theme to emerge from the women graduate students in AEE is identified as *reflections on graduate school*. As participants considered the opportunities and challenges they experienced in AEE, many self-reflected whether the decision to attend graduate school was fruitful. *Rewarding, flawed, and sacrifices* are categories used to describe the students' choice to pursue graduate education in AEE.

For almost a third of the AEE women graduate students, their experiences in graduate school are described as rewarding and positive. One participant stated, "It has been an amazing experience . . . I wouldn't trade my degree for anything in the world." The participants did not deny the challenge of graduate school but found the effort worth the benefits. "Of course I would make the same sacrifice again because so many doors have opened since getting my master's degree," another student commented. Graduate school is also beneficial to helping students figure out what to focus on for their career in the future and as an opportunity "to take [their] education and knowledge to new heights." The rewards of attending graduate school are best described by the following participant: "Although it was a tough decision to leave my job and pursue graduate work, I know this is where I am supposed to be. . . even if things have been very difficult from time to time."

The decision to pursue graduate school is confounded by the perception of a flawed system for another group of women graduate students in this study. While the women are appreciative of the opportunity, they also share how less-than-positive occurrences as women graduate students in the AEE profession have impacted their overall experience. "I have enjoyed my time . . . I just see the flaws in the system and wish they could be changed," shared one participant. For most of these women, they do not regret their decision to attend graduate school, but perhaps feel bitter toward the extreme workloads and limited resources offered to graduate students. One student put it this way:

In academia, school is my life, especially as a graduate student. I don't date. I don't have many friends outside of school. I live too far from my family to see them more than once or twice a year. . . The sacrifices, I hope, will be worth it.

Other participants commented explicitly on the expectations their faculty advisors have for "graduate assistants to put in more than the allotted hours a week we get paid" to "accomplish what need[ed] to get done." A participant who was about to complete her doctorate shared she was not sure she would do it all over again because, in her experience, "graduate students [were] not treated well. At all." For some, the sense of unrealistic expectations in graduate school lead to personal neglect, concern for mental health, and inattention to "parts of my life which I find gratifying, such as volunteering and mentoring youth."

Sacrifices experienced during graduate school lead some participants to rethink their decision to earn a higher degree in AEE. "Some days I regret pursuing my master's degree," said a participant. The regrets of "choosing my professional life over my personal life at times", taking a huge pay cut, or denying job offers to earn a graduate degree were repeated by several students. Some participants feel the decision to attend graduate school negatively impacted their current relationships with family and friends and will limit their opportunities down the road:

Family is very important and if I had known going into it that it would require so much time away from family, I would really have to think about it. I am extremely thankful for everything I've had the opportunity to do, but if I had the opportunity to do it again, I am not sure I would.

I firmly believe my desire to be at the university level is intimidating to people outside of the profession. As a single female, with goals and ambitions, I find that males are intimidated by my demeanor and drive, and I am unsure if my dreams to have a family will come true.

Realities of Graduate School

The second theme to emerge from the data describes the *realities of graduate school* for women graduate students in AEE. Many participants share the sentiment that the agricultural industry (including the AEE profession) operates as *a man's world*. In particular, women graduate students voice opinions about the existence of a *Good Ol' Boys Club* in AEE, one in which they feel they did not belong or benefit. The women share experiences of gender-based *microaggressions*, which seem to be expected behaviors from men in the workplace. Numerous women graduate students express the *questioned competency* of women professionals and educators as the greatest barrier in AEE.

AEE is frequently referred to as a man's world and seems to be an accepted notion among the participants. It is highlighted by some students that although sectors of the profession may have predominantly female students (e.g., communications) or experienced increased female enrollment (e.g., teacher education), gender bias "seems to be magnified in this field." "[I've had to figure out how to] deal with the patriarchy institutionalized in the system of academia," reflected a participant. "A majority of women are students . . . faculty and department chairs are predominantly male. [This] imbalance of power results in a profession of suppressed wages and lower expectations for leadership," another participant pointed out. The perceived imbalance of power based on gender in the AEE profession is cause for concern to the students, as it seems to reinforce gender stereotypes. Women graduate students reflected on specific teaching and research instances during their graduate program when they were denied opportunities or responsibilities because of their gender.

Other participants wrote about times when they were discouraged by stories of women not being as respected in the perceived male-dominated profession. Students also perceive others to view their feminine behavior and attitudes as less valuable or unprofessional when compared to the traditional masculine expectations of the profession. "Agriculture and academia are both male-dominated. Some men simply do not treat women as equal, especially smart, accomplished, independent women," reported a participant. The perceived reality of AEE as a man's world appears to discourage women graduate students from pursuing a career in the profession:

This friend of mine was seeking employment after graduating with her Ph.D. [in AEE]. I commiserated with her in regard to how minds like hers may not be appreciated in agricultural education today. She is highly innovative and thinks outside of the box frequently. This would be appreciated more if she were a man in this discipline and tenured. Instead, she is a young female in our profession who is still regarded as 'a little out there' in her ideas. I fear the same outlook for myself.

The existence of a *Good Ol' Boys Club* in AEE is a common sentiment among the participants. As one student put it, "beating the stigma of the Good Ol' Boys Club," seemed to be one of the most critical barriers for women graduate students in AEE. "I feel that women don't fit the 'good ol' boy' club feel of middle-aged and older men in agriculture. Often, the women seem to be doing all the work and it's expected," said a participant. Other students observed the tokenizing of women faculty and students by the perceived good ol' boys club. The preferential treatment given to male colleagues by tenured male faculty is a source of annoyance for many women graduate students. "I would be extremely frustrated when I initially started my program because guys I started with would be invited out for drinks with tenured faculty (who were all male). However, it would be 'inappropriate' for me to attend," reported a participant. "We miss out on social and professional opportunities when male faculty are taking male graduate students on fishing or camping trips," shared another student.

Male peers of mine have received different treatment, seemingly because of their gender and that they can fit into the “good ol’ boys club.” It seems that quite a few men in our profession belong to this club with invisible rules, but it does seem advantageous to be white, male, from a rural setting, and regularly chew tobacco to be a member of this club . . . it does seem that my peers who have membership in the good ol’ boys club have been given preferential treatment compared to myself. This was particularly challenging my first year of graduate school.

Another reality women graduate students frequently reported is the prevalence of experienced microaggressions during their graduate schooling. “In our profession, the frequent microaggressions that women can’t teach Ag Mechanics, cause drama, or when discussing the decline of males in Ag Ed accidentally or unknowingly make their solution anti-female” is a barrier identified by participants. Microaggressions toward women in the profession mentioned in the data range from not being taken seriously as a woman in agriculture to perceived disrespect from older men to being overlooked in decisions or for opportunities in their department, even though they have the relevant experience to contribute.

“Just today I was discussing with another female colleague in Ag Ed how hard it is to deal with comments that feel sexist, but not knowing how to handle them,” a student expressed. Examples of sexist comments provided by participants describe situations of being considered a child rather than a job candidate, being called “young lady” or “miss” in professional settings, and the assumption made of being married and referred to as “Mrs.” in email and person. “I have been introduced as ‘the new shop teacher’ while the individual condescendingly eyed me up and down,” said a student. One participant was even “asked by a male if [she] was pursuing an agricultural degree to find a farmer husband.” Similarly, a participant reported:

I have been approached many times while at professional workshops or industry conferences where individuals automatically assume I am only in attendance because I am with my husband, even though I am not married, and I am there completely on my own.

The bias displayed toward women graduate students extends to the classroom as well. One participant revealed that “compared to male professors, [she] got more push back and criticism from students and had more instances of being treated disrespectfully or aggressively confronted (specifically by White male students).”

A fourth reality of graduate school shared by the participants is the barrier of having their competency in AEE questioned. “Men are given a greater amount of confidence starting out – women have to earn respect in this field, whereas it seems to me that men are awarded that respect more immediately,” stated a participant. Many students feel “it takes women longer to establish their credibility in the workplace.” It was also perceived that others see the women graduate students as less capable and find it challenging to be treated like they do not know as much about agriculture as someone else. Because of their gender several participants feel stereotyped when their ability to teach or lead certain subjects, such as agricultural mechanics, is questioned. The effort to establish themselves as credible researchers and teachers appears to be a weighty emotional tax according to the study’s data.

There were times early in my career that people doubted my ability to teach agriculture because I was a female. . . I worked my tail off to prove them wrong . . . Instead of spending my time doing my job well, I had to spend time convincing people that I was capable as a woman to teach welding, mechanics, etc.

Also, in the study is a small group of participants who do not negate the realities of other participants, but do report being viewed as capable in the AEE profession. As one participant stated, “perhaps I am naïve, but I have never experienced someone doubting my abilities because of my gender.”

Future in Academia

The third theme focuses on the women graduate students' perspectives of their *future in academia*. When considering if they would pursue a career in postsecondary AEE, the participants could be categorized into three groups: (a) *confident about an AEE career*, (b) *unsure about a career in AEE*, and (c) *concerned about the AEE profession*.

The first group of women graduate students in this study express confidence in their desire to pursue a career in postsecondary AEE. Comments such as "I'm very confident in my decisions and my conviction in the career I have pursued," "I really enjoy being at the university level and believe it is the right path for my career," and "I really enjoy what I do and want to become a faculty member" demonstrate the positive attitude this group of students has toward the AEE profession. Further, the group perceives they are encouraged to continue on a career path in postsecondary AEE: "In the short time I have been engaged in AAAE, I sense a strong commitment to collaboration between faculty members from various universities and truly feel they are cheering me on as I pursue this new career." The women graduate students find the work in the AEE profession rewarding and exciting. They also recommend other women pursue a similar career despite the perceived hardships and sacrifices needed to reach their goal.

The second group of women graduate students are unsure about their desire to pursue a postsecondary AEE career. When reflecting on the sacrifices made during graduate school in AEE, some students said they would "see if it was worth it." Other students provided comments demonstrating a sense of disappointment with their decision to pursue a career in academia.

I am unsure if this is the direction I truly want to go now that I have gotten this far. I truly believed I would love research, and I hate it . . . I almost feel like I have wasted two years (with another still to go – but I'm too far to change now).

I'm aware of my innovativeness and overall tendency to think differently than most in this field. If I was aware of this sooner in life, I may not have tried to make myself be a square peg unable to fit in a round hole.

Some of the participants voice concerns about being able to find employment in AEE at the university level and sense limited diverse opportunities in the field. "I would only encourage other women to pursue this career if it was something they were truly passionate about – only if it is something they commit to and are willing to navigate a variety of challenges" said a student.

The third group of women graduate students, when considering a future career in academia, appear concerned about the sustainability of the AEE profession. Some students mention being discouraged by observations of "poor leadership," "the conduct of faculty and their visible character," and "the negative conversations about tenure and the hoops one must jump through that are seemingly against your success." This group of participants also note a perceived sense of counterproductive competition among women faculty. "Women in my department have a competitive nature, which leads to negative interactions when attempting to work collaboratively," said one student. Another participant feels it is "difficult to be a woman in a department with very little support for other females." One participant, who is a former Extension educator, said she felt "women bonded together more [in the industry]. It's not that way in academia."

This group of women graduate students also express concern about having full-time employment in postsecondary AEE while raising a family. "I believe work-life balance would be one of the major barriers faced by women in comparison to men," a student parent in the study commented. Many participants seem apprehensive about moving "through the promotion and tenure ranks while trying to raise a family." One student said she witnessed "women navigate this successfully, but it seem[ed] a daunting task." *Second-shift* responsibilities (i.e., those duties often ascribed to women

based on societal norms such as caretaking, family and home management) for women in academia was mentioned by several participants in the study's data. "The professional demands of work coupled with second shift responsibilities are a recipe for disaster and increased attrition rates," a participant reported.

The Pursuit of Mentorship

The fourth theme focuses on the AEE women graduate students' *pursuit of mentorship*. Finding and maintaining positive women role models is a consistent response among the participants. Although the participants express meaningful *faculty encouragement* during their time in graduate school, the women students still perceive a *leadership void* of women faculty to serve as examples to younger members in the profession. Many participants also emphasize the importance of graduate student *peer mentoring*, regardless of gender, to promote completion and success in AEE graduate programs. Overall, "finding positive mentorship relationships, which provide the necessary support for success" was essential to the participants' experience in the AEE profession.

The participants in this study attribute much of the encouragement they receive in graduate school to both men and women faculty. Participants mention the many opportunities afforded to them by their advisors and value the constructive feedback faculty provide. "We see our professors as mentors and they make it a point to guide us through the program and advise us even after we graduate," a student noted. For some students, the majority of faculty who support them are male, but they feel it is a function of the faculty's demographics in the profession. However, one participant shared a conflicting experience: "A lot of my mentors and advisers have been very respected females . . . they've always told me I can do anything I set my mind to, and my thoughts, ideas, and work are just as good as anyone else's." As such, the majority of participants are reassured that their AEE faculty are willing to support them as future professionals.

However, the participants still report a lack of opportunities to network with women faculty and mentors in the AEE profession. Participants also reference a void in women leadership in AEE, which results in a lack of representation in key roles in the profession. There is a consensus that postsecondary AEE needs "more women in leadership positions." Postsecondary AEE is often described as having "a great deal of female graduate and undergraduate students, but very few tenured women who serve as positive role models for the students." A participant explained the lack of women representation in leadership at her university by describing the distinguished alumni wall as "all White males . . . not a single female has received the distinction." The participants challenge more women to pursue leadership roles in order to diversify and change the status-quo of the AEE profession.

We are in need of tenured individuals to step up in departmental administration roles and serve as our chairs and leaders, but no one wants to do it. Furthermore, the women who should be stepping up in service and who hold the qualifications are raising families, or even intimidated by the power and politics that accompany the position.

It is important for women to fill leadership roles in any industry, even when it is uncomfortable. They have valuable and needed perspectives that the industry can benefit from and should learn to regard as highly as anyone else's contributions.

A common thread among the mentoring experiences of women AEE graduate students in this study is the emphasis on peer mentoring. Students strive to encourage other students for success in AEE graduate programs, regardless of gender, and value the reciprocal encouragement from their peers. "Primarily I have received support from my fellow female graduate students," said a participant. Many students share a personal policy to "to uplift other women" and ascribe to the motto, "women should empower other women." Participants desire to "build people up, not tear them down" and "eagerly

recruit other women with similar interests and interesting backgrounds to contribute to the diversification of the profession and of our food system.” The significance of pursuing all levels of mentorship as a woman graduate student in AEE was best summarized by a participant:

The reason I made the sacrifices I made in my own life was because I wanted to prepare students for the workforce – to do what I used to do – to make a difference in the world. It really doesn’t matter if that student is a man or a woman. I want to see them all succeed. But of course I want my female students to know they can do anything they want as long as they are willing to put in the blood, sweat and tears to accomplish it. When they ask me what it’s like I give them the truth, and the truth is, being a woman in a male-dominated workforce is challenging, and frustrating at times, but also incredibly rewarding.

Conclusions, Implications, and Recommendations

The critical lens used to analyze the findings of this study reveal the complex experiences of women graduate students in postsecondary AEE. Experiences were unique to each participant, with common perceptions varying in degree and intensity regarding the decision to attend graduate school, the realities of graduate school, their future in academia, and their pursuit of mentorship. Acker’s (2012) explanation of *gendered organizations* helps us derive meaning from the complexity of women graduate students’ experiences in AEE. According to Acker (2012), a gendered organizational culture has invisible processes that influence assumptions about gender based on (a) “the sum of particular images, attitudes, beliefs, behaviors and values” (p. 216), (b) interactions between colleagues that contribute to perceived levels of power, and (c) assumed gender roles and identities.

AAAE members are encouraged to examine experiences of women graduate students - the future of the organization - in more depth to help the association build a more inclusive and collaborative culture. The women in this study described various experiences as graduate students in AEE, ranging from rewarding and supportive of future academic careers to full of sacrifices and concerns about the profession. Perhaps the complexities expressed by women graduate students in this study are a contributing factor to anecdotal attrition of women in the AEE discipline (Cabrera, 2009).

The data from this study also support a less-than-positive experience and reality for women graduate students in postsecondary AEE based on the perceived imbalance of power (Acker, 2012). According to the leaky educational pipeline metaphor (Blickenstaff, 2005; Gasser & Shaffer, 2014; Massachusetts Institute of Technology, 1999; Pell, 1996), lack of self-esteem continuing into graduate school and the job entry period (Pell, 1996) pertains to fewer women remaining in academia. The participants in this study also illuminated how the emotional tax of frequent questioning of their competency, microaggressions, and navigating a perceived male-dominated profession impacted how they perceived success and satisfaction in AEE. As such, we recommend AEE design support mechanisms for women graduate students to help them tackle predominant attitudes, behaviors, and beliefs toward gendered differences.

Although calls for improved AEE mentoring and support networks for women were made previously (Baxter et al., 2011; Cline et al., 2019; Enns & Martin, 2015; Seever & Foster, 2003), it appears from the findings of this study that not much progress has occurred. The women graduate students also yearned for stronger women networks, mentors, and role models, particularly in leadership and administrative roles. Therefore, more stories of women successfully navigating promotion and tenure in AEE and achieving leadership roles in academia should be highlighted to combat students’ concerns about work demands and personal responsibilities. We also recommended AAEE pursue the development of an intentional and structured mentorship program to pair women faculty members with women graduate students interested in postsecondary careers. Creating a respectful, honest, and

transparent environment for women to share experiences and receive advice for success in the AEE profession may improve the retention of a more diverse faculty and staff.

If AAAE is genuinely committed to inclusion, the AEE profession should continue to study the organizational culture and climate for all underrepresented populations and males to provide a comprehensive snapshot of the state of the profession. We suggest further in-depth interviews with underrepresented groups in AEE to provide a richer understanding of individual experiences in the profession. Additional attrition data for underrepresented populations in postsecondary AEE careers should also be studied to establish a baseline for improving retention.

References

- Acker, J. (2012). Gendered organizations and intersectionality: Problems and possibilities. *Equality, Diversity and Inclusion: An International Journal*, 31(3), 214-224.
<https://doi.org/10.1108/02610151211209072>
- American Association for Agricultural Education. (2017, May). *2017-2020 AAAE strategic plan*.
<http://aaaeonline.org/resources/Documents/National/AAAE2017-2020StrategicPlan.pdf>
- Barrick, R. K. (1993). A conceptual model for a program of agricultural education in colleges and universities. *Journal of Agricultural Education*, 34(3), 10-16.
<https://doi.org/10.5032/jae.1993.03010>
- Baxter, L., Stephens, C. A., & Thayer-Bacon, B. J. (2011). Perceptions and barriers of four female agricultural educators across generations: A qualitative study. *Journal of Agricultural Education*, 52(4), 13-23. <https://doi.org/10.5032/jae.2011.04013>
- Bettinger, E. P., & Long, B. T. (2005). Do faculty serve as role models? The impact of instructor gender on female students. *The American Economic Review*, 95(2), 152-157.
<https://www.jstor.org/stable/pdf/4132808.pdf>
- Blickenstaff, J. C. (2005). Women and science careers: Leaky pipeline or gender filter? *Gender and Education*, 17(4), 369-386. <https://doi.org/10.1080/09540250500145072>
- Bradley, K. (2000). The incorporation of women into higher education: Paradoxical outcomes? *Sociology of Education*, 73(1), 1-18. <https://www.jstor.org/stable/2673196>
- Bureau of Labor Statistics. (2019). *Employment characteristics of families - 2018*. (Report No. USDL-19-0666). U.S. Department of Labor. <https://www.bls.gov/news.release/pdf/famee.pdf>
- Cabrera, E. F. (2009). Fixing the leaky pipeline: Five ways to retain female talent. *People and Strategy*, 32(1), 40-45.
<http://argo.library.okstate.edu/login?url=https://www-proquest-com.argo.library.okstate.edu/docview/224579624?accountid=4117>
- Cline, L. L., Rosson, H., & Weeks, P. P. (2019). Women faculty in postsecondary agricultural and extension education: A fifteen-year update. *Journal of Agricultural Education*, 60(2), 1-14.
<https://doi.org/10.5032/jae.2019.02001>
- Crotty, M. (1998). *The foundations of social research: Meanings and perspective in the research process*. Sage.

- Enns, K. J., & Martin, M. J. (2015). Gendering agricultural education: A study of historical pictures of women in the Agricultural Education Magazine. *Journal of Agricultural Education, 56*(3), 69-89. <https://doi.org/10.5032/jae.2015.03069>
- Foster, B. B. (2001a). Choices: A dilemma of women agricultural education teachers. *Journal of Agricultural Education, 42*(3), 1-10. <https://doi.org/10.5032/jae.2001.03001>
- Foster, B. (2001b, December). *Women in agricultural education: Who are you* [Paper presentation]? The 28th National Agricultural Education Research Meeting, New Orleans, LA, United States.
https://www.researchgate.net/profile/Billye_Foster/publication/253600663_Women_In_Agricultural_Education_Who_Are_You/links/544961480cf2f63880829a49/Women-In-Agricultural-Education-Who-Are-You.pdf
- Foster, B. (2003). Profiling female teachers of agricultural education at the secondary level. *Journal of Career and Technical Education, 19*(2), 15-27.
<https://files.eric.ed.gov/fulltext/EJ675783.pdf>
- Foster, B., & Seevers, B. (2003). University women in agricultural and extension education: Committed to the profession and seeking solutions to challenges. *Journal of Agricultural Education, 44*(1), 31-42. <https://doi.org/10.5032/jae.2003.01031>
- Gasser, C. E., & Shaffer, K. S. (2014). Career development of women in academia: Traversing the leaky pipeline. *The Professional Counselor, 4*(4), 332-352.
<https://doi.org/10.15241.ceg.4.4332>
- Golde, C. M. (2005). The role of the department and discipline in doctoral student attrition: Lessons from four departments. *Journal of Higher Education, 76*(6), 669-700.
<https://doi.org/10.1080/00221546.2005.11772304>
- Kelsey, K. D. (2006a). A case study of women's experiences in a preservice teacher preparation program. *Journal of Agricultural Education, 47*(4), 123-133.
<https://doi.org/10.5032/jae.2006.04123>
- Kelsey, K. D. (2006b). Teacher attrition among women in secondary agricultural education. *Journal of Agricultural Education, 47*(3), 117-129. <https://doi.org/10.5032/jae.2006.03117>
- Kincheloe, J. L., McLaren, P., Steinberg, S. R., & Monzó, L. D. (2018). Critical pedagogy and qualitative research: Advancing the bricolage. In N. K. Denzin & Y. S. Lincoln (Eds.), *The SAGE handbook of qualitative research* (5th ed.) (pp. 235-260). Sage.
- Kleihauer, S., Stephens, C. A., Hart, W. E., & Stripling, C. T. (2013). How six women deans of agriculture have attained their leadership role: A qualitative study. *Journal of Agricultural Education, 54*(3), 15-27. <https://doi.org/10.5032/jae.2013.03015>
- Lincoln, Y. S. (1995). Emerging criteria for quality in qualitative and interpretive research. *Qualitative Inquiry, 1*(3), 275-289. <https://doi.org/10.1177/107780049500100301>

- Lindner, J. R., Murphy, T. H., & Briers, G. E. (2001). Handling nonresponse in social science research. *Journal of Agricultural Education*, 42(4), 43-53.
<https://doi.org/10.5032/jae.2001.04043>
- Maher, M. A., Ford, M. E., & Thompson, C. M. (2004). Degree progress of women doctoral students: Factors that constrain, facilitate, and differentiate. *The Review of Higher Education*, 27(3), 385-408.
https://www.researchgate.net/profile/Michelle_Maher/publication/236697014_Degree_Progress_of_Women_Doctoral_Students_Factors_that_Constrain_Facilitate_and_Differentiate/link/s/00b4953c69c1e1ab67000000.pdf
- Mannebach, A. J. (1990). A vision and a mission for agricultural education. *The Agricultural Education Magazine*, 62(7), 4-5.
https://www.naae.org/profdevelopment/magazine/archive_issues/Volume62/v62i7.pdf
- Massachusetts Institute of Technology. (1999). A study on the status of women faculty in science at MIT. *The MIT Faculty Newsletter*, 11(4), 5-17. <http://web.mit.edu/fnl/women/women.pdf>
- Merriam, S. B. (2002). *Qualitative research in practice: Examples for discussion and analysis*. Jossey-Bass.
- Murphrey, T. P., Odom, S. F., McKee, V., & Wilkens, C. C. (2016). A qualitative examination of success factors for tenure-track women faculty in postsecondary agricultural education. *Journal of Agricultural Education*, 57(4), 54-67. <https://doi.org/10.5032/jae.2016.04054>
- National Center for Education Statistics [NCES]. (2018). *Back to school statistics* [Data file]. U.S. Department of Education. <https://nces.ed.gov/fastfacts/display.asp?id=372>
- National Science Foundation [NSF]. (2018). *Doctorate recipients from U.S. Universities: 2017*. Special Report NSF 19-301.], National Center for Science and Engineering Statistics [NCSES]. <https://nces.nsf.gov/pubs/nsf19301/>
- Newcomb, L. H. (1993). Transforming university programs of agricultural education. *Journal of Agricultural Education*, 34(1), 1-10. <https://doi.org/10.5032/jae.1993.01001>
- Patton, M. Q. (2015). *Qualitative research and evaluation methods* (4th ed.). Sage.
- Pell, A. N. (1996). Fixing the leaky pipeline: Women scientists in academia. *Journal of Animal Science*, 74(11), 2843-2848. <https://doi.org/10.2527/1996.74112843x>
- Peshkin, A. (1988). In search of subjectivity - One's own. *Educational Researcher*, 17(7), 17-21. <http://www.jstor.org/stable/1174381>
- Saldaña, J. (2016). *The coding manual for qualitative researchers* (3rd ed.). Sage.
- Seevers, B. & Foster, B. B. (2003). Women in agricultural and extension education: A minority report. *NACTA Journal*, 47(1), 32-37.
https://www.nactateachers.org/attachments/article/516/Seevers_and_Foster_Mar03Journal.pdf

Stephens, C. A., Brawner, S., Dean, A., Stripling, C. T., & Sanok, D. (2017). Reflective journeys of five women agriculturalists in Australia: A qualitative study. *Journal of Agricultural Education*, 59(1), 271-286. <https://doi.org/10.5032/jae.2018.01271>