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Motivations and Challenges of Underrepresented Students Enrolled in a Post-Secondary Agricultural Education Program: Community through Diversity

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Abstract

This study used an exploratory case study approach to explore the motivations and challenges of underrepresented students enrolled in a post-secondary agricultural education degree program. The study's sample consisted of four agricultural education undergraduate students who self-identified as members of an underrepresented group (URG) categorized as: 1) ethnic minority, 2) LGBTQ+, 3) low income, and/or 4) first generation college student. Semi-structured interviews were used to collect data with thematic content analysis to determine the themes present regarding motivations for enrolling and perceptions of challenges among participants. Motivation themes included students involved in high school agricultural education programs, positive influence of adults, fun and interesting agricultural content, community feeling, and exposure to teaching experience. Perceptions of challenges for participants were financial burden, cross-race effect, possible discrimination, and isolation. This study focused on underrepresented groups, therefore, generalizability across all students enrolled in agricultural education is not possible. However, this study does provide valuable insight into the perspectives of underrepresented students and a voice for these students to hopefully invoke change in policies, structures, and activities in agricultural education programs locally and nationally.

Keywords: agricultural education; undergraduate education; underrepresented students

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Introduction

According to the U.S. Census Bureau's 2014 National Projections, the United States will be more racially, ethnically, culturally, and linguistically diverse in the coming years. These same projections show 64% of children under the age of 18 will belong to racial and ethnic minorities by 2060 (Colby & Ortman, 2015), resulting in an ethnically and culturally diverse student population in public school classrooms across the United States (Diller & Moule, 2005; Luft, 1996; Milner et al., 2003; National FFA Organization, 2019). This cultural gap between teachers and students is immense, especially within agricultural education (Hains et al., 2013; Sleeter, 2001) where most teachers are White (Kantrovich, 2010; Smith et al., 2019).

Prior research has noted the importance of an ethnically and culturally diverse teacher force (Villegas & Irvine, 2010). Villegas and Lucas (2004) contended that even though diverse teachers are

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expected to serve as role models for all students, they are especially needed by minority students. In addition, teachers from diverse backgrounds often bring an implicit understanding of student experiences that may not be so familiar to the broader, more homogeneous group of teachers. Interactions between students and teachers from various racial, cultural, and ethnic groups can help combat stereotypes and reduce unconscious implicit biases (Albert Shanker Institute, 2015; Milner et al., 2003). Opportunities to engage with teachers from a variety of backgrounds better prepares students to be successful in engaging in our increasingly diverse society (Albert Shanker Institute, 2015; Brown et al., 2017; Rodriguez & Lamm, 2016).

The lack of minority representation in the teaching profession has been identified as an area of serious concern in educational research and the discipline of agricultural education is no exception (Kantrovich, 2010; LaVergne, 2016; Smith et al., 2019; Talbert & Larke, 1995; Vincent & Torres, 2015). A 2005 study of the pre-service agriculture teacher population revealed out of the 215 respondents, 93.4% identified as White, followed by 2.4% Hispanic, 1.4% African American, and 0.9% Asian (Rocca & Washburn, 2008). Based on data collected through the National Agricultural Education Supply and Demand Study in 2018, 90.1% of all license-eligible program completers were reported as White, Non-Hispanic by the teacher educators who provided data (Smith et al., 2019).

Although research in the agricultural sciences (McKim et al., 2017; Moss, 2011) and agricultural education (Talbert & Edwin, 2008; Velez et al., 2018; Warren & Alston, 2007) identifies underrepresented populations as racial/ethnic minorities and/or gender, underrepresented populations can also include first-generation college students, low-income students, and students who identify as LGBTQ+. First-generation students are identified as college students whose parents have no more than a high school education (Horn & Nuñez, 2000). According to Choy (2000) and Chen and Nunnery (2019), low-income students are defined as students whose family income is below the federally established poverty level for their family size. Collins and Ehrenhalt (2018) defined LGBTQ+ as an acronym that attempts "to envelop an entire community of people who hold identities that are not cisgender or heterosexual" (p. 43).

Much of the research on diverse student enrollment in agricultural education has focused on the secondary level and involvement in FFA. Motivating factors of underrepresented groups to enroll in agricultural education programs includes encouraging and passionate teachers, parental and family influences, hands-on learning, response to social pressure, academic achievement, and job preparation and skill development (Balschweid & Talbert, 2000; Velez et al., 2018). Lack of encouragement from teachers and a negative view of the agriculture industry may be reasons why underrepresented students are not more fully involved in agricultural education programs (Balschweid & Talbert, 2000). Researchers have also found that participation of students of color and students with disabilities was hindered by a lack of role models in agricultural education (Brown et al., 2017; Jones & Bowen, 1998; LaVergne et al., 2012; Velez et al., 2018).

Qualitative research based on the lived experiences and perspectives of underrepresented groups in agricultural education is scarce compared to quantitative studies. Although statistical analysis can provide some generalizations and recommendations, obtaining an emic perspective (Creswell & Poth, 2018) by giving voice to underrepresented groups is important to gaining understanding of why underrepresentation exists and how various agencies, organizations, and educational institutions can work together to find solutions. Two of seven national agricultural education research priorities focus on addressing the recruitment and retention of diverse populations into agricultural and natural resource careers and the creation of meaningful, engaged, and inclusive learning environments (Roberts et al., 2016).

This underrepresentation was present in the undergraduate student enrollment in the agricultural education degree program at a southeastern, predominantly White land-grant university. These students were pursuing a future career as agriculture teachers, working in a school-based agricultural education (SBAE) program situated in a private or public-school system. This study sought to give a voice to members of underrepresented groups enrolled in agricultural education who aspire to become agricultural education teachers. Why did underrepresented students enroll in an agricultural education degree program and desire a professional career as an agricultural education teacher? What challenges were perceived by underrepresented students in agricultural education?

Theoretical Framework

This study was situated in a transformative worldview focusing on the need for social justice and the pursuit of human rights for specific communities at the margins of society (Creswell & Plano Clark, 2018). Within this transformative view, the theories guiding the study included social learning theory of career decision making (SLTCDM) and critical theory (Horkheimer, 1968/2002; Krumboltz et al., 1976; Rasmussen, 1996). When evaluating the motivations of underrepresented groups to enroll in agricultural education as a degree program option in preparation for a future career, SLTCDM asserts that four categories and their interactions can influence an individual's career decision making: 1) genetic endowment and special abilities, 2) environmental conditions and events, 3) learning experiences, and 4) task approach skills. Genetic endowment and special abilities include race, sex, physical appearance, and predisposition to certain abilities. Environmental conditions and events encompass factors outside of the control of an individual such as educational systems, natural disasters, community influences, and job opportunities. Learning experiences include past learning experiences, instrumental learning, associative learning, and observational learning experiences (Krumboltz et al., 1976). Task approach skills were "defined as cognitive and performance abilities and emotional predispositions for coping with the environment" (Krumboltz et al., 1976, p. 74) and include work habits, emotional responses, thought processes, performance standards, and values. The interaction of these categories can be analyzed through the consequences of self-observation generalizations (SOGs), task approach skills (TASs), and actions (Krumboltz et al., 1976).

When evaluating the perceptions of challenges faced by underrepresented populations in agricultural education, critical theory guided the study and helped give voice to the marginalized groups (Guajardo & Guajardo, 2004). Critical theory's branches include critical race theory (CRT), LatCrit theory, queer theory, feminist theory, and theories of power and marginalization (Heiser et al., 2017). Critical theory seeks to merge philosophy with praxis and provide positive, practical, and transformative solutions for social problems (Horkheimer, 1993). With participant voices speaking from lived experiences and across the intersectionality of identities, critical theory allows researchers to "identify and locate the ways in which societies produce and preserve specific inequalities through social, cultural, and economic systems" (Martinez-Aleman et al., 2015, p. 8). Higher education institutions utilize critical theory research to determine causes and effects of societal, structural, and systemic inequalities and help bridge that knowledge with the need for practical change in policies, procedures, and organizational structures (Heiser et al., 2017; Levinson et al., 2011; Martinez-Aleman et al., 2015).

With the four categories of underrepresentation identified in this study linking to its aforementioned branches, critical theory guided an inquiry following three underlying assumptions: a) underrepresented groups are present in SBAE programs, but do not pursue agricultural education as a degree/career, b) underrepresented groups face barriers due to the intersectionality of their identities, and c) by giving voice to underrepresented students in agricultural education and transforming policies, structures, and procedures, these students would pursue agricultural education as a degree/career.

Purpose and Objectives

The purpose of this exploratory case study was to describe the motivations for enrolling and perceptions of challenges of underrepresented students in the agricultural education degree program at a predominantly White institution (PWI) recognized as a land-grant university in the southeast region of the United States. For this study, four categories defined underrepresentation: a) minority, b) low-income, c) first generation college student, and/or d) LGBTQ+. Each participant voluntarily self-identified with at least one of the four categories. The goals of this study were to discover reasons why underrepresented students chose to pursue agricultural education degrees and their perceived challenges of that pursuit of an agricultural education degree and their aspirations to become agricultural education teachers. This line of research is important in contributing to the knowledge base on how agricultural education programs can create diverse and inclusive programs through an understanding of the perspectives and lived experiences of underrepresented populations. Two research questions guided this study:

1. What motivations existed in the underrepresented populations enrolled in an agricultural education undergraduate degree program?
2. What perceptions of challenges existed within underrepresented populations enrolled in an agricultural education undergraduate degree program?

Methods

Case studies allow researchers "to explore individuals or organizations, simple through complex interventions, relationships, communities, or programs and supports the deconstruction and the subsequent reconstruction of various phenomena" (Baxter & Jack, 2008, p. 544). A case study approach was selected for this study to determine the decisions made by underrepresented students in agricultural education and factors that influenced those decisions as well as the perceptions of challenges of underrepresented groups in agricultural education. Cooperation between the participants and the researcher existed so that participants could tell their stories and allowed the researcher to gain a richer understanding for the participants' actions (Baxter & Jack, 2008).

Qualitative case studies enable researchers to explore a phenomenon within its social, cultural, and political context using a variety of data collection and analysis methods (Baxter & Jack, 2008). Semi-structured interviews with open-ended questions allowed for collection of specific information from participants, as well as freedom to allow the interview to flow organically based on the participants' responses and sharing of their lived experiences (Merriam, 2009). Case study researchers, such as Yin (2003) and Stake (1995), encouraged placing boundaries on the study to provide a focused lens on who and what is being investigated. For the purpose of this study, the case was bounded by participant (self-identified as an underrepresented student), by definition (low income, racial/ethnic minority, first generation college student, and/or LGBTQ+), by time (enrolled during the Fall 2019 semester), and by place (undergraduate student in agricultural education at a PWI and land-grant university in southeastern United States). These boundaries allowed for direct focus on understanding the experiences and decision-making factors of the underrepresented students in the agricultural education program through the interviewing process.

Sample Selection

The study's population included four undergraduate students enrolled in the agricultural education degree program at a predominantly white, land-grant university in the southeastern United States who self-identified as underrepresented, volunteered to participate in the study, and consented to the use of their data for research purposes. To identify as underrepresented, participants had to self-identify, confidentially and/or openly, as at least one of four categories: a) minority, b) low-income, c)

first generation college student, and/or d) LGBTQ+. A nonprobabilistic, convenience sampling (Creswell & Plano Clark, 2018) was conducted as participants were enrolled in a required agricultural education course taught by the researcher, however, their participation was voluntary. Students were informed about the need for the study and then asked to contact the lead researcher if they chose to participate. Use of a secure Google survey form allowed eligible participants to confidentially self-identify without fear of being identified. Verification of participant identity was not conducted due to the sensitivity of some of the identities and the researcher trusted the participants met the identity boundary requirement. This self-identification allowed students to come forward and volunteer that may not have been selected if based solely on phenotypic traits. Additional demographics and identities of the participants is not included in this manuscript due to the small sample size and the possibility of re-identification of participants. Participants provided their consent using IRB approved forms regarding the use of their interview transcripts for research purposes.

Limitations

For this study, the restrictions of self-identifying as underrepresented by undergraduate students enrolled in an agricultural education program at a predominantly White, land-grant university provided boundaries that prevented its findings from being generalizable across other populations of agricultural education students. The lived experiences of participants may not be the same as other students who self-identify in the same underrepresented categories due to many external and internal factors that contribute to individual differences. The small sample size created a limitation, however, this study still provided valuable insight as to what teacher educators can do in classrooms and what higher education institutions can do in various programs on campus.

Researcher limitations included the role and associated power present with being an instructor of the study participants. Although the researcher's underrepresented identity was known by participants, the role as their instructor could have impacted their willingness to participate in the study as well as what information and lived experiences participants were willing to share during interviews. An assumption that participants self-identified truthfully as an underrepresented student was held by the researcher.

Data Collection and Analysis

After announcing the study's purpose to undergraduate students, a Google form survey was created asking students to 1) self-identify as one of the four categories of underrepresentation, 2) provide their contact information, and 3) provide their availability for semi-structured interviews based on predetermined times corresponding with the researcher's availability. This survey was posted on the course Moodle page and a message was emailed to all enrolled students (N=47) reminding them of the study and discussion in class and asking for voluntary participation in the study. After one week, the researcher examined the responses to the survey and discovered five students had volunteered and self-identified as underrepresented and were willing to participate in the study. Based on schedule compatibility, the researcher sent an individual email message and calendar invite to each participant with an assigned interview time and date. The students confirmed the invitations and room locations were reserved. Illness of one participant led to interview cancellation and it was not rescheduled due to scheduling conflicts.

Interviews included semi-structured, open-ended questions to allow for individual participants to answer from their own lived experiences (Merriam, 2009). Open-ended statements, such as "tell me about your experience as an underrepresented student in agricultural education" and "tell me about challenges you face as an underrepresented student in agricultural education" were combined with prompting questions, such as "what motivated you to choose the AEE major?" and "what challenges

have you experienced during your time in college?" Participants signed an IRB approved consent form that explained the title, purpose, risk, confidentiality, and ability to discontinue participation at any point during the interview or study. At the completion of all interviews, the audio files were uploaded to a web-based, professional transcription service (*Temi.com*), except for one interview recording which was transcribed manually to provide experience for the researcher. Each participant provided a pseudonym to protect their identity.

Once transcriptions were complete, participants were asked to review their transcript electronically, confirm accuracy, and identify any changes needed. These noted changes were applied, and the coding process began by reading through all of the transcripts multiple times, followed by researcher memoing and writing preliminary codes and emerging ideas in the margins (Creswell & Poth, 2018). These codes and emerging ideas were then compiled in Microsoft Excel along with specific, detailed quotes from the interviews corresponding to the specific codes. Thematic content analysis identified common themes within the codes (Strauss & Corbin, 1990) and participant quotes were categorized as participants' motivations for enrollment and perceptions of challenges.

Trustworthiness

Several techniques were used to enhance the quality and trustworthiness of the study. Member checking (Lincoln & Guba, 1985) allowed participants to validate and provide clarity to the data collected, data analysis, and related interpretations. Participants were provided secure access to the interview transcripts and allowed time to provide approval of their transcripts for use in research. Participants were provided secure access to the written interpretation and thematic analysis utilizing participant quotes to verify and approve the use of their lived experiences. Peer coding strategy was used to enhance the dependability of the data by having a colleague code a portion of the data and collaborate on common codes and themes. Conscious efforts by the researcher to place himself beyond his own assumptions, experiences, and preconceptions, known as bracketing (Husserl, 1913/1931), also contributed to the study's trustworthiness.

Researcher's Reflexivity

Reflexivity within critical theory encourages the researcher to investigate "how experiences, knowledge, and social positions might impact each aspect and moment" (Bettez, 2015, p. 940) of the research process. As a member of an underrepresented group in agricultural education, the researcher placed himself as an insider to this research. His passion for research focused on transforming and changing structures, policies, and procedures that impact underrepresented groups and his focus on creating diverse, equitable, and inclusive learning environments for students in agricultural education programs framed this study. Identifying as underrepresented may have influenced his interview questions and data analysis, however, to mitigate this subjectivity, he employed researcher reflexivity to identify his own biases, his assumptions regarding potential outcomes, and the researcher-participant relationships to maintain as neutral and impartial a position as possible.

Findings

From analysis, five themes emerged within motivations for enrollment and three themes emerged within perceptions of challenges. Participant quotes support these eight themes across the study's two research questions.

Research Question #1: Motivations for Enrollment in the Agricultural Education Major

Research question one sought to identify the motivations for enrollment of underrepresented students in agricultural education. Five themes were identified from participant interviews and corresponding quotes are included to provide an emic perspective. Participants' names, re-identifiable information, and third-party information were given pseudonyms or placeholders to protect their identities and help in mitigating risks through the reporting of this research.

Theme 1: Motivated and Involved Students in High School

All participants expressed their involvement in the agricultural education program at their respective high school and how that involvement motivated them to pursue an agricultural education degree and fueled their desire to become a teacher. Adriana shared that after participating and experiencing success in the Parliamentary Procedure Leadership Development Event, she continued her involvement:

> But from after that I competed in Livestock Judging, Dairy Evaluation, Farm Business Management, Ag Sales, Floriculture, Agriscience Fair, Land Judging, really anything that I could compete in because I just loved it so much.

The other three participants also shared their involvement in the local agricultural education program by working with their advisors to help build the programs, competing in various Career Development Events, and serving as FFA Chapter officers and even beyond the chapter level. This close working relationship with their agricultural education teachers and FFA advisors contributed to the second theme.

Theme 2: Positive Influence of Adults in Participants' Lives

The positive influence of adults in participants' lives motivated them to enroll in agricultural education and their pursuit of becoming agricultural education teachers. Participants expressed desires to impact the lives of young people through the opportunities in agricultural education, much like their own lives had been influenced by their teachers.

Charlie expressed appreciation for the influence of his agriculture teacher and English teacher. He said:

> In my high school, I know my FFA advisor, he's one of my role models. He's always been there for me. He's always been trying to give me every opportunity possible. And then also my English teacher, she was a good mentor for me. She was the one that was also trying to help form the GSA [Gay Straight Alliance] at our high school. She was always there for me as well.

James expressed the influence and help of his English teacher. He elaborated:

> I had one of my English teachers I had for two years, had her freshman and sophomore year. She was always like, come to me at any time, you know, talk over things. And she helped me kind of just understand cause I can do things but sometimes I just get so much in my own head that I'm just like, I can't make a decision. And she's like, okay James, what do you like about this? What do you like about this? And that really helped.

Adriana and Tatyanna shared that their agriculture teachers were a major influence in their lives during high school and contributed to their decisions to pursue agricultural education. Adriana explained that "one of my biggest motivations was my ag teacher…I saw the change that she made in students' lives, and I saw her dedication after I told her that I wanted to be an ag teacher." Adriana offered that "she opened so many doors for so many people, including myself. I would not be the person

I am without her, and I would not reach my potential if it wasn't for her." Tatyanna found inspiration in her agriculture teacher. She said:

> Once I became involved in the agriculture program like it was something that I really enjoyed and that I thought was valuable enough to look into it and just seeing [Teacher Name] do it and how much she loved it I thought it was something that I would really enjoy too, and I still think that.

Adults such as agricultural education teachers, English teachers, music teachers, agricultural education university professors, and high school guidance counselors impacted the participants' lives, however each participant attributed their passion for teaching and becoming an agriculture teacher to the influence of their respective agricultural education teacher. This influence of an agricultural education teacher contributed to the third theme of making agriculture fun and interesting.

Theme 3: Agriculture is "Fun" and "Interesting"

Throughout the interviews, descriptions of "fun," "enjoyable," and "interesting" were consistent. The atmosphere of the classroom created by the agricultural education teacher was viewed as fun and enjoyable. James said:

> I liked horticulture. That was one of the fun things, I liked animal science. But when it really came down to deciding do I want to like major in Hort, major in animal science major in Ag Ed, it was just kind of like I like all of it but I want to teach.

Adriana stated, "But really as time progressed and I learned more about the class, I really enjoyed it." Charlie shared that the various agriculture topics and content were interesting. He said:

> Like learning about different animals. And then there was like when we got to talking about like the plant stuff, like soil, soil conservation, plant conservation, deforestation, that kind of stuff that like piqued my interest and I was like that's kind of a cool topic.

This enjoyable and interesting view of the content within agricultural education motivated the participants to choose agriculture as their discipline to teach. Participants' involvement in the agricultural education program provided a sense of community through their participation at various events, competitions, and activities, leading to the fourth theme.

Theme 4: Community Feeling within Agricultural Education

Despite one participant expressing an individual feeling of isolation (which will be addressed in the challenges section below), participants shared that the sense of community, connection to agriculture, and shared FFA experiences motivated them to enroll and maintain enrollment in agricultural education. James shared that the common experiences and interests between students in the program helped create the community feeling. He said, "like the ag ed we're all a family and we all help each other." Adriana explained the sense of community she felt during her high school agricultural education experience as well as during her experiences at the university. She said:

> But everyone's working towards a degree and everyone knows that everyone else is. And so we're all like, we're not trying, we're all on this race, but we're not trying to one up each other in getting to the end. And so I really liked that about our community.

Charlie felt that his identity as a first-generation college student helped to create a community for him. He said "there's a lot of like first generation college students around me. So, if I had to talk to anyone then I can, there's plenty of people that I can talk to about that." Tatyanna concurred with the community feeling that she described experiencing, "the community of future ag teachers is amazing. We all kind of know each other because of our involvement in high school and FFA, but we support each other." This sense of community contributed to the participants' decisions to pursue agricultural

education and the experiences they had in common created a bond between them despite their identities. Along with the similar experiences acquired through agricultural education and FFA, participants were also exposed to teaching opportunities during their secondary education, the fifth theme.

Theme 5: Interest in and Exposure to Teaching

Exposure to classroom instruction and a longstanding interest in teaching was expressed by the participants. This theme may be expected because the participants were pursuing the teaching profession, however the exposure and experience with teaching in their high school programs helped to develop and direct their desires to teach. Charlie mentioned that opportunities for him to teach other high school and middle school students about agricultural education helped to guide him to pursue agricultural education as a career. He said:

> And then my junior year I wanted to do teaching. I didn't know what kind of teaching, but I wanted to do teaching. And then my senior year, my advisor was like, you want to do teaching? And I was like, yeah. And he was like, why don't you do agriculture education? And I was like that, that's a good idea.

Tatyanna knew from a young age that she wanted to teach. She commented, "for me it was I've always wanted to teach, I just didn't know what and so that was like since kindergarten like I wanted to teach." She gained some teaching experience through her advanced agriculture class under the supervision of her agricultural education teacher. Although he was uncertain of what he wanted to do after high school, James explained that "I knew I wanted to do something in education because I enjoyed teaching and interacting with people." Adriana shared a personal story that her agricultural education teacher would depend on her to teach the class. She said:

> I would've considered myself essentially a student teacher with her because if she wasn't wanting to really teach the lesson or if she was gone, I was the one that did it. She had to go for a conference one day and I didn't have classes that semester other than one that year. And that was when her planning period was. And so she had me stay throughout the day with the sub so that I could like do the video and answer the questions with the students, even though the sub was there, she wanted me there so that I could see like I wasn't the one in charge, but I was also the one that was like teaching with them and working with the students. So, I started doing that and the first time that I ever like stood in front of the classroom and did that, it was sophomore year and when I just had like the students were engaged and we were talking through the curriculum, I knew then like it's just one of those feelings as you're like, this is where I'm supposed to be. Like this is what I'm meant to do.

The encouragement and motivation of the participants' agricultural education teachers, positive influence of other adults, involvement in fun and enjoyable agricultural education programs at their high schools, the sense of community within agricultural education, and the exposure to and interest in teaching all contributed to motivating the underrepresented students to pursue an agricultural education teaching career.

Research Question #2: Perceptions of Challenges

Research question two sought to identify the perceptions of challenges existing within underrepresented students enrolled in an agricultural education degree program. Participants' interviews helped to identify four themes:

Theme 1: Financial Burden

The financial obligations of attending a post-secondary institution were a challenge for participants from initially applying to colleges coupled with the uncertainty of being able to attend college. Lack of financial stability and the inability to participate in opportunities were challenges Charlie experienced. He said, "there's certain things that I can't do and certain opportunities that I can't pursue." Charlie felt the impact of being a low-income student on his involvement at his high school. He elaborated:

> Well, in high school, I come from a low-income county as well as my high school was low income, so it was very difficult for me to do certain things, whether that be through the school or like through my FFA Chapter.

The financial cost of college was a burden on James' family, but his acceptance to a scholarship program helped to alleviate that stress. James said:

> But with the [Scholarship] program, you know, that took the financial burden off like instantly instead of gradually cause Mom's like, don't worry about it, don't worry about it. But I was like, I know if I do not get some scholarship, this is going to be a financial burden on my family.

Scholarship programs also benefited Tatyanna by paying her college tuition with a commitment to teach in a low-income school for four years. Aside from financial hardships and challenges with affording college, participants worried that their identities might lead to discrimination, as explained in the second theme.

Theme 2: Cross-Race Effect and Possible Discrimination

Participants perceived the possibility of their identities being mistaken because of phenotypic traits and the possibility of future employment discrimination based on such differences rather than qualifications as challenges in the pursuit of their degrees and eventual careers teaching agriculture. Tatyanna described an incident in which she was mistaken as a fellow peer who had similar phenotypic characteristics by her dorm mates, which in the field of psychology has been termed cross-race effect or other-race effect (MacLin & Malpass, 2003). She said:

> And they're like, when you have a backpack on and you're dressed up, your students are going to have a really hard time figuring out which one's which because our hair color is the same and it's also the same texture almost and we're the same height and everything. And um, they're like, dang, your students are going to have a really hard time. Me and her were both like, well, I would hope that our students like could pick up on it. Um, like that we are different and maybe by the time one of us may be wearing heels or something like that. We would hope that our students would notice the things that identify us and not like get us mixed up.

Adriana also described her experience and how her identity had created a sense of imposter syndrome as being an underrepresented student in agricultural education:

> I think it mainly is just that like at the beginning it's like imposter syndrome where you feel like you don't belong here especially in [state] where I feel like most of the events that I went to I was like, the people in my chapter and were like the only ones that you could like visibly see were different. So it's just like that, do I really belong here, and that feeling kind of goes away with time and as you find your like place, but I think that's like the main thing of like imposter syndrome and looking around and not seeing yourself and sometimes not even feeling comfortable, too.

Charlie questioned how his identities could affect future employment opportunities. He said:

> And I'm more culturally diverse than they are that I feel like is wrong as well as it's something that I'll just have to overcome like yeah, I'm culturally diverse. Yeah. I'm a different person than the majority, but I feel like that's what should make employers want to hire me. But then in my head I'm thinking like what if that's the reason why you don't get hired? I feel like that's a challenge.

> Tatyanna expressed concern with possible discrimination when seeking employment. She said: I can definitely see how some people may be discriminated against when trying to find a job in ag ed because I've noticed that it's predominantly white males and females that are educators, not just in ag ed, but in general. You don't see a lot of minority educators and I'm not really sure why that is.

These three participants all self-identified in the minority category and the challenge of possible discrimination was not expressed by the fourth participant. Adriana expressed how "overwhelming" it could feel to be "representing the minority in this industry," pushing "past those barriers of being a certain group," and feeling "like you're the one that has to make it work for everything."

Theme 3: Isolation

Because of underrepresentation, two of the four participants felt isolated and that some things could not be discussed openly with others about certain topics because of their identities. Adriana said:

> Being part of an underrepresented group there's like certain experiences that you just have to know that you go through, that other people may not understand, I'm sorry [participant started crying] like home life or anything like that. And sometimes it feels like you can't necessarily talk about it even though it's something that like is going on. So, it's mainly that feeling like there's things that you can't be open about because other people wouldn't understand.

Charlie described this inability to talk and connect with others:

> Like when you have a problem, you want to talk about it to someone, but when there's no one around that you can talk to, it makes you feel like you're alone. And I'm not the kind of person that likes to feel alone, but that's the only thing that happens is like there's no one I can talk to. So that's the only other option is that I, I just feel alone.

Charlie also explained "it's challenging to talk about certain things to certain people when you can't, when those certain people aren't around." These feelings of isolation and sense of alienation were attributed to the differences that stood out to the participants compared to their peers in the agricultural education program and their concerns of not being able to connect with their peers because of such. Participants perceived challenges to their pursuit of agricultural education as the financial burden of college, possible discrimination based on their identities, mistaken identity or other-race effect, and isolation unique to their identities when individuals are not around who share the same identities.

Conclusions and Recommendations

Conclusions Regarding Research Question One

The diverse student participants were encouraged to pursue a degree in agricultural education by influential role models, who were primarily their respective agriculture teachers (Stair et al., 2016; Wildman & Torres, 2001). Rocca and Washburn (2008) also found agriculture teachers to be a significant source of encouragement as preservice agriculture teachers made decisions to teach. In addition, all the participants were actively engaged in agricultural education in high school and found it enjoyable to learn the technical agriculture content. Participants noted the importance of developing a sense of community with their peers and their connection through shared experiences within

agricultural education. Participants noted prior experiences in teaching agriculture during high school confirmed their desires to teach, which they held from a young age (Wildman & Torres, 2001).

The themes identified in this study supported Krumboltz's (1976) social learning theory of career decision making (SLTCDM). The interaction of four categories of SLTCDM are evident in the impact of role models and the sense of community in agricultural education (environmental conditions and events), interest in and exposure to teaching (learning experiences and task approach skills), and uniqueness of the participants' identities (genetic endowment and special abilities) [Krumboltz, 1976].

Conclusions Regarding Research Question Two

The participants' diverse identities and intersectionality of their identities contributed to the perceived challenges in the pursuit of an agricultural education degree and teaching careers. Financial hardships of pursuing a college degree were a challenge impacting participants' educational pursuits, but scholarship programs helped to alleviate this financial stress for some. Phenotypic similarities leading to mistaken identity or cross-race effect (MacLin & Malpass, 2003) was a concern for two participants. Potential discrimination based on identity differences was perceived as a possible impact on the participants' educational and professional career pursuits. Lack of diversity among their peers contributed to feelings of isolation and an inability to talk about sensitive topics that were specific to participants' identities (Brown et al., 2017). Participants' perceived challenges in pursuing agricultural education degrees and careers should help to give voice to underrepresented students in agricultural education and transform policies, structures, and procedures that impact the goals and aspirations of its underrepresented students (Heiser et al., 2017).

Recommendations for Future Practice

Pre-service and in-service teachers are encouraged to make connections with diverse students as research shows they are some of the main influencers for students pursuing an agricultural education degree (Milner et al., 2003; Vincent & Torres, 2015). Agricultural education leaders and teacher educators are encouraged to consider how to bridge the cultural and ethnicity gaps that exist between many agricultural education teachers and some agricultural education students. Encouragement and mentoring should be provided to underrepresented students pursuing agricultural education to maintain the enthusiasm, focus, and passion present at the beginning of their educational pursuits. Teacher preparation programs should capitalize on their intrinsic desires to teach by seeking out opportunities to get students involved in teaching early in their degree program and maintain consistent teaching experiences throughout their coursework, especially experiences involving diversity and inclusion.

Referring to critical theory, an understanding of cultural differences and exposure to students of different cultures and backgrounds is pivotal to improving teacher preparation programs, recruiting and retaining underrepresented students, and preparing in-service teachers to work with culturally diverse students (Vincent & Torres, 2015, Warren & Alston, 2007). This study provided evidence supporting the recommendation that teacher preparation programs need to focus on efforts to promote diverse and inclusive learning environments (Boehm, 2019; LaVergne et al., 2012) and to recruit members from underrepresented groups to pursue careers as educators (Brown, et al., 2017; Villegas & Lucas, 2004). Teacher preparation programs should seek out opportunities to eliminate barriers and challenges that are often faced by underrepresented students entering agricultural education. Providing students with resources related to club organizations and experiences that will allow them to meet other students with similar identities will help foster a sense of belonging. To combat the financial challenges expressed by the participants, the promotion and development of scholarship programs for underrepresented students interested in agricultural education as a career option is recommended.

Additionally, both pre-service and in-service teachers should be encouraged and required to attend professional development workshops focused on inclusivity and cultural competence.

Recommendations for Future Research

Although this study provides important findings about the motivations and challenges of underrepresented students who enrolled in agricultural education, all the participants made the decision to major in agricultural education. It is also important to explore what factors influence underrepresented students' decisions to pursue a major other than agricultural education. As well, if underrepresented students change majors or leave the university, follow-up research should be done to explore the reasons for that decision.

A longitudinal study would help provide additional insight into motivations and challenges of underrepresented students. Interviews should be conducted with these participants throughout their teacher preparation program to see if motivations and challenges remain the same or change over time. Even though some of the findings are similar to research conducted on students' decisions to enroll in colleges of agriculture (Brown et al., 2017; Robinson et al., 2007; Shrestha et al., 2011; Stair et al., 2016; Torres & Wildman, 2001), exploration of the motivations and perceptions of underrepresented students who elected to not enroll in agricultural education programs is recommended to discover opportunities to develop or revise recruitment and retention strategies.

Guided by critical theory, the feelings of possible discrimination, alienation (Sleeter, 2001; Villegas & Lucas, 2004), and loneliness should be addressed through future research with underrepresented groups to discover what changes must occur to strengthen the cultural diversity and cultural sensitivity demonstrated in SBAE programs, agricultural education degree programs, and professional development for pre-service and in-service agricultural educators.

Although generalizability of these findings is not possible due to the small sample size and the case's boundaries, findings validated the need for postsecondary institutions and teacher preparation programs to evaluate policies, procedures, and structures that marginalize underrepresented students and review recruitment and retention strategies targeting underrepresented students. Placing the weight of an entire identity group on the shoulders of a few students can be overwhelming and efforts should be made to ensure that faculty, staff, and student peers are operating, promoting, and embracing a diverse and inclusive environment in and for agricultural education.

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