A Case Study of CTE Teacher Retention:
Transitioning from Mid-Career to Veteran Teacher Status

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Schools across the country are facing a shortage of Career & Technical Education (CTE) teachers. Variables such as low pay, absence of adequate teaching resources, and lack of administrative support associated with CTE teacher attrition have been noted throughout the literature. This study sought to identify developmental experiences associated with teacher retention via focus group interviews with mid-career (7-15 years) and veteran (20+ years) CTE teachers representing the fields of agriculture and family and consumer sciences (FCS). A comparison of the mid-career and veteran teachers was conducted in an attempt to identify gaps in developmental experiences that could be used to inform programming and develop support systems to help mid-career teachers transition to veteran status. In general, veteran teachers are more skilled at balancing work and home, building positive working relationships with administrators, advocating for their programs, feeling empowered by program success, maintaining a strong network of colleagues, and connecting with the community. Findings suggest that mediating factors for transitioning from mid-career to veteran teacher status include establishing boundaries, setting priorities, networking, taking on leadership roles, building and maintaining strong partnerships with administration and the community, and advocating for CTE programs.

The current shortage of classroom teachers is not a new phenomenon. According to the U.S. Department of Education (2016) at least two-thirds of states were experiencing a shortage in at least one area of Career and Technical Education (CTE). Werhan (2013) reported that half of states were experiencing shortages of highly qualified family and consumer sciences (FCS) teachers. It was later discovered that the extent of the FCS teacher shortage had been underrepresented in national U.S. Department of Education data due to inconsistent coding of FCS teacher positions (Werhan & Whitbeck, 2017). Agricultural education is also facing a teacher shortage. Foster et al. (2020) reported at least 60 teaching vacancies went unfilled nationwide in 2019.

Recruiting the next generation of CTE teachers is a concern for many content areas and has led to special efforts including the National *Teach Ag!* and *Say Yes to FCS* campaigns (National Association of Agricultural Educators, n.d); American Association of Family & Consumer Sciences, 2018). Retention of current CTE teachers should also play an important role in addressing the current shortage. A wide body of literature exists exploring new and beginning teachers job satisfaction and other factors associated with career longevity (Clark et al., 2014; Crutchfield et al., 2013). However, there are gaps in the literature that help to explain how mid-career teachers transition to veteran status.

Veteran teachers, those with 20 or more years of teaching experience, have found success in striking a healthy work-life balance and protecting personal time (Clark et al., 2014). On the other hand, one common concern expressed by mid-career agriculture teachers was finding a balance between work and personal lives (Crutchfield et al., 2013; Smalley & Smith, 2017). They may have entered the profession as single individuals but later started or expanded families which required a recalibration of balancing family and work responsibilities. Among mid-career agriculture teachers, many found it more common for work to interfere in their personal lives, than their personal matters to interfere with work (Crutchfield et al., 2013). Close to half of a sample of FCS teachers who had left the profession cited responsibilities related to family (Mimbs, 2000).

Supportive school administration (Morris, 2006) and communities (Clark et al., 2014; Inman & Marlow, 2004; Johnson et al., 2011) have been shown to influence teacher job satisfaction (Morris, 2006) and encourage early career teachers to stay in the classroom (Inman & Marlow, 2004). Clark et al., (2014) found agriculture teachers who experienced strong administrative support remained in the profession for extended periods of time as did veteran teachers who felt supported by their community (Inman & Marlow, 2004; Johnson et al., 2011). However, lack of administrative support can be detrimental, and is cited as a reason why agriculture teachers left the classroom prior to retirement (Boone & Boone, 2007; Walker et al., 2004). When seeking suggestions to improve FCS teacher recruitment and retention, in-service teachers highlighted the need to improve support from administration, counselors, and school boards (Mimbs, 2000).

The importance of strong and healthy collegial and student relationships for career longevity should not be overlooked (Brunetti, 2006; Clark et al., 2014; Gu & Day. 2007). Mid-career agriculture teachers have expressed desires to build collaborative relationships with other CTE teachers (Smalley & Smith, 2017). Relationships between teachers are important for continued pedagogical development (Hasselquist, 2017; Johnson et al., 2011). When teachers do not have strong peer relationships, it can lead to a sense of isolation and lack of belonging. This lack of belonging may lead to teacher attrition (Clark et al., 2014; De Lay & Washburn, 2013). The ability to make a positive difference in the lives of students is also positively correlated with teacher satisfaction. Social service (i.e. the chance to do things for others) was ranked the highest satisfier among mid-career and veteran FCS teachers (Tucker, 2009). Early career FCS teachers were motivated to teach because they could help young people and families (Godbey & Johnson, 2011), which also contributed to job satisfaction (Mimbs, 2002).

Financial support for teachers and CTE programs is also a factor related to teacher retention. Higher salaries and other types of support, such as health insurance, have a positive correlation with teacher retention (Shen, 1997; Morris, 2006). Due to CTE's connection to industry, schools are faced with a unique financial situation in both equipping classrooms with updated technology and paying teachers a salary comparable to those available in industry. Agriculture teachers who left the profession cited the financial incentives of working in higher-paying industry positions as a reason for leaving (Lemons et al., 2015; Quinton, 2017). Some FCS teachers who had left the profession admitted that the time commitment and extra responsibilities for teaching FCS did not compare to other occupational opportunities and financial rewards found in industry (Mimbs, 2000). To further complicate things, CTE programs often have unique budgetary and facilities considerations. Having the adequate facilities and proper budgetary support to maintain programs has traditionally been a concern for teachers and can have a negative impact on teacher job satisfaction (Boone & Boone, 2009; Brunetti, 2001;

Mundt & Connors, 1999; Morris, 2006; Torres et al., 2008). Lack of proper facilities, equipment, and monetary support can be frustrating to CTE teachers as they try to prepare students for the workforce.

Teachers work in a complex environment and are often influenced by personal and organizational variables (Fessler & Christensen, 1992). Teachers stay and leave the profession for a variety of reasons. Relationships with administrators, other teachers (both in and outside of their districts), and community members can all play a role in a teacher's decision to continue teaching or to leave the profession. Beyond relationships, feelings of autonomy or empowerment and personal and program financial support also matter to teachers. Despite the numerous professional aspects associated with career longevity, finding a balance between their personal and professional lives is crucial. This study seeks to explore how personal and organizational environments translate into career longevity.

Conceptual Framework

Fessler & Christensen's (1992) teacher career cycle model served as the guide for this study to contextualize, identify, and categorize the complex events and incidents that impact teachers across their careers. Fessler and Christensen (1992) propose that teacher development is not linear in nature and influenced by personal and organizational (professional) factors. Organizational factors include items related to school governance, administration, and public perceptions. Personal environment focuses on a teacher's life outside of school and includes family support, hobbies, personal dispositions, and crises. The model identifies eight stages of a teacher's career: preservice, induction, competency building, enthusiastic and growing, career frustration, career stability, career wind-down, and career exit (Fessler & Christensen, 1992). Traditionally, heavy emphasis is placed on the preservice stage of career development while college students complete a teacher preparation program (Fessler & Christensen, 1992). However, more attention should be paid to the types of support teachers need at all stages of their career (Rust, 2010). The current study is designed to examine the teacher experience between the stages of *career frustration* and *career stability* (Fessler & Christensen, 1992) and to reveal experiences and variables associated with career longevity in the field of CTE with a focus on the fields of agriculture and FCS.

Purpose

The primary purpose of the study was to examine teacher experiences associated with CTE teacher retention in a rural Midwestern state. With states facing a shortage of qualified CTE teachers, it is important to explore the experiences of mid-career (7-15 years) and veteran (20+ years) teachers to better inform preservice and in-service CTE teacher programming to recruit, support, and retain future generations of CTE teachers. The guiding question for this study was "What experiences are impactful for CTE teacher career longevity?"

Methods

This study is part of a larger data set and the methods may be similar or identical to methods used in extensions of this study. This instrumental case study (Creswell, 2013; Stake 1995) focused on mid-career and veteran CTE teachers to better illuminate needs associated with teacher retention and career longevity. The target population was CTE teachers in South Dakota. The bounded systems were CTE teachers who were South Dakota Association for Career and Technical Education (ACTE) members, attended the summer 2018 state ACTE conference, and

had the appropriate years of experience. Prior to the conference, a recruitment letter was posted to the organization's website, focus group sessions were listed in the program, conference rooms were reserved, and fliers were included in registration materials.

All 16 individuals who volunteered to participate in this study were included in the data set: four mid-career and 12 veterans representing the fields of Agriculture, Food, and Natural Resources; FCS; and Arts, AV Technology, and Communications. Each focus group was led by the primary researcher, lasted approximately one hour, and utilized a semi-structured format with questions focused on teacher longevity. The interviews were recorded and transcribed to aid in analysis. Line by line coding was used to identify categories and themes related to the group's experiences. Data were approached using a constructivist lens (Creswell, 2013). The researchers reflexively positioned themselves as former CTE teachers. These experiences have influenced the researcher's subjectivity; however, trustworthiness was ensured through member checking, peer debrief, and an audit trail (Creswell, 2013; Stake 1995).

Once themes had been identified for each data set, work began on comparing the findings between mid-career and veteran teachers' experiences. To do this, the research team identified developmental experiences related to teacher retention from across the literature as a guide. Information related to those developmental experiences that were already embedded in the themes from the original data sets were extrapolated to expose the gaps between mid-career and veteran teacher's experiences with the ultimate goal of identifying ways to help support mid-career teachers to continue the journey to veteran teacher status.

Results

This section compares the mindset of mid-career teachers with veteran teachers regarding several developmental experiences that have been correlated with teacher retention.

Work-Life Balance

Analysis of the mid-career teacher sample from this study revealed that these teachers had made strides in seeking balance and establishing boundaries, but still had not achieved it. The veteran teachers reported a mastery in work-life balance and allocation of time. They also demonstrated a matured perspective and ability to see the big picture.

Mid-career teachers admitted that they were much better at balancing workload than earlier in their career. One teacher shared "your first couple of years, you're all excited and you want to do everything. Now it's like 'hmm, no.'" All had admitted that they had become more discerning about what projects they decided to include in the curriculum.

Life circumstances of the mid-career teachers had changed since beginning their career. One Ag teacher shared "Our spouses weren't in the picture when we first got started and as it came to be our priorities shifted and I wonder what it would've been like had I started right away with a wife and a child, I don't know if I would've… lasted three years."

The mid-career teachers in this sample were still trying to reconcile their career values with decisions related to time and energy invested outside of school hours. An Ag teacher shared, "You want every opportunity for your students; that's the problem." An FCS teacher shared disappointment she felt after allocating extra time and not feeling recognized or appreciated by students, parents, or administration. All recognized that time is a commodity that needs to be carefully spent and they were getting better at prioritizing. One teacher commented, "That is why figuring out what to spend your time on as you have some experience it's a little bit easier because that time is so valuable."

The veteran teachers addressed the concepts of balance and priorities from a matured perspective. One said, "you realize that things come and go, like what was a crisis to you when you were in year two is [now] a minor little blip on the radar." She went on to say:

> A teacher will let a bad class run them out of teaching. Heck, those kids are gone in four years, four years is nothing, you know, and so, I think perspective brings a lot of that when you realize that these things that you are stressing over really aren't that big of an issue.

Relationships with Administrators

In general, the mid-career teachers felt they had less administrative support than veteran teachers. The veterans shared how building relationships with administrators was the result of advocating for their programs.

Three mid-career teachers expressed frustration and disappointment with school administration. They agreed that part of the issue was administrations' "lack of understanding" and misconceptions related to the CTE programs. They wished administration "had their back" more often by supporting the programs. An Ag teacher mentioned that he felt that veteran teachers were treated better by administration. "they [veteran teachers] are telling you about the things that they are doing, and you're like 'my administration would never let me do that'."

Veteran teachers appeared less fearful of approaching administration to fight for their programs. Some noted that when communicating with administration it was wise to "choose the right battles" and then be willing to advocate strongly for what you believe in. A veteran FCS teacher shared her sentiments related to the need to advocate for CTE programs

> Basically, I had an administrator tell me tell and other teachers that in some ways I am a pain because I've advocated for my program… but it's important…if we don't advocate for our programs and we don't make people aware of what we offer and what we need who else will?

One Ag teacher recounted a story when he joined forces with an Industrial Tech teacher to advocate for a much-needed shop,

> He [the administrator] pretty much threatened to throw me out of the office because…he thought I was angry. No, I am passionate about what I do and it's important to me and by the time he left my high school he was an honored supporter of Ag Ed, but he had to know that I was passionate about what I was doing.

Another important lesson learned from a veteran teacher regarding building relationships with administrators was shared,

> the first thing you need to do in terms of winning over administration is you have to do your job and you have to do it very well. The kids you have in your program and their parents over time will build on that.

Teacher Empowerment

Mid-career teachers from this sample were driven by their ability to innovate in the classroom; whereas, veteran teachers reported being empowered by the positive outcomes they knew their programs were having on students and the community.

Some of the mid-career teachers referenced having more time to innovate compared to the first few years of teaching. "I can start doing more with newer technology and new things. And it is easier to incorporate into the classroom than it was in the first years when you are still trying to figure out content standards and figure out how to teach." Additional comments related to a continued passion for teaching, "If you keep doing that and keep yourself interested, you're going to stay motivated and you are going to keep teaching because you get to buy a drone, you get to use a CNC machine… and it's cool it's fun."

Veteran teachers expressed feelings of continued motivation due to the positive outcomes of their programs. One teacher remarked, "I like to watch the growth of the kids from when I first have them to when they leave my program. I think I get the biggest kick out of that to see how they've changed over the years and you hope that you had a part in that." Another commented about remaining motivated to learn, "If you like to learn the kids will love to learn…"

Other veteran teachers spoke of their professional dedication in relation to keeping the curriculum up-to-date. A few noted that they do not like to use the same set of notes or materials year after year and were able to make decisions regarding changes to the curriculum. One teacher commented, "We're trying something new all the time, the kids love to learn just as much as you do."

Collegial Relationships

In general, mid-career teachers from this sample had built strong professional networks that contributed to their continued desire to teach. However, some still struggled with how isolating it can be to be a single teacher program. The veteran teachers noted that their colleagues had become a "family" of sorts which supported them and contributed to job satisfaction and career success.

All of the mid-career teachers from this sample mentioned the importance of their relationships with other CTE professionals and the importance of their involvement in professional organizations. One Ag teacher shared that his CTE network was partially responsible for his decision to stay in the profession; "I think one of the reasons why I'm still teaching, and that's helped us [himself and two other focus group members] is having that connection." Despite having connections with other CTE teachers from across the state and nation, one teacher shared that it can still be isolating to be the only CTE teacher in the school building. "And in other areas of education you have a math group, an English group, a science group, we are generally departments of one… I definitely feel like an island."

When making the transition from mid-career to veteran status, the veterans teachers discussed how the relationships deepened into something more than just a professional network. They often referred to it as a "family." One teacher said, "I really like the network of teachers and the family that is created whether that Agricultural Education family or the FCS family that you have beyond the school." Another teacher focused on how she believed CTE was unique, "I believe that's what makes being a CTE teacher special over just any teacher, the comradery that develops because we do know each other."

Community Support and Program Advocacy

Little was said about community support in the mid-career teachers' focus group. The veteran teachers spoke of the importance of building community support and advocating for programs. The veteran teachers had a good deal to share about lessons learned about the importance of community support to the success and well-being of a CTE program. One FCS teacher advised, "Don't worry about the moms and dads, worry about the grandmas and grandpas." An agriculture teacher concurred, "the older people in the community they are the ones that vote."; therefore, this teacher had learned that when he wanted support for student organizations that he needed to reach out to the older members of the community to garner that support.

One veteran teacher connected community support with one more way of getting the message across to the school administrators that the FCS program was worth fighting for. She commented, "the business community is seeing kids come out with work skills." She went on to say, "because he [the principal] knows he has people within the community that have written notes, that say, 'Your kids did a really good job!' and so he sees that."

Finances

While finances were not discussed much by teachers in either sample, both the mid-career and veteran teachers referenced that their passion for teaching and ability to positively impact students and the community superseded monetary compensation. One mid-career teacher shared, "Actually time for me is more valuable to me than money." Another teacher commented "…I've always felt it's a calling and I don't do it for the money. I don't do it for the glory--those things are great--but you do it for the students and becomes who you are."

While veteran teachers recognize that business and industry have better paying jobs, they often commented on the pride they feel in making a positive difference in the community. One teacher said, "…You have to have the passion, the will to want to be a teacher more than just wanting to get paid for what you are doing."

Discussion

There were some important distinctions between mid-career teachers and veteran teachers in relation to the concept of work-life balance. While the mid-career teachers were still working to find a happy balance, the veteran teachers had resolved those issues. The veteran teachers spoke mostly of lessons learned, recognizing the big picture, and making a positive difference in the lives of students. The findings were consistent with the literature that reported veteran teachers were able to achieve a healthy work-life balance Clark et al., 2014), while mid-career agriculture teachers were still working to balance work and personal lives (Crutchfield et al., 2013; Smalley & Smith, 2017).

While mid-career teachers saw administration as an entity that would either stand in the way of or support innovation, the veteran teachers viewed their interactions with administration as a sign of professional dedication. The veteran teachers spoke more often of the need to advocate for their programs and seemed more assured that their programs were making a positive difference and were willing to go out of their way to make those facts known by administration and the community. Support of the administration has been noted in the literature as important for both agriculture (Clark et al., 2014) and FCS (Mimbs, 2000; Mimbs, 2002) teacher job

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satisfaction and retention. In a study of FCS teachers, administrative support was noted as a key factor related to teacher's social integration at school as well as teachers' desire to continue teaching (Dainty et al., 2011). Mid-career teacher's efforts to building healthy relationships with administrators could also contribute to an atmosphere of teacher empowerment (Ndoye et al.,2010).

Community support was discussed more often by veteran teachers than the mid-career teachers. Veteran teachers also spoke of knowing which battles to choose to fight and which issues were best left alone. The mid-career teachers did not mention taking on the role of an advocate. However, learning to take a stand for programs early on may help mid-career teachers through the *career frustration phase* (Fessler & Christensen, 1992) because strong administrative support has been positively correlated with extended teacher retention (Clark et al., 2014).

The importance of networking was apparent to mid-career and veteran teachers. Mid-career teachers spoke about the need for proper mentoring and the importance of building a trusted professional network via involvement in professional organizations. The veteran teachers were more explicit in describing their CTE network as a "family" and addressing how they integrated their home life and work life. Since relationships between teachers are important for continued pedagogical development (Hasselquist, 2017; Johnson et al., 2011), professional organizations should continue to provide opportunities for CTE professionals to learn together in face-to-face and digital settings.

Finances were not discussed much by either group of teachers, but when it was discussed, it was described as an issue that was not on the top of the values list. The lack of emphasis on salary and financial aspects is divergent of literature, which has stressed in the importance of it (Boone & Boone, 2009; Brunetti, 2001; Lemons et al., 2015; Mundt & Connors, 1999; Morris, 2006; Quinton, 2017; Torres et al., 2008).

Implications

One identifiable gap between mid-career and veteran teacher's developmental experiences appears to be the veteran teachers' ability to focus on the big picture and not getting overly concerned with small matters. Perhaps it could be useful to mid-career teachers to map out long-range goals and plans (such as a five-year or 10-year plan) for their programs so that they can begin to see the larger picture? Mid-career teachers may also benefit from taking on an advocacy role, which relates to relationships with administration and the community. Efforts should be made to help mid-career teachers develop program advocacy skills and become comfortable being program advocates. This can be particularly rewarding for Agriculture and FCS teachers who can also connect their students to the community via involvement in CTSOs such as FFA and FCCLA. Mid-career teachers seem to be on the right track in relation to staying involved in professional organizations and nurturing their professional networks. Veteran teachers also seemingly have a more student-centered approach to decision making which empowers them to continue learning and updating curriculum.

Directions for future practice would include partnerships between post-secondary teacher education programs, school administrators, and CTE related professional organizations to provide workshops and educational opportunities to further foster professional networking, advocacy, and healthy relationships with administration. Encouraging Agriculture and FCS teachers who are planning for retirement to host a student teacher in an effort to fill that teaching spot upon the teacher's departure could also help to combat the teacher shortage issues those programs have been facing. School administrators could also foster teacher collaboration across

the school system so that CTE teachers feel less isolated. There would be several opportunities for Agriculture and FCS teachers to collaborate on projects. Professional organizations could provide additional advocacy ideas and promotional resources for mid-career teachers to use in their local communities. Areas for future research should include a deeper dive into the experiences of mid-term career teachers to explore other variables related to teacher attrition such as burnout and compassion fatigue, exploring how professional networks influence career satisfaction and longevity, and working to determine in financial support impacts career satisfaction.

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Student Perceptions of Learning Experiences During the COVID-19 Pandemic: An Examination of Post-Secondary Hybrid, In-Person, and Online Consumer Affairs Courses

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The COVID-19 pandemic required many post-secondary family and consumer sciences (FCS) programs, including consumer affairs programs, to offer in-person courses in hybrid or online format. The current literature focuses on the impact of the COVID-19 pandemic on online learning that occurred during Spring 2020 but does not examine hybrid learning in this context. Using a survey, this study examined student perceptions of their learning experiences in hybrid, 100 % in-person, and 100 % online consumer affairs courses during the Fall 2020 semester. Findings indicate students have a more positive view of their experiences in hybrid courses relative to in-person and online with differing responses based on students' year in school. Discussion includes implications for FCS education programs at secondary and post-secondary levels and suggestions for future research.

Family and consumer sciences (FCS) "is the comprehensive body of skills, research, and knowledge that helps people make informed decisions about their well-being, relationships, and resources to achieve optimal quality of life" (American Association of Family and Consumer Sciences, n. d., para. 4). This field includes several areas, including consumer affairs, textiles and apparel, and nutrition. Many of these areas are the focus of post-secondary degree programs at colleges and universities. This article describes research designed to examine students' experiences with hybrid, in-person, and online learning among consumer affairs college students in Fall of 2020 during the COVID-19 pandemic.

Background

In March 2020, the novel coronavirus (SARS-CoV-2) pandemic and its effects on public health forced higher education leaders to change the delivery of in-person programs in the United States. Many in-person programs pivoted to 100 % online delivery for the remainder of the Spring 2020 term and for all the Summer 2020 term. In Fall 2020, many higher education institutions opted for a hybrid model that required some in-person instruction. Hybrid models combine in-person instruction with online activities. Students spend less time engaged in in-person instruction than with traditional in-person courses, with more course content moved online. In-person activities in hybrid courses center on authentic, active learning experiences (The Pennsylvania State University, 2021). In this paper, hybrid approaches are compared with in-person and online approaches. In-person approaches refer to all instruction and activities delivered in-person. Online approaches refer to all instruction and activities delivered online.

Online Learning Models in Family and Consumer Sciences Higher Education Programs

Online and hybrid learning models have become increasingly common in FCS higher education programs in recent years, particularly at the graduate level. For example, the Great Plains Interactive Distance Education Alliance (GPIDEA) offers graduate degrees and certificates in a variety of FCS areas, including family and consumer sciences education, merchandising, and family financial planning (GPIDEA, n. d.). Family financial planning is an area taught by consumer affairs program faculty at some institutions, including South Dakota State University (South Dakota Board of Regents, 2019). Moreover, Kansas State University offers a doctoral degree in personal financial planning using a hybrid model (K-State Online, n. d. b.). At the undergraduate level, fewer academic programs in FCS are offered using an online or hybrid model. Examples of such programs include an online bachelor's degree in personal financial planning offered by Kansas State University and an online bachelor's degree in FCS offered by Western Kentucky University (K-State Online, n. d. a.; WKU Online, 2020).

Learning Models During the COVID-19 Pandemic

Due to the health and mortality consequences associated with the COVID-19 pandemic, 100 % in-person programs in FCS, including consumer affairs programs, were forced to quickly pivot to an online delivery model in March 2020. For Fall 2020, many colleges and universities required programs to adopt a hybrid model that included courses to offer both in-person and online opportunities for instruction. Both commentary and research about the impact of the COVID-19 pandemic on instruction in higher education has begun to proliferate, but much of the existing literature focuses on the online learning that occurred during the Spring 2020 semester. Moreover, literature on the impact of COVID-19 on instruction in higher education FCS programs, including consumer affairs programs, is still limited.

Regarding online learning during the COVID-19 pandemic in Spring 2020, students found it to be more convenient and felt it facilitated more student participation than in-person learning (Hussein, Daoud, Alrabaian, & Badawi, 2020; Nambiar, 2020). However, students found the workload and technology problems associated with online course delivery to be barriers to learning (Hussein, Daoud, Alrabaian, 2020). In a study of students enrolled in a social work program during the pandemic, students indicated they retained less information with online learning and that they preferred in-person learning (Smoyer, O'Brien, & Rodriguez-Keys, 2020). Students missed the in-person experience of being near others. For online learning, synchronous activities were preferred over asynchronous activities because students perceived more opportunity for discussion with their instructor.

Student Perspectives and Demographics

There is a paucity of literature on the influence of student demographics on students' perception of their experiences in hybrid and online courses during the COVID-19 pandemic. In a study exploring the effectiveness of hybrid learning prior to the COVID-19 pandemic, Gulnaz, Althomali, and Alzeer (2020) found males and females did not differ in their perception of the effectiveness of hybrid learning. Day, et al. (2020) found students who had previously taken online courses were more successful during the pivot to remote learning during Spring 2020 than those who had not previously taken online courses. Tichavsky, Hunt, Discoll, & Jicha (2015) found students who enrolled in 100 % online courses were an average of nearly two years older than those enrolled in 100 % in-person courses prior to the pandemic. Older students are more

likely to be upperclassmen (e.g., juniors and seniors) who have been exposed to prior online learning. It's likely that upperclassmen will report a different learning experience in hybrid and 100 % online courses than underclassmen (e.g., freshmen, sophomores). Racial disparities regarding students and the COVID-19 pandemic have been noted. Specifically, Harper (2020) noted an increased risk of violence for Asian American and Asian international students given the "Chinese Virus" connotation associated with COVID-19. Moreover, "COVID-19 infections and deaths are disproportionately affecting African Americans and other communities of color" (Harper, 2020, p. 156). This means students from these groups are more likely to have lost someone close to them due to the virus, leaving them susceptible to emotions that may inhibit their engagement in coursework which, in turn, may influence how they perceive their learning experiences.

Methods

Hypotheses

Given the shift from online to hybrid learning models during the Fall 2020 semester, there is little empirical guidance to assist instructors in ensuring quality experiences for students enrolled in post-secondary FCS programs, including consumer affairs programs. This study seeks to address this gap in the literature by exploring the research question, "How do students enrolled in hybrid consumer affairs courses during Fall 2020 perceive their experiences relative to their experiences in 100 % in-person and 100 % online consumer affairs courses?" Consistent with the above research question, the following hypotheses were tested in this study:

H1: Lower Quality Learning Experience with Hybrid Courses Relative to In-Person Classes

Most students enrolled in hybrid consumer affairs courses during Fall 2020 will report a lower quality learning experience relative to their experiences in 100% in-person consumer affairs courses.

H1a: Year in School. Students enrolled in hybrid consumer affairs courses during Fall 2020 will report the quality of their learning experience relative to their experiences in 100 % in-person consumer affairs courses differently based on their year in school.

H1b: Race. Students enrolled in hybrid consumer affairs courses during Fall 2020 will report the quality of their learning experience relative to their experiences in 100 % in-person consumer affairs courses differently based on their race.

H1c: Sex. Students enrolled in hybrid consumer affairs courses during Fall 2020 will *not* report the quality of their learning experience relative to their experiences in 100 % in-person consumer affairs courses differently based on their sex.

H2: Higher Quality Learning Experience with Hybrid Relative to Online Classes

Most students enrolled in hybrid consumer affairs courses during Fall 2020 will report a higher quality learning experience relative to their experiences in 100 % online consumer affairs courses.

H2a: Year in school. Students enrolled in hybrid consumer affairs courses during Fall 2020 will report the quality of their learning experience relative to their experiences in 100 % online consumer affairs courses differently based on their year in school.

H2b: Race. Students enrolled in hybrid consumer affairs courses during Fall 2020 will report the quality of their learning experience relative to their experiences in 100 % online consumer affairs courses differently based on their race.

H2c: Sex. Students enrolled in hybrid consumer affairs courses during Fall 2020 will *not* report the quality of their learning experience relative to their experience in 100 % online consumer affairs courses differently based on their sex.

Instrument

Data were collected using a 26-item online survey developed for the purpose of this study. The development of survey items was informed by available literature and a publicly available student survey that was designed to measure the impact of the COVID-19 pandemic on university students (Aucejo & Zatar, n. d.). Four items developed by Aucejo and Zatar (n. d.) were modified and included in the survey. Four additional survey items were open-ended and five were designed to gather demographic information.

Sample Recruitment and Demographics

Upon receipt of IRB approval, data were collected from students enrolled in consumer affairs courses at one Midwestern university. Information about the study was shared with instructors and an academic advisor in the college in which the consumer affairs program was housed, for dissemination to students. Study recruitment information was shared on department and college social media. Inclusion criteria were being 18 years of age or older and having been enrolled in a hybrid undergraduate consumer affairs course during the Fall 2020 semester. Forty-five students completed the survey between December 2020 and February 2021. Two respondents indicated they had not been enrolled in a hybrid consumer affairs course during the Fall 2020 semester, so their responses were removed prior to data analysis. The sample was comprised of majority White ($n = 39$, 88.6%), female ($n = 27$, 61.4%) college juniors ($n = 26$, 59.1%).

Data Analysis

Descriptive statistics were computed for respondents' demographic information. Descriptive statistics and one-way ANOVAs were computed to test the hypotheses. All quantitative analyses were completed using SPSS version 26. To analyze the qualitative responses to the open-ended survey items, open coding was utilized. In open coding, codes that seem relevant to the research question are noted by reading and coding the transcript line-by-line (Esterberg, 2002). After the completion of open coding, focused coding was conducted to identify categories and themes. Coding was completed by hand.

For the quantitative analyses, the following dependent and independent variables were used to test the hypotheses:

Dependent Variables

Hybrid vs. In-Person Learning Experience. This continuous variable, measured on a seven-point Likert scale, reflects responses to a survey item that asked students to rate their learning experience in hybrid consumer affairs courses relative to their experiences in 100% in-person consumer affairs courses. This dependent variable was used to test H1, H1a (year in school), H1b (race), and H1c (sex).

Hybrid vs. Online Learning Experience. This continuous variable, measured on a seven-point Likert scale, reflects responses to a survey item that asked students to rate their learning experience in hybrid consumer affairs courses relative to their experiences in 100%

online consumer affairs courses. This dependent variable was used to test H2, H2a (year in school), H2b (race), and H2c (sex).

Independent Variables

Year in school. This categorical variable reflects responses to a survey item that asked respondents to indicate if they were a freshman, sophomore, juniors or senior. This variable was used to test H1a and H2a.

Race. This categorical variable reflects responses to a survey item that asked respondents to indicate their race. This variable was used to test H1b and H2b.

Sex. This categorical variable reflects responses to a survey item that asked respondents to indicate if they were male or female. This variable was used to test H1c and H2c.

Results

Overall, students did not report a lower quality learning experience in hybrid consumer affairs courses relative to in-person courses. The demographic variables of race and sex did not influence students' rating of their learning experiences. Juniors and seniors were more likely to report a higher quality learning experience in hybrid courses relative to sophomores. More students viewed their learning experience in hybrid consumer affairs courses as positive or equal to their experience in online courses. The demographic variables of race and sex did not influence students' ratings of their learning experiences. Juniors and seniors were more likely to rate their learning experiences in hybrid consumer affairs courses as better than or equivalent to their experiences in online consumer affairs courses. H1a, H2, and H2 were supported. H1, H1b, H1c, H2b, and H2c were not supported. ANOVA results are summarized in Table 1.

Table 1

Learning Experiences in Consumer Affairs Courses: ANOVA Results

Learning Format	Dependent Variable	*p*-value
In-Person vs. Hybrid	Year in School	.048
	Race	.463
	Sex	.544
Online vs. Hybrid	Year in School	.046
	Race	.758
	Sex	.348

Learning Experience: In-Person vs. Hybrid

Descriptive statistics were computed to determine if students reported a lower-quality learning experience in hybrid when compared with in-person courses. Twenty-one students reported their learning experience in hybrid consumer affairs courses was worse relative to their experiences in 100 % in-person consumer affairs courses. Another 21 students reported their learning experience in hybrid consumer affairs courses was either the same as or better relative to their experiences in 100 % in-person consumer affairs courses. This hypothesis (H1) was not supported.

However, to gain additional insight, students were asked to explain their rating of this question in an open-ended survey item. The themes that emerged from the open-ended responses were Equal Learning Experience, Flexibility, and Student-Instructor Communication. *Equal Learning Experience* was defined as the hybrid learning experience being perceived as equivalent to the in-person learning experience. *Flexibility* was defined as the perceived freedom to manage one's responsibilities in addition to coursework. *Student-Instructor Communication* was defined as the perceived quality and frequency of communication between students and instructors.

Equal Learning Experience

Seven students indicated that they perceived hybrid learning and in-person learning to be equivalent. One student shared, "I learned just as much as I would have for an in-person class" and another shared, "I enjoyed hybrid consumer affairs courses and found that it was just about as easy to learn as a normal in-person class." Another student commented, "[My] learning experience in hybrid courses was similar to in-person courses." This was echoed by another student who said the hybrid experience was "basically the same as in-person."

Flexibility

Six students noted flexibility as a positive of their hybrid learning experience. One student appreciated the "flexibility to manage multiple responsibilities" and another noted, "it was nice to have time to do other things when we had class online." Another student commented, "hybrid courses allowed for greater flexibility in student schedules".

Student-Instructor Communication

Five students discussed student-instructor communication in their responses, with two noting that student-instructor communication "was worse" in hybrid consumer affairs courses relative to 100 % in-person courses. One student shared, "hybrid courses had more miscommunication about in-person meetings." Another student noted they felt that hybrid courses enabled "high communication that sometimes lacks when in-person." Overall, the students who commented appeared to prefer hybrid consumer affairs courses over 100 % in-person consumer affairs courses.

Year in School

A one-way ANOVA comparing the dependent variable "hybrid vs. in-person learning experience" with "year in school" was computed to see if students' year in school impacted their preference for one form of learning over another. A significant difference was found [$F (3, 40) = 2.882, p = .048$], demonstrating students' report of their learning experience in hybrid consumer affairs courses relative to their experiences in 100% in-person consumer affairs courses is dependent on their year in school. Juniors and seniors preferred hybrid learning relative to sophomores. H1a was supported.

Race

A one-way ANOVA comparing "hybrid vs. in-person learning experience" with "race was computed. No significant difference was found [$F (3, 40) = .873, p = .463$]. Students'

report of the quality of their learning experience in hybrid consumer affairs courses relative to their experiences in 100% in-person consumer affairs courses did not differ by race. H1b was not supported.

Sex

A one-way ANOVA comparing 'hybrid vs. in-person learning experience' with 'sex' was also computed. No significant difference was found [F (2, 41) = .678, p = .544]. Students' report of the quality of their learning experience in hybrid consumer affairs courses relative to their experiences in 100% in-person consumer affairs courses did not differ by sex. H1c was supported.

Learning Experience: Online vs. Hybrid

For H2, "Most students enrolled in hybrid consumer affairs courses during Fall 2020 will report a higher quality learning experience relative to their experiences in 100 % online consumer affairs courses," twenty-four students reported that their learning experience in hybrid consumer affairs courses was either the same as or better than their experiences in 100 % online consumer affairs courses. Fifteen students reported their learning experience in hybrid consumer affairs courses was worse than their experiences in 100 % online consumer affairs courses. H2 was supported. To gain additional insight, students were asked to explain their rating of this question in an open-ended survey item. Two themes emerged from the qualitative responses, *Interactions and Connections with Others* and *Learning*. Interactions and Connections with Others was defined as students' interactions with, and connections made with peers and instructors. Learning was defined as students' perceptions of understanding course material.

Interactions and Connections with Others

Students overwhelmingly indicated their hybrid learning experience included more and better interactions and communication with peers and instructors. One student shared:

> I think that hybrid was a little better than 100 % online courses because we still got to meet our professor in hybrid whether it was through Zoom or in class every once in a while. In 100 % online courses you don't really get the opportunity to meet with your professor whether it's on Zoom or in class.

Another student shared that "hybrid allows for connections with others" and another commented that there was "more interaction in hybrid courses than online courses."

Learning

While several students mentioned learning, the responses were mixed: some thought hybrid consumer affairs courses facilitated a better learning experience than 100 % online consumer affairs courses, and other students thought 100 % online consumer affairs courses provided a better learning experience than hybrid consumer affairs courses. Regarding the learning experience in hybrid consumer affairs courses, one student shared, "hybrid learning allows for more instructor guidance than online courses;" another shared that "online courses are less confusing than hybrid [courses]." Still others commented on the poor-quality learning experience afforded to them in 100 % online consumer affairs courses. One student indicated that it is "more difficult to understand the material in 100% online consumer affairs courses."

Year in School

For H2a, "Students enrolled in hybrid consumer affairs courses during Fall 2020 will report the quality of their learning experience relative to their experiences in 100 % online consumer affairs courses differently based on their year in school," a one-way ANOVA comparing 'hybrid vs. online learning experience' with 'year in school' was computed. A significant difference was found [F (3, 40) = 2.911, p = .046], demonstrating students' report of their learning experience in hybrid consumer affairs courses relative to their experiences in 100% online consumer affairs courses is dependent on their year in school. H2a was supported.

Race

For H2b, "Students enrolled in hybrid consumer affairs courses during Fall 2020 will report the quality of their learning experience relative to their experiences in 100 % online consumer affairs courses differently based on their race", a one-way ANOVA comparing 'hybrid vs. online learning experience' and 'race' was computed. No significant difference was found [F (3, 40) = .394, p = .758]. Students' report of the quality of their learning experiences in hybrid consumer affairs courses relative to their experiences in 100 % online consumer affairs courses did not differ by race. H2b is not supported.

Sex

For H2c, "Students enrolled in hybrid consumer affairs courses during Fall 2020 will *not* report the quality of their learning experience relative to their experience in 100% online consumer affairs courses differently based on their sex," a one-way ANOVA was comparing 'hybrid vs. online learning experience' with 'sex' was computed. No significant difference was found F (2, 41) = 1.084, p = .348]. Students' report of the quality of their learning experience in hybrid consumer affairs courses relative to their experiences in 100% online consumer affairs courses did not differ by sex. H2c is supported.

Discussion and Implications

Findings of this study address a gap in the literature by providing insights on students' perceptions of their learning experience in hybrid consumer affairs courses relative to 100 % in-person and 100 % online consumer affairs courses during the COVID-19 pandemic. Consumer affairs is an area of FCS. Moreover, this study provides insight on demographic factors that may influence students' perceptions of their learning experiences during the pandemic.

Taking both the quantitative and qualitative findings into account, hybrid is the preferred mode of delivery for students enrolled in undergraduate consumer affairs courses given the flexibility and ability to interact with instructors and peers that hybrid courses offer. The preference for hybrid consumer affairs courses relative to 100 % in-person or 100 % online consumer affairs courses differs by students' year in school. Students' race and sex do not appear to be factors that influence their preference.

Given the findings of this study, post-secondary consumer affairs programs should consider offering consumer affairs courses in a hybrid format. However, it may not be appropriate for all consumer affairs course offerings to be in a hybrid format, given students' preference for hybrid learning is influenced by their year in school.

The COVID-19 pandemic is changing the landscape for higher education programs, and FCS programs are not immune to these changes. To recruit and retain students, post-secondary

programs must be designed in a way that meets students' needs. Changing the mode of delivery for courses has impacts beyond student recruitment and retention. Technology platforms (e.g., Brightspace, Blackboard) allow for the delivery of course content to larger audiences at a lower cost (Govindarajan & Srivastava, 2020). Offering more courses in a hybrid format may reduce students' attendance costs, which might improve their financial well-being. Moreover, this would reduce the instructional workload of faculty, and resources once devoted to in-person instruction could be redirected to career guidance and mentorship.

To expand upon the findings of this study, future studies should consider gathering data from students at multiple universities to obtain a larger, more diverse sample. Moreover, studies exploring this topic with students enrolled in programs in other FCS areas, such as nutrition and textiles and apparel, at both the secondary and post-secondary levels should be considered.

Limitations

Like all studies, this study has limitations. Data were collected from students enrolled in undergraduate consumer affairs courses at one university located in the Midwest. Regarding the sample, respondents were primarily white, female juniors, limiting the generalizability of the findings to consumer affairs programs at tribal colleges, historically black colleges and universities, and Hispanic serving institutions. However, the population of students enrolled in consumer affairs courses at the university where this study was conducted have been historically majority white, female upperclassmen. The current population of undergraduate students at the university where this study was conducted are majority white females. Moreover, student performance data (e.g., course grades) were not gathered for this study, nor was data regarding income and students' access to technology.

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Resource Management: Environmental Sustainability Across the Financial Literacy Curriculum

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Despite a call to action for policymakers to incorporate sustainability into the family and consumer sciences (FCS) education curriculum, it has been overlooked in financial education. Utilizing data from the Arizona Pathways to Life Success for University Students (APLUS) Project[1], this article explores the plausibility of including environmental sustainability principles in the financial education curriculum as an additional pedagogical method for FCS educators to use when teaching financial literacy. General linear regression results suggest that participants with more pro-environmental attitudes and behaviors display a larger number of positive financial attitudes, behaviors, and intentions providing initial support for the implementation of sustainability into FCS financial literacy curriculum.

Huston (2010) defined financial literacy as the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial wellbeing and security. Financial education is intended to increase a person's human capital, specifically financial knowledge and/or application (i.e., financial literacy) (Huston, 2010). Therefore, the goal of financial education is to increase financial literacy and ultimately improve financial wellbeing (Huston, 2010).

Personal finance continues to grow in importance as a topic in family and consumer science (FCS) education. By 2017, personal finance was a requirement for high school graduation in 21 states (Stoddard & Urban, 2020). According to a recent report by the Council for Economic Education (2020), 45 states have added personal finance in the K-12 standards, and 37 states require the standards to be adopted and implemented by school districts. Given the importance, it is imperative that financial education is not handled with a one-size-fits-all approach. It should be tailored to suit different demographics, life stages, and learning strategies (Huston, 2010). Introducing sustainability principles into financial education may provide alternative pedagogical techniques for increasing financial literacy.

Sustainability is broadly defined as the efficient use of resources to meet present needs without compromising the ability of future generations to meet their own needs (Brundtland, 1987). The Association for the Advancement of Sustainability in Higher Education (AASHE) in December 2005 (AASHE, n.d.) officially launched *Sustainability across the Curriculum*. Since then, nearly 80 % of U.S. colleges and universities have adopted sustainability programs on campus (Velazquez et al., 2006), ranging from research intensive universities such as the University of Pennsylvania (Dmochowski et al., 2016) to liberal arts institutions such as Morehouse College (Muldrow et al., 2019). The interdisciplinary and multidisciplinary nature of sustainability has allowed its concepts to be implemented across various curriculums such as architecture (Iulo et al., 2013; Olweny, 2018), the arts (Bertaux & Skeirik, 2018), chemistry (Kanapathy et al., 2019), dance (Waldman, 2013), economics (Green, 2015; Venkatesan, 2015), engineering (Gallego-Schmid et al., 2018; Shields et al., 2013; Tang, 2018; Thürer et al., 2018), hospitality and tourism (Deale & Barber, 2012), modern languages (Hubscher-Davidson & Panichelli-Batalla, 2016), and sport management (Mercado & Grady, 2017).

Stall-Meadows (2010) urged FCS policymakers to weave sustainability into the FCS education curriculum. Since this suggestion was made, sustainability has been infused into FCS areas such as foods and nutrition (Maher & Burkhart, 2017), apparel and textiles (Hiller Connell & Kozar, 2012), and interior design (Afacan, 2014; Stark & Park, 2016). Although sustainability has received attention across these numerous disciplines and areas, it has been mostly overlooked in financial literacy, financial planning, and personal finance curricula and literature (we use "financial education" to include all three terms).

The purpose of this study is to explore the relationship between environmental sustainability and personal finance. Does a relationship exist between an individual's concern over environmental resources and their proclivity to manage financial resources? We posit that those attitudes about resource management apply broadly, covering both environmental resources and financial resources. We hypothesize that individuals displaying pro-environmental attitudes and behaviors will also display positive financial attitudes, behaviors, and intentions. Results of this study may encourage financial educators and researchers to weave environmental sustainability into financial education curriculums and financial literacy research.

Literature Review

Both environmental sustainability and personal finance are driven by a shift in time perspectives because at the root of both disciplines is the concept of intertemporal choices (Chieffe & Rakes, 1999). Intertemporal choices involve tradeoffs among costs and benefits occurring at different times, this concept is the essence of delayed gratification (Frederick et al., 2002). Three behavioral paradigms existing in the vein of intertemporal choices are future orientation, intertemporal and intergenerational transfers of resources, and hyperbolic discounting. These three paradigms focus on attitudinal, cognitive, and motivational constructs predicting individual behavior related to the ability to embrace environmental sustainability and personal finance (Steinberg et al., 2009).

Future Orientation

Future orientation is a trait combining elements of planning and delaying gratification that allows individuals to see the potential long-term consequences of their current behavior and decisions (Howlett et al., 2008; Strathman et al., 1994). The extent to which individuals consider the future consequences of their current behavior is a predictor of their likelihood to make sound

intertemporal choices, exercise self-control and sacrifice short-term pleasure for long-term wellbeing (Anong & Fisher, 2013; Howlett et al., 2008; Strathman et al., 1994; Thaler & Shefrin, 1981). In personal finance, budgeting is an example of future orientation. Budgeters are considered long-term planners who understand that their financial decisions today impact their consumption tomorrow (Davis & Carr, 1992; Godwin, 1990; Muske & Winter, 2001).

Bryant and Zick (2005) described future-oriented individuals as "patient" because they prefer to sacrifice some of their consumption today in order to have more tomorrow. An individual's ability to manage their finite financial resources is determined in part by their attitude towards intertemporal choice and budget constraints (Shelton & Hill, 1995). Similarly, future orientation has been linked to individuals engaging in pro-environmental behaviors (Howlett et al., 2008; Strathman et al., 1994; Zaval et al., 2015). These individuals understand that how environmental resources are managed today influences the future availability of these resources.

Intertemporal and Intergenerational Transfers of Resources

The intertemporal and intergenerational transfers of resources are prevalent in both environmental sustainability and personal finance. Through borrowing, individuals bring future resources into the present (Huston, 2010). In contrast, saving, investing, and bequeathing allows individuals to preserve resources for future use (Huston, 2010). Similarly, sustainability is both intertemporal and intragenerational. Individuals must allocate environmental resources to meet their current needs without depleting resources and compromising their future consumption and the needs of future generations (Brundtland, 1987; Shields et al., 2014). The problem arises through the tension caused between the desire to preserve resources for the future (through intertemporal and intergenerational transfers) with the human tendency to prefer having rewards in hand (e.g., hyperbolic discounting).

Hyperbolic Discounting

Hyperbolic discounting refers to the tendency of individuals to choose smaller rewards that pay off sooner rather than larger rewards that pay off in a longer period of time. The amount a future reward is discounted depends on the length of the delay, when the delay occurs, and changing preferences (Laibson, 1997). Young adults may constrain their futures by discounting the importance and benefit of saving and investing for retirement because of the sacrifice in current lifestyle often required to save and invest (Muske & Winter, 2001). Likewise, hyperbolic discounting has a direct effect on environmentally responsible behavior because an individual's personal habits can counteract intention and behavior (Swaim et al., 2016).

Method

Data came from the Arizona Pathways to Life Success for University Students (APLUS) project. In 2013, the APLUS longitudinal panel study released Wave 3 survey data containing responses from 1,010 participants (Shim & Serido, 2007-2018). Data were collected via online survey at a large, public university in the southwestern region of the United States. In Wave 3, most of these young adults have entered their post-graduation life stage.

The dependent variables were four scales created by the data collectors: student financial attitude scale, student financial intention scale, student budgeting behavior scale, and student financial planning scale. Each of the four scales had a reliability score above the $\alpha=0.70$ acceptable threshold.

The *student financial attitude scale* (mean=3.891; median=4.00; α=0.817) was computed as the mean of six items on a five-point scale from 1 (very unfavorable) to 5 (very favorable). Participants were asked to indicate how favorably or unfavorably they feel toward each of the following activities: tracking monthly expenses, spending within the budget, paying off credit cards in full, saving monthly for the future, investing for long term financial goals, and learning about financial management. Higher scores indicated positive attitudes toward financial behaviors.

The *student financial intention scale* (mean=3.81; median=3.83; α=0.77) was computed as the mean of six items on a five-point scale from 1 (very unlikely) to 5 (very likely). Participants were asked to indicate how likely or unlikely they are to engage in the following activities within the next 12 months: tracking monthly expenses, spending within the budget, paying off credit cards in full, saving monthly for the future, investing for long term finance goals, and learning about financial management. Higher scores indicated increased intention to use positive financial behaviors. The financial attitude and intention scales signaled the importance students place on personal financial management.

The *student budgeting behavior scale* (mean=3.55; median=3.67; α =0.775) was computed as the mean of three items on a five-point scale from 1 (never) to 5 (very often). Participants were asked to indicate how often they have engaged in the following activities within the past six months: budgeting regularly, tracking monthly expenses, and spending within the budget. Higher scores indicated more positive budgeting behaviors.

The *student financial planning scale* (mean=4.28; median=4.33; α =0.897) was computed as the mean of three items on a six-point scale from 1 (strongly disagree) to 6 (strongly agree). Participants were asked to express the extent to which they agree with the following statements: I consult my budget to see how much money I have left for the next 1-2 months, I like to look to my budget for the next 1-2 months in order to get a better view of my spending in the future, and it makes me feel better to have my finances planned out in the next 1-2 months. Higher scores indicated an increased likelihood to do financial planning for a one-to-two month time horizon.

The independent variables were categorized as either: 1) environmental sustainability variables of interest, or 2) demographic and socioeconomic covariates. There were 22 environmental sustainability variables of interest; 19 questions titled *About My Environmental Self* were coded on a seven-point scale 1 (strongly disagree) to 7 (strongly agree) and three questions regarding the future effects of climate change coded on a five-point scale: 1 (none at all) and 5 (a whole lot). Demographic and socioeconomic covariates related to financial outcomes were included as control variables (i.e., age, ethnicity, college GPA, first-generation college, father's education, mother's education, and parents' annual gross income).

Given the large number of environmental variables, Principal Component Analysis (PCA) was employed to reduce the 22 environmental variables into two principal components (i.e. index variables) while preserving as much information as possible from the original data. The two principal components, Environmental 1 and Environmental 2, revealed the internal structure of the original 22 environmental variables in a way that best explained the variance and information in the data. The principal components were new variables, constructed as uncorrelated, linear combinations of the initial variables.

PCA places the maximum possible information in the first few principal components. Therefore Environmental 1 and Environmental 2 captured a majority of the original variance and information from the initial data, with Environmental 1 containing and explaining the largest proportion of the variance and information from the original variables. The environmental

Table 1

APLUS Environmental Variables Included in the Creation of the Principal Component Analysis Index Variables and Corresponding Weighted Average of Each Variable

	Environmental 1	Environmental 2
Indicate the extent to which you agree or disagree with the following statements:		
I buy environmentally friendly products as much as possible.	-0.2688	0.0025
When available, I buy organic food instead of conventionally produced food.	-0.2203	-0.0059
I attempt to reduce the waste I cause when buying and consuming products.	-0.2844	-0.0541
I use products made from recycled material whenever possible.	-0.2835	-0.0119
I recycle beverage containers and plastic items whenever possible.	-0.2142	-0.0222
I try to conserve paper or go paperless whenever possible.	-0.2504	0.0034
I try to cut down on eating meat.	-0.2033	0.0247
I turn off lights and electronics when not in use.	-0.1781	-0.0349
I avoid buying products that I don't really need.	-0.1634	-0.1472
I use reusable shopping bags.	-0.2097	-0.0308
I try to conserve electricity or use renewable energy whenever possible.	-0.2347	-0.0220
I try to use a bike or public transport rather than a car whenever possible.	-0.1848	-0.1060
I consider myself to be environmentally responsible.	-0.2848	-0.1008
I repair things that are broken rather than buy new ones whenever possible.	-0.2042	-0.2051
I avoid using disposable products.	-0.2326	-0.0900
When available, I buy locally grown produce.	-0.2506	-0.0801
I avoid impulse purchases.	-0.1315	-0.1756
I buy used furniture and household items on Craigslist or	-0.1386	-0.1751

at garage sales.

I buy second-hand clothing at vintage or thrift stores.	-0.1366	-0.1366
Please carefully read the following statements regarding the future effects of climate change and select an appropriate response for each:		
How much harm will climate change cause for Americans in 50 years?	-0.1633	0.5229
How much suffering will climate change cause for Americans in 50 years?	-0.1664	0.5147
How much damage will climate change cause for Americans in 50 years?	-0.1646	0.5244

variables included in the PCA and the corresponding weight of each independent variable used to create the Environmental 1 and Environmental 2 index variables are presented in Table 1. It should be noted that, Environmental 1 and Environmental 2 represented the negative weighted average of all the environmental variables.

We tested our hypothesis with four models, one for each dependent variable. Each model contained Environmental 1 and Environmental 2 as the independent variables of interest as well as the demographic and socioeconomic covariates. For each of the four models, we first conducted an ANOVA to determine the overall significance of the independent variables of interest, Environmental 1 and Environmental 2. Since there were both categorical and numerical predictors in the models, we then used general linear regressions (GLM) to make detailed interpretations of whether significant differences existed between the four financial outcome variables (dependent variables), the two independent variables of interest and the covariates. Statistical significance for all analyses was set at $p < 0.05$, and all analyses were conducted in SAS software version 9.4. Given that Environmental 1 and Environmental 2 were the negative weighted average of all environmental variables, any negative regression coefficients were interpreted as a positive relationship with the financial outcome variable. After removing 221 participants with missing responses, the data size used in the regression was N = 789.

Results

A descriptive summary of the demographic and socioeconomic variables is presented in Table 2. The aim of this exploratory study was to provide evidence that a significant relationship exists between environmental sustainability and personal finance; therefore, only the multivariate results of the sustainability variables are discussed. All multivariate results have been presented in Table 3 and Table 4.

An exploration of the link between environmental sustainability and personal finance revealed that statistically significant relationships exist between the independent environmental principal components and each of the four dependent financial outcomes. As participants' Environmental 1 average increases, they were significantly more likely to have higher averages in all four financial outcomes: student financial attitudes (β=-0.3478, SE=0.0907, p<0.001), student financial intention (β=-0.3778, SE=0.0887, p<0.001), student budgeting behavior (β=-

Table 2
Descriptive Summary of Students

	N = 1,010
Race	
Asian/Asian American	9%
Black/Native American	8%
Hispanic/Latino	15%
White	68%
Age	
Mean (Range)	24.41 years (22,46)
Gender	
Female	62%
Male	38%
GPA	
Mean (Range)	4.04 (1,5)
Father's education	
Less than HS diploma	5%
HS diploma	16%
Some college	19%
Bachelor's degree	32%
Graduate degree	28%
Mother's education	
Less than HS diploma	21%
HS diploma	22%
Some college	57%
Parent's income	
Less than $50,000	19%
$50,000-$99,999	31%
$100,000-$200,000	33%
Over $200,000	17%

Table 3
General Linear Model Regression Results

	Financial Attitudes				Financial Intentions			
	Coef.	SE	t-value	p-value	Coef.	SE	t-value	p-value
Environmental 1	-0.3478***	0.0907	-3.8335	0.0001	-0.3778***	0.0887	-4.2564	0.0000
Environmental 2	-0.2297	0.1595	-1.4401	0.1503	-0.1331	0.1560	-0.8530	0.3939
Race (Asian)								
Black/Native American	-1.2680	1.1393	-1.1129	0.2661	0.7962	1.1145	0.7144	0.4752
Hispanic/Latino	0.0144	0.9960	0.0144	0.9885	0.8370	0.9743	0.8592	0.3905
White	0.3819	0.8182	0.4668	0.6408	0.3068	0.8003	0.3833	0.7016
Age	0.2178	0.2168	1.0047	0.3154	-0.1294	0.2121	-0.6100	0.5420
GPA (0.00-0.99)								
1.00-1.99	0.6955	1.5669	0.4439	0.6573	0.4815	1.5328	0.3141	0.7535
2.00-2.99	1.1121	1.4338	0.7756	0.4382	0.2410	1.4026	0.1718	0.8636
3.00-4.00	1.4848	1.3572	1.0941	0.2743	0.0758	1.3276	0.0571	0.9545
Over 4.00	2.6941*	1.3341	2.0194	0.0438	0.3255	1.3050	0.2494	0.8031
First generation college	-0.0741	0.8729	-0.0849	0.9324	0.7259	0.8539	0.8501	0.3955
Father's education (<HS)								
HS diploma	4.5609**	1.5455	2.9510	0.0033	-0.0771	1.5118	-0.0510	0.9593
Some college	4.7603**	1.5679	3.0360	0.0025	0.9933	1.5338	0.6476	0.5174
Bachelor's degree	3.8110*	1.5726	2.4233	0.0156	0.9235	1.5384	0.6003	0.5485
Graduate degree	4.9683**	1.6129	3.0804	0.0021	0.8233	1.5777	0.5218	0.6019
Mother's education (<HS)								
HS diploma	-0.9448	1.7697	-0.5339	0.5936	0.2475	1.7311	0.1430	0.8863
Some college	0.2850	1.7962	0.1587	0.8740	0.2535	1.7570	0.1443	0.8853
Bachelor's degree	-0.4284	1.8095	-0.2368	0.8129	0.6084	1.7701	0.3437	0.7312
Graduate degree	0.0323	1.8675	0.0173	0.9862	0.0335	1.8268	0.0183	0.9854
Parent's income (<$50,000)								
$50,000-$99,999	-0.1744	0.7648	-0.2280	0.8197	0.6165	0.7482	0.8240	0.4102
$100,000-$200,000	1.1283	0.8103	1.3924	0.1642	1.8526*	0.7927	2.3371	0.0197
Over $200,000	0.0417	0.9576	0.0436	0.9652	1.3173	0.9367	1.4063	0.1601

Source: APLUS.
Significance: * p<0.05, ** p<0.01, *** p<0.001

Table 4
General Linear Model Regression Results

	Financial Planning				Budgeting			
	Coef.	SE	t-value	p-value	Coef.	SE	t-value	p-value
Environmental 1	-0.2749***	0.0524	-5.2477	0.0000	-0.1939***	0.0533	-3.6397	0.0003
Environmental 2	-0.0549	0.0921	-0.5958	0.5515	-0.2928**	0.0937	-3.1261	0.0018
Race (Asian)								
Black/Native American	1.3057*	0.6578	1.985	0.0475	0.2983	0.6691	0.4458	0.6559
Hispanic/Latino	0.7984	0.5750	1.3884	0.1654	0.9136	0.5849	1.5621	0.1187
White	0.3404	0.4724	0.7206	0.4714	-0.0729	0.4805	-0.1518	0.8794
Age	-0.1906	0.1252	-1.5228	0.1282	0.0274	0.1273	0.2148	0.8300
GPA (0.00-0.99)								
1.00-1.99	1.3235	0.9046	1.4630	0.1439	0.2528	0.9202	0.2747	0.7836
2.00-2.99	1.4729	0.8278	1.7794	0.0756	0.2808	0.8420	0.3335	0.7389
3.00-4.00	1.3537	0.7835	1.7277	0.0845	0.7830	0.7970	0.9825	0.3262
Over 4.00	1.1112	0.7702	1.4427	0.1495	0.2149	0.7835	0.2743	0.7839
First generation college	1.0352*	0.5040	2.0541	0.0403	-0.0156	0.5126	-0.0304	0.9757
Father's education (<HS)								
HS diploma	0.2501	0.8923	0.2803	0.7793	0.2195	0.9076	0.2419	0.8089
Some college	0.0166	0.9052	0.0183	0.9854	0.1514	0.9208	0.1644	0.8694
Bachelor's degree	0.4343	0.9079	0.4784	0.6325	0.1231	0.9235	0.1333	0.8940
Graduate degree	-0.2164	0.9312	-0.2324	0.8163	0.0154	0.9472	0.0163	0.9870
Mother's education (<HS)								
HS diploma	-1.1875	1.0217	-1.1623	0.2455	-0.7086	1.0392	-0.6819	0.4955
Some college	-0.3666	1.0370	-0.3536	0.7238	-1.0881	1.0548	-1.0315	0.3026
Bachelor's degree	-0.9663	1.0447	-0.9250	0.3553	-0.9896	1.0626	-0.9312	0.3520
Graduate degree	-0.8655	1.0782	-0.8027	0.4224	-1.1416	1.0967	-1.0410	0.2982
Parent's income (<$50,000)								
$50,000-$99,999	0.5323	0.4416	1.2055	0.2284	0.1471	0.4491	0.3275	0.7434
$100,000-$200,000	0.2247	0.4678	0.4802	0.6312	0.2072	0.4759	0.4353	0.6634
Over $200,000	0.1511	0.5529	0.2733	0.7847	0.8348	0.5623	1.4845	0.1381

Source: APLUS.
Significance: * $p<0.05$, ** $p<0.01$, *** $p<0.001$

0.1939, SE=0.0533, p<0.001), and student financial planning (β=-0.2749, SE=0.0524, p<0.001). Participants with higher Environmental 2 averages were more likely to have higher averages in student budgeting behavior (β=-0.2928, SE=0.0937, p<0.01).

Taken together, the results met the objective and supported the hypothesis. Participants with more pro-environmental attitudes and behaviors were more likely to display a larger number of positive financial attitudes, behaviors, and intentions. This suggested that participants' attitudes and behaviors around managing resources carries over from the environment to their own personal finances. The results provided evidence that a willingness to manage environmental resources translates to various aspects of participants' financial lives, particularly budgeting, saving, investing, managing debt, and learning about personal finance. In other words, environmental sustainability is related to an intention to efficiently manage current financial resources in a manner which ultimately benefits future financial wellbeing.

Discussion and Conclusion

This exploratory study took a first look at linking students' attitudes and behaviors about environmental sustainability to their attitudes and behaviors in personal finance. The findings of this study are important for several reasons. First, Cortese and Seif Hattan (2010) and Elder (2008) made a call for higher education to encourage implementing sustainability in all aspects of students' courses. Stall-Meadows (2010) specifically encouraged FCS policymakers to weave sustainability into the FCS curriculum. However, personal finance and financial planning curricula and research have been mostly overlooked. The results of this study provide evidence that incorporating sustainability topics, concepts and principles into financial education could benefit FCS educators teaching financial education and students acquiring valuable financial knowledge and skills.

Secondly, FCS educators have another tool available to teach financial literacy and financial planning. Financial education is not a one-size-fits-all approach. Educators must have the knowledge and preparation to reach students of diverse backgrounds. Implementing sustainability in financial education could be a valuable way of connecting the importance of financial literacy to students who already understand the importance of conserving, protecting, and saving the environment. Adding the principles of sustainability to financial education pedagogy expands the arsenal FCS educators have at their disposal to help a wider group of students understand principles that govern financial management.

This study also highlights how financial educators, extension educators, higher education institutions and Certified Financial Planner (CFP) Board Registered Programs could benefit from increasing their focus on sustainability principles in personal financial education materials. Financial educators and extension educators can highlight the resource management connection between managing environmental resources and managing financial resources in promoting when preparing financial literacy programming. Heads of sustainability programs at colleges and universities should consider a course in financial resource management in sustainability certificate and degree programs. Directors of CFP Board Registered Programs, particularly graduate programs, may find a source of potential students in majors with a pro-environmental focus. Many CFP programs are housed in FCS departments in the United States. Tools that help students gain confidence in their financial knowledge will not only help them become financially literate adults but may open an additional career option in financial planning which bestows professionals with the responsibility of helping others manage resources (Sibbel, 2009).

Since both environmental sustainability and financial literacy are already represented in the FCS national standards, teaching environmental sustainability in a personal finance curriculum could occur in two ways (Allen-Gil et al., 2005; Gaard et al., 2017; Mercado & Grady, 2017; Rusinko, 2010). First, create an entire resource management course devoted to combining sustainability in personal finance (Hurney et al., 2016). Second, deliver topics across the curriculum which include object lessons infusing environmental sustainability into the content of each course taught in a financial literacy or personal financial planning program. When students are taught how the principles of sustainability are related to specific personal financial attitudes and behaviors it increases the odds that they will be better prepared to put them into practice in managing all resources of their households. It is also important to note that faculty in both environmental sustainability and financial literacy programs can benefit their students by encouraging a shift towards a future orientation (Horstmanshof & Zimitat, 2007). A recent meta-analysis showed that teachers can aid in students developing an optimistic future orientation through modeling and encouraging real world applications to curriculum materials (Biglan & Barnes-Holmes, 2015).

The content standards and competencies in areas of study 2.0- Consumer and Family Resources and 3.0-Consumer Services of the National Standards for FCS Education provide the content knowledge, skills and outcomes that FCS educators could utilize to build courses and course sequences that weave together sustainability and personal finance education (Lead FCS, 2018). Sustainability concepts, topics and themes from competencies 2.2.1-2.2.3 (Analyze the relationship between the global environment and family and consumer resources) and 3.4.1-3.4.5 (Analyze resource consumption for conservation and waste management practices) can be utilized to teach personal finance concepts, topics and themes from competencies 2.6.1-2.7.6 (personal finance and demonstrate the ability to use knowledge and skills to manage one's financial resources effectively for a lifetime of financial security) and 3.3.1-3.3.8 (Analyze factors in guiding development of long-term financial management plans). Since both sustainability and personal finance involve the intertemporal management of resources, as the results suggest, increasing sustainability knowledge should affect personal finance attitudes, behaviors and intentions.

The national standards provide available content and outcomes to implement sustainability across financial education. FCS educators could also partner with sustainability experts and interested faculty at universities to bring together multiple areas of study and promote collaboration (Natkin & Kolbe, 2016). Sustainability across the financial literacy curriculum can continue to help evolve the inclusivity of financial education and fill a gap in Stall-Meadow's (2010) call to weave sustainability into FCS.

Overall, this exploratory study has promising results. Future research necessitates a pilot study combining the topics discussed in this article and testing the curriculum in a live teaching setting. Using other disciplines to teach personal finance has proven effective in the literature. In particular, mathematics education and financial education are commonly paired to link numeracy and financial literacy (Dituri et al., 2019; Ozkale & Erdogan, 2020). In the same manner, the results of this study suggest combining the resource management messages of intertemporal choice and future orientation prevalent in both sustainability and personal finance could produce similar success.

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Citation

Utilizing Family and Consumer Sciences' Expertise to Enhance Healthy Food Choices in a Rural Latino Community

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This article describes the implementation of a nutrition program by family and consumer sciences (FCS) educators in a rural Latino community in Spring 2020. The "Healthy for Life" curriculum from the American Heart Association and Aramark provided the curriculum for this effort. This program was offered with funding from the American Association of Family and Consumer Sciences. FCS educators worked in collaboration with the local chapter of the Association of Mexicans in North Carolina. A Latina graduate student provided translation as needed. A detailed program description, data on the participants, reflections from facilitators, and best practice recommendations for community programs for FCS educators are provided.

Family and consumer sciences (FCS) is a profession concerned for the well-being of individuals, families, and communities (American Home Economics Association, 1994; Nickols et al., 2009). Developing formal connections between FCS educators and communities requires collaboration among constituents. This is a report on a recent collaboration that connected a large university in the southeastern United States with a rural under-served community. Resources from the American Association of Family and Consumer Sciences (AAFCS), combined with the expertise of secondary and post-secondary FCS educators, delivered a community nutrition program using the Healthy for Life curriculum from the American Heart Association (AHA) and Aramark to empower Latino families.

Literature Review

Obesity is one of the most challenging health issues in the United States. Research from 2018 indicates Hispanic adults were more obese (44.8 %) than White (42.2 %) and Asian (17.4 %) peers (National Health and Nutrition Examination Survey, 2017-2018). Latino households are more likely to experience food insecurity (22.4 %), compared to 14 % for all households in the U.S. (Rabbitt et al., 2016).

Research suggests that food availability at home, parental diet, and familial eating habits play an important role in the diet quality of Hispanic children (Santiago-Torres et al., 2014).

Also, food resources and information, language acculturation, and environmental promotive factors are associated with protective dietary patterns (Torres-Aguilar et al., 2016).

To provide effective interventions, it is important to understand Latino beliefs and attitudes regarding healthy eating and their perceived barriers of adopting healthy eating patterns (Beck et al., 2019). Martínez (2016) found that healthy foods were those considered natural, minimally processed, and homemade in Latino families. Eating well was accomplished when everything on one's plate was eaten, everyone felt full, and meals were shared among family or an intimate group.

Because most Latino families value home cooking, healthy eating interventions should support meals made at home while including cost-conscious suggestions for increasing healthy eating in the context of traditional meals (Beck et al., 2019). Women are most often in charge of cooking responsibilities as well as assessing what is good for the family (Martínez, 2016). Taverno Ross et al. (2018) found some of the external factors that negatively affect a Latino family's healthy living included lack of time, cost of healthy foods, weather, and school. Similarly, the school environment and food available to them have an impact (Beck et al., 2019). Taverno Ross et al. (2018) found a barrier to a healthy lifestyle was the concept of *acustumbrados* which means being used to a certain lifestyle; Latino people are used to following specific routines, eating large portions of foods, and foods prepared with large amounts of fat and oil.

Beck et al. (2019) found Latinos in their study held misconceptions about nutrition including equating "organic" and "expensive" as healthy and had difficulty in recognizing sugar in beverages and foods. Arcan et al. (2018) found Latino parents expressed limited knowledge about local and American foods. Education that supports and refines Latinos' existing knowledge of healthy eating and addressing the misconceptions they have is an important component for healthy eating interventions (Beck et al., 2019). Taverno Ross et al. (2018) note that increasing self-efficacy (healthy recipe preparation, and physical activity breaks) and skills (self-monitoring) to promote a healthy life may be beneficial for Latinos. Wilson et al. (2018) suggest effective nutrition label use could help Latinos identify the healthfulness of foods more effectively so they can make better dietary choices. Also, language acculturation was found to be positively associated with protective dietary patterns because knowing English can be used as a tool to evaluate and make better food choices (Torres-Aguilar et al., 2016).

When it comes to improving the well-being of families and communities, FCS extension agents often provide education on important issues that impact families. In North Carolina, FCS agents' offices are situated in each county to deliver a research-based knowledge and education in FCS core areas such as nutrition, health, food safety, and local food systems at the state and local county levels. FCS agents also speak to significant community issues associated with housing, parenting, family resource management, human development, and aging to help families improve their well-being (About Family and Consumer Sciences, n.d.). Recent research found that nutrition education offered by FCS extension agents among Spanish-speaking adults had a tremendous impact not only on the individuals and their families involved in the study (Stotz et al., 2021). Nutrition education should include the whole family and activities in nutrition classes should be home-based (Stotz et al., 2021) to encourage healthy choices with realistic situations that provide quality time for all family members. When families are educated on healthy choices together, it alleviates the challenge of differing family preferences in food and activity. Nutrition education can also include culturally relevant topics, such as food preferences, cultural food-related practices, and country-specific vocabulary and jargon (Stotz et al., 2021).

In a thesis arguing the benefits of FCS education in schools, Shaw (2019) reflected that, FCS education can also teach teamwork, respect, and time management in addition to learning about nutrition. Italoye (2020) indicated food preparation as one of the key skills important to FCS education programs for individuals, families, and communities. Skills that successful FCS educators can employ to connect with students include relationship building, cultural knowledge, communication skills, and reflecting on their own personal biases and ethical decision making (Rehm & Allison, 2006).

Program Description

AAFCS sent out a call for grant proposals in the Fall of 2019 for implementation of the *Healthy for Life* community nutrition program. A $2500 grant was received to support program development and delivery. Funding requirements included webinar training, offering at least four educational experiences over 2-3 months using the American Heart Association (AHA) and Aramark curriculum, and collecting data on food, nutrition, and health habits of participants before and after the program. The project was approved by the Institutional Review Board (IRB) at the authors' university.

The community partner selected for the program was the local chapter of the Association of Mexicans in a southern state (AMEXCAN). Program facilitators included FCS faculty with experience in delivering workshops in educational and community settings, and a local FCS secondary teacher familiar with teaching foods and nutrition with this population in the area schools. A Latina graduate assistant who is a heritage Spanish speaker served as our main interpreter along with her friend who was a native Spanish speaker. In addition, two native Spanish speakers and two heritage Spanish speakers who were volunteers and staff with the AMEXCAN program helped during the implementation by explaining and collecting consent forms, handing out materials, and assisting during Q and A portions of the sessions.

Four sessions were planned; however, the COVID-19 pandemic interrupted the program so only three sessions were delivered. At the beginning of each session, participants signed a permission form to use their photos and during the first session they completed a short survey provided by AHA and Aramark. This was a pre-assessment on food, nutrition and health habits and was a requirement of the grant funding and the AHA for using their curriculum. It was grounded in theory and according to AHA the instrument was valid and reliable. All handouts, permission forms, and surveys were provided in Spanish by AHA and Aramark and were also available in English. PowerPoint presentations were developed in Spanish by the graduate assistant that followed the AHA facilitator script and materials for each session, so we could have a visual in Spanish up on the board during the demonstrations that accompanied the handouts that AHA and Aramark provided in Spanish.

Each session was held at the AMEXCAN community center in a classroom style setting. The director of AMEXCAN recruited participants for the sessions by providing other programming prior to the session to ensure participation. Because of this, there were new participants at each session, which was unknown to us until we arrived at the second session. Therefore, data were not collected after the first session. The university IRB prohibited us from collecting addresses or contact information from participants, so we were not able to follow up and do any post virtual programming when COVID interrupted our program; nor were we able to do any post assessment. Following is a detailed description of each session. Healthy snacks and or meals were provided at the end of each session as reinforcement of the nutritional curriculum and to encourage participants to return for future sessions.

Session One: February 8, 2020

　　The participants for the first workshop, *Eat a Rainbow: Colorful, Seasonal Fruits and Veggies*, consisted of 30 Latino participants. The FCS educator facilitated the session. The focus was the need to eat a variety of fruits and vegetables and their nutritional value. Participants watched a video on preparing a simple Persian Salad, which was then demonstrated by the FCS educator. The FCS educator also discussed a comparison of food labels on canned, dried, or frozen fruits and vegetables, and emphasized selecting those with less or no added sodium or sugars with fresh produce as the optimal choice. Shopping tips for selecting fresh produce were discussed with a focus as purchasing seasonal produce (e.g., radish and peas in spring, berries or melon in summer). Participants were encouraged to add daily to their plate from five color groups: (1) red and pink, (2) blue and purple, (3) yellow and orange, (4) white and brown, and (5) green fresh produce. At the end of the session, fresh food bags with fruits and vegetables that included an example of each of the five color groups were given away to five randomly selected participants.

Summary of Session One Participants' Survey Responses

　　The 30 participants who completed the AHA survey on food choices and eating habits, ranged in age from 18 to 54. The majority were women (67 %); over 50 % of participants had less than a high school education, and 7 % had some college education or vocational training. Eighty percent of the sample had one to three children under the age of 18 living at home. Nearly half (48 %) of participants indicated they are the only person in the household who prepares meals, while 35 % indicated they share meal preparation equally. Over half of participants were mostly to totally confident in preparing healthy meals, while 35 % had little to no confidence. When asked about confidence in their ability to eat recommended serving sizes, 50 % of participants reported they were mostly or totally confident compared to 39 % with little or no confidence. In addition, 52 % indicated they were confident in their ability to substitute healthier cooking and preparation methods for traditionally fried foods.

　　Survey findings indicated most participants were not eating recommended daily servings of vegetables with over 60 % eating or drinking only one or no servings of vegetables. Only 36 % of participants indicated they ate or drank two to three servings of fruits per day. For whole grains, 76 % of participants reported eating no more than one serving of whole grains each day. When participants were asked whether they plan meals before shopping, over 34 % indicated they never or rarely plan their meals with 42 % always or often planning meals. A total of 44 % of participants rarely or never read food labels or checked the nutritional value when purchasing food. A total of 15 % always read the label and checked the nutritional value.

Session Two: February 29, 2020

　　A total of 55 Latino participants attended the second workshop session: *Snack Smarter*. The FCS educator facilitated the session where participants learned about the role of food in overall health and well-being, tips for eating more tasty and nutritious foods, and healthful food sizes for major food groups. Participants watched videos on making avocado toast, examples of serving sizes, and various tips to help families eat better. Afterwards the FCS educator demonstrated the avocado toast recipe and answered participants' many questions related to the serving sizes of a variety of foods by going to MyPlate websites during the presentation. Again,

bags of food were given away randomly to five participants: These bags of food contained healthy snack foods such as whole grain crackers, peanut butter, and light cheese sticks.

Session Three: March 7, 2020

For the third workshop: *Feed Your Potential*, there were 23 Latino participants. The secondary FCS educator was unavailable for this session, so the post-secondary FCS education faculty facilitated this session. Participants expanded their knowledge about different food groups, serving sizes, and how different foods directly impact energy and focus. A nutritious snack, apple nachos, that can be easily prepared at home was demonstrated. This snack featured items from three major healthy food groups: (1) vegetables, (2) fruits, and (3) protein foods (incorporating nuts, seeds, and legumes). Participants were actively engaged in the discussion and shared their personal struggles with eating healthy meals in the recommended serving sizes. Food bags containing staple items such as whole grain pasta, rice, and dried beans were given to five randomly selected participants.

Program Reflections

The outcomes of this program as a promising practices approach to deliver needed FCS content in the community are shared through the reflections of all the stakeholders involved. The purpose of sharing the reflections is to help those who may choose to replicate this program or develop similar programs.

FCS Educator Reflection

The FCS educator stated:

> While I have worked with Latino students before in my classroom, this was my first opportunity working with adults in the Latino community and using a translator. The participants were extremely welcoming and listened and asked questions throughout the presentations. Much of the information from the script was read in Spanish by the translator, but the participants were able to engage with me during the question-and-answer sessions as I was being interpreted. Participants had many questions regarding healthier options for snacks, and how to understand nutrition labels. They were very engaged in learning about small changes that would impact nutritional outcomes for snacks and meals. Meal preparation for the week and ways to store meals for the workday instead of eating fast food were discussed. They asked some questions about the food items I was demonstrating and gave feedback on the taste and ease of preparation for each item. As indicated by the data, many of those who attended the session primarily handled food preparation at their home. I think that showing them simple ways to prepare healthier options and answering their questions on nutrition labels and food choices helped the participants.

Faculty Reflections

Faculty reported participants were unaware of key nutritional information like healthier portion/serving sizes, importance of selecting foods from all food groups, and how to read nutritional labels. Participants enjoyed seeing the recipes prepared by the facilitators, trying the foods, and having healthy snacks and meals together. One faculty member reflected,

One unique aspect of the program is the fact that it was easily delivered to the Latino community because it was all translated into Spanish: consent forms, surveys, and all session materials including the videos. We attempted to be relevant by selecting items for the food bags that are common in the Latino community and by asking questions about their food choices, recipes, and family meals.

Graduate Assistant Interpreter Reflection

The Spanish interpreter reflected:

As a member of the Latino community, I enjoy working with them. I was happy that I was able to be a part of the *Healthy for Life* project and that I was able to contribute to this opportunity of bringing information on healthy eating behaviors to an underserved community. The participants were very welcoming of us and were thankful that we took the time to share information, and resources, and gave them something to leave with. I remember having a few participants talk to me at the end of the sessions and tell me how much it meant to them that we took the time to have this presentation and just overall showing me their gratitude. My takeaway of this project is that it is important work that should continue as many individuals from this community do not have access to many resources and information. Many participants expressed this was the first time that they heard of many of the nutritional facts and serving/portion sizes. The participants loved having a teacher who specializes in nutrition. Participants asked various questions they otherwise might not have been able to get the answers to.

Participant Reflections

Although we did not collect participant comments in a formal way, some of the comments that we heard a few times at each session included that participants were glad there are programs like *Healthy for Life* in Spanish because the Latino community often is not aware of many resources. They said they were thankful to be provided information to help improve their health and well-being. In addition, at one session, one participant mentioned she was glad to know some of the foods she already eats are considered healthy, but the workshop helped her learn how to make it healthier and taught her the importance of an appropriate serving size.

Discussion and Implications for Best Practice

Program Implementation Challenges and Barriers

Enrollment was not consistent across the three workshops conducted which affected the research process. All community members were invited by the community partner. We assumed that those who attended the first session were those who would be returning for the other sessions. We expressed this clearly during planning. The intent of the grant and the use of the pre- and post-assessment by the American Heart Association (AHA) was intended to show participants' change in food, nutrition, and health habits after attending four different sessions over a two-to-three-month period. Once we arrived for the second session, we realized the participants were all new. We were not prepared to have them take the pre-assessment, so we only collected permission forms for the photos for sessions two and three. The community partner indicated that because they were offering other programming in the morning before our session that they knew we could have available participants. They did not want to limit who

could attend. Participants were actively engaged during the educational sessions. They shared personal experiences and struggles with eating and preparing healthy meals. They asked many questions about portion sizes. The FCS educator introduced *MyPlate*/*Let's Move* websites and accessed the Spanish versions of each site. She reviewed how to measure portion sizes using examples of foods they may already have at home. Due to the COVID-19 shutdown, the final session was not possible.

A clearer understanding between the researchers and the community partner about the importance of consistency for follow up data would have improved the program and should be a requirement for future programs. The large size of the groups did not allow for participants to prepare the recipes with facilitators, which was suggested by the authors of the AHA and Aramark curriculum. We were limited to our location which was a classroom with a small kitchen in another room. Future programming should be done in a setting that has multiple kitchens and workspace and we recommend a FCS culinary or food laboratory at local secondary school. Using such a lab would require more coordination, planning, and costs for the facility use, possible transportation for the participants, and childcare. Delivery of the materials using the demonstration style approach worked but when the group was very large, Q and A was more limited. Recruiting specific participants who agree to attend multiple sessions is more complicated because of the reliance on the community partner and the language barrier. It is also important to note that some of the participants were migrant workers, which may limit their ability to continue in the program over several sessions.

Having a facilitator who speaks Spanish fluently and is also skilled in food preparation would have improved the flow of the sessions. FCS extension professionals could also assist in collaborating with the FCS educators from the schools to deliver similar nutrition education programming. The AAFCS partnership allowed the university access to the Latino rural community to provide a needed service. Providing these workshops also gave a platform to educate about the importance of FCS programs in this community.

Value of FCS Educator Expertise

Using the expertise of a local FCS teacher who teaches food and nutrition courses in a local high school was a significant part of the success of the program sessions delivery. The facilitator for two of the sessions was a skilled FCS teacher who demonstrated the recipes for the group. The experience and confidence of an active FCS educator provided an extremely valuable resource, especially when modifying demonstration style delivery, due to larger numbers of participants than anticipated. Because of her skills as a teacher with different sized classes and diverse populations, she was able to demonstrate effectively while the interpreter was able to maintain the communication stream with participants.

Conclusion

This collaborative community nutrition project with FCS educators at the secondary and post-secondary level proved beneficial to the Latino participants. Demonstrating healthy recipes that can be easily prepared at home is supported by research suggesting Latinos prefer cooking meals at home (Beck et al., 2019). An emphasis on using recommended serving sizes, choosing healthy foods, and having recipes and materials available in Spanish, assisted our participants and their families to make steps to overcome the barriers to cooking and eating healthy meals at home (Taverno Ross et al., 2018). FCS educators are uniquely positioned to utilize their content

knowledge and teaching skills to implement culturally appropriate nutritional programming in communities where knowledge, resources, and education for adults is lacking.

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Citation

Effects of Social Media and Technology on Adolescents: What the Evidence is Showing and What We Can Do About It

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This manuscript discusses the effects of social media and technology usage on adolescents and their emotional and social development and provides recommendations for family and consumer sciences (FCS) professionals. Today's adolescents have been exposed to technology since childhood, and this exposure has led to several effects—both positive and negative. The paper will explain aspects of adolescent development, the implications that technology usage has on this development, and strategies for parents and professionals in promoting positive and safe social media and technology use among their adolescents or those with whom they work. Lastly, the paper will highlight the importance of the FCS profession and how we can address this issue.

Technology Usage Among Adolescents

Today's adolescents have been exposed to technology their entire lives through various means. This process starts with young children as they observe their parents' use of technology. As the children grow, they become active participants, whether through technology usage in school or for personal use. Many youths are active on cell phones and computers, utilizing different apps and features. Also, many are involved in online gaming platforms through various gaming devices.

Statistics prove the trend of the growing use of technology. According to a Pew Research study, 95 % of teens in the United States today have access to a smartphone, and 45 % say they are online almost constantly (Anderson & Jiang, 2018). When gender is considered, 50 % of adolescent girls are near-constant online users, while 39 % of adolescent boys are near-constant online users (Anderson & Jiang, 2018). Looking at specific amounts of screen time, research shows that online usage among youth equates to an average of more than six hours daily being used for entertainment purposes such as social media (Austin, 2019).

One of the primary issues of technology usage among today's youth is that of social media platforms. According to Guinta and John (2018), social media is "an electronic form of communication that provides a space for social engagement and interaction where users can both consume and create content" (p. 196). Eighty-one percent of teens use social media for various purposes, including communication, self-expression, sharing of experiences and ideas, planning, keeping up with current events, and gaming (Herold, 2018).

Some of the most popular apps among teens in recent years include Snapchat, YouTube, Instagram, TikTok, WhatsApp, Kik, Discord, Houseparty, Ask.fm, VSCO, REFACE, Omegle, Facebook, Pinterest, Twitter, and (Austin, 2019; Hurtado, 2020). Although many of the apps mentioned seem harmless, they may have inherent risks. Messages and pictures on Facebook, Snapchat, and Instagram are not always easily deleted after being received or sent. It is also becoming ubiquitous for kids to create fake accounts on Instagram or other platforms called "finstas." According to Varma-White from a story for the *Today Show* (2019), teens' main reasoning for creating these accounts is for avoiding a parent's prying eyes. However, they could also be making them to show a different side of themselves—one that might display illegal

activities or activities that would not be acceptable to future colleges and employers, in addition to parents. Even apps that have been around for a while, such as Pinterest, can have questionable material as well—not only in a sexual manner, but also material concerning self-harm, suicide, and other violence (Spears, 2018).

Regulation of these applications continues to be an issue. In 1998, the *Children's Online Privacy Protection Act* (COPPA) was enacted by Congress. COPPA required the Federal Trade Commission (FTC) to issue and enforce regulations concerning children's privacy online. According to the FTC (2020), COPPA "imposes certain requirements on operators of websites or online services directed to children under 13 years of age, and on operators of other websites or online services that have actual knowledge that they are collecting personal information online from a child under 13 years of age." Therefore, the legal age, presently, to search the web without parental consent is thirteen. This factor is why many sites, especially social media sites, require a member to be at least this age (Herold, 2018). Even so, many sites do not require parental consent, and age regulation is not always strictly enforced (USA Today Magazine, 2018).

Since the original enactment of COPPA, several bills have been proposed to amend it. Most recently, in 2020, a bill known as the *Preventing Real Online Threats Endangering Children Today* (PROTECT Kids) *Act* was introduced, which would extend all existing COPPA consent and requirements to users under the age of 16. Also, this Act would include mobile apps and add information collected from geolocation features and biometric data (Walberg, 2020). With more emphasis on protecting children and their information online, companies can expect to see more regulation and movement regarding these matters. Parents and professionals must also be informed and stay updated about these acts and whether they are being adequately enforced if they expect their children and students to be protected.

The Problem

To understand the issue of technology usage among adolescents, one must understand the development that happens during this period of life. Early scholars defined the adolescent period as ages 14-24. However, because of early initiation of puberty and the age at which high school ends, this stage is now being defined as ages 10-18 (Arnett, 2018). This period of life has many purposes. Known as the stage of curiosity, adventure, impulsiveness, intense emotions, and elation of moods, adolescence is a period of rapid physical, social and emotional changes that includes the phase of transition between childhood and early adulthood (Jena & Mohanty, 2015).

One of the aspects of emotional development during this period is that of adolescent egocentrism. Adolescent egocentrism is when adolescents have difficulty distinguishing their thinking about *their* thoughts from their thinking about the thoughts of *others* (Arnett, 2018). Essentially, adolescents tend to think that others see them the same way they see themselves. They tend to base decisions and behavior on having an *imaginary audience*, which involves continually thinking about themselves and how they might appear to others (Arnett, 2018). Social media could contribute to increased feelings of being the center of an imaginary audience, leading to more self-consciousness and, ultimately, anxiety.

Social implications are also evident with the increased use of social media. Adolescent preference for face-to-face communication has declined substantially. Only 32 % of teens say their favorite way to communicate with friends is in-person. Even when teens *are* together, there is a high likelihood of distraction from cell phones (Yorio, 2018). Studies have shown that even if a device is on "silent mode," many people repeatedly check for texts or voice messages. Even

a mobile device's presence may cause distraction and thoughts outside a teen's immediate context (Przbylski & Weinstein, 2013).

Adolescent brain development is also a significant factor in understanding why technology can have such a tremendous impact during this time of life. Adolescents have more synapses than adults, which can lead to a higher capacity to learn but also a higher vulnerability to addiction. The part of the brain that controls addictive behavior is more active during adolescence, resulting in addiction being harder, stronger, longer, and faster (Jensen, 2017). Additionally, today's tech industry has designed its products to draw in users and influence them to spend long periods using social media and video game sites (Children's Screen Time Action Network, 2019). When the perfect conditions for strong addiction in adolescents are paired with persuasive technology designed to influence human thoughts and behavior, it is not surprising why we are seeing so much of this behavior in today's teens.

Not only is the adolescent brain more prone to addiction, but it is also more prone to behaviors such as risk-taking while lacking rational thinking and good decision-making skills (Jensen, 2017). This factor is significant because the part of the brain that controls these behaviors—the frontal lobe is not fully developed during this time (Jensen, 2017). However, the sections of the brain that control emotions are already developed (Jensen, 2017). Therefore, adolescents tend to be more emotional and often respond to things that others see as inconsequential (Jensen, 2017). Combining these factors with the Internet's influence often leads to amplified stress and anxiety during the adolescent period (Jensen, 2017).

The increase of technology usage among the adolescent population in conjunction with the developmental factors during this period makes this a relevant area of concern for parents and professionals. Higher incidences of mental illnesses, including depression, anxiety, and social isolation, are growing among this age group, and there are possible correlations between this factor and higher use of social media. Parents and those who work with youth need continuing education and support to help decrease the adverse effects of social media as they help guide adolescents through the utilization of these platforms.

What Research is Showing: Risks Versus Benefits
Risks
Research is showing many risks observed in adolescents in association with the use of social media. These include the following: cyberbullying, an increase in conflict, school outcome, mental health consequences, sexting, breach of privacy, exposure to online predators, and lack of sleep (Guinta & John, 2018; Muzaffar et al., 2018; Chandra, 2016).

Cyberbullying
Perhaps one of the most talked-about concerns presently is that of cyberbullying among teens. According to Guinta and John (2018), cyberbullying is the use of "electronic forms of contact to inflict willful and repeated harm to others" (p. 197). In a study from 2015, the average prevalence of cyberbullying in adolescents was 23 % (Guinta & John, 2018). In most cases, the youth know the perpetrator. However, anonymity can be one of the biggest challenges of this issue. Approximately 10 to 27 % of cases have an anonymous bully (Guinta & John, 2018). Many social media platforms are used for cyberbullying, including blogs, Twitter, social networking sites, and message boards. Cyberbullying is significantly associated with an increased likelihood of depression (Guinta & John, 2018).

Conflict

According to the Pew Research Center (2018), 31% of teens who use social media endorse fighting with friends over something that happened online. Sixty-eight percent say they have witnessed others create "drama" for many of the behaviors adults consider bullying (Anderson & Jiang, 2018). Females tend to be the main perpetrators of increased conflict online. Consequently, this "drama" has resulted in 58 % of teens unfriending someone on a social network site who they previously considered a friend (Chandra, 2016).

School Outcomes

Not only can social media affect a teen's personal life, but it can also affect a teen's education. Overall, there is a negative relationship between school outcomes and electronic media use, outcomes largely associated with students trying to multitask by using social media sites while in class or when doing homework (Guinta & John, 2018). The distraction of technology has been a significant issue in schools. Research has shown that students perform better without technology-based distractions. Kuznekoff and Titsworth (2013) found that students took better notes and scored better on an assessment when they did not have access to their cell phones. Beland and Murphy (2015) also reported that test scores improved when mobile phones were banned from schools.

Mental Health

Mental health has become a big concern as poor mental health continues to increase among younger populations. According to a 2016 study, adolescents who were high social media users were twice as likely to have received a diagnosis of depression and anxiety or needed treatment for mental health issues (Guinta & John, 2018). Consequently, we now have terms such as "Facebook depression" and "Facebook envy" in association with the effects of social media use. Facebook depression is "depression that begins with an extreme amount of social media usage and subsequent development of the classic symptoms of depression," while Facebook envy develops as "users compare themselves with others" and can lead to damaging life satisfaction (Guinta & John, 2018, p. 197). Guinta and John (2018) found both Facebook depression and Facebook envy common among heavy users, and both were predictors for depression. However, it is crucial to know that it is mainly the *negative* social media experiences leading to these conditions. A 2019 study found that every 10 % increase in negative interactions on social media made study participants more likely to feel lonely. This finding is ironic given the fact that social media is supposed to make people feel connected (Primack et al., 2019).

Sexting

As mentioned previously, the teenage brain does yet contain the connections that aid in rational thinking skills. This factor is evident in the online behavior of sexting, which is "electronic communication of nude, seminude, provocative images, as well as erotic text messages" (Guinta & John, 2018, p. 197). Many teens do not think about the consequences of this activity, such as how quickly the images can be distributed without permission and how difficult or impossible it is to remove content once shared or posted. Victims can face embarrassment and humiliation as well as emotional distress. Those who share these images can face serious consequences such as school suspension and legal action like felony child pornography (Guinta & John, 2018).

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Breach of Privacy

Many younger users of social media are naïve when it comes to factors such as privacy. When using platforms that encourage sharing so many different things, we see adolescents share information such as cell phone numbers, school names, relationship status, and pictures. Even enabling privacy settings on social media is not a guarantee for protection. Platforms continue to make efforts to protect user privacy. However, violations and unwelcomed content sharing are constant risks that users need to consider (Guinta & John, 2018).

Online Predators

Concern about adolescent user privacy on social media also leads to a more severe matter of exposure to online predators. According to the *Online Teen Safety Guide* (StaySafe.org, 2019), a predator is a "person who works to gain a youth's confidence either in order to build an inappropriate relationship or to lure them into inappropriate behavior." Approximately 750,000 predators are online looking to start inappropriate relationships with teens at any given time (StaySafe.org, 2019). These predators will gradually gather information about the teen to harass them or violate their privacy. Many of these actions have been linked to abductions, luring the teen into sexual situations, and subjecting the teen to sexual assault (StaySafe.org, 2019).

Lack of Sleep

Adolescents are still in a rapid state of development, which requires more rest. However, 44 % of cellphone-owning teens say that they regularly keep their phones on and active at night —leading to sleep that can be interrupted by calls, texts, and notifications (Herold, 2018; Twenge, Krizan & Hisler, 2017). The blue light emitted by smartphones and tablets also affects sleep. This light simulates daylight and can inhibit the body's release of melatonin. Not only that, but technology also stimulates the brain, making it more difficult to fall asleep (Twenge, 2017). Consequently, most adolescents get less than seven hours of sleep at night (Twenge & Campbell, 2018).

Benefits

Although many studies highlight the negative aspects of social media, there are also some benefits to be mentioned. Some of these include the following: promoting diversity and inclusion, health, and self-esteem and well-being (Guinta & John, 2018).

Diversity and Inclusion

Using social media for collaboration and tolerance allows users exposure to new ideas and experiences outside of the classroom or their social norm. Social media can also be used to stay informed of current events and as a tool for promoting civic engagement. Overall, exposure to different groups allows adolescents a chance to learn, understand, and empathize with others who may be different from themselves (Guinta & John, 2018; Muzaffar et al., 2018).

Not only can social media provide exposure to others, but it can also foster an environment of inclusion while avoiding stigmatization for populations such as LGBTQI (Lesbian, Gay, Bisexual, Transgender, Questioning, or Intersex) and those with ongoing illnesses, conditions, and disabilities. Those with serious mental illnesses can also find comfort and coping skills from group networks, and social media platforms can be a way to reach many difficult-to-engage people (Guinta & John, 2018).

Health

Health communication and promotion can also be possible using social media. Groups can be a source of sensitive health information. With careful selection, users can find groups employed to improve health and advocate for healthier behaviors. Joining these groups can give social support and help with accountability, leading to higher success rates (Guinta & John, 2018).

When choosing appropriate sites for health information, it is essential to check for validity. According to the U.S. Department of Health and Human Services (2018), five quick questions are imperative to ask when visiting an online health site or downloading a new app:

- Who runs or created the site or app? Can you trust them?
- What is the site or app promising or offering? Do its claims seem too good to be true?
- When was its information written or reviewed? Is it up to date?
- Where does the information come from? Is it based on scientific research?
- Why does the site or app exist? Is it trying to sell something?

Sources of reliable health information can typically be found from websites sponsored by Federal Government agencies, large professional organizations, and well-known medical schools.

Well-being

The last benefit finding with social media can have conflicting research results. This includes the area of self-esteem and well-being. While *negative* experiences and feedback can lead to some of the risks discussed, *positive* feedback can enhance adolescents' self-esteem and well-being. Another benefit is for those who lack social skills—social media can offer an alternative route for communication and a virtual supportive community for those who find face-to-face interaction difficult (Guinta & John, 2018).

Recommendations

Many of the current recommendations for improving technology addiction and social media usage among teens start with the family's influence. One of the first things that can be done is to develop a *Family Media Use Plan* with parents and teens using shared decision making. If parents and teens work together to make the plan, each will be more likely to want to stay accountable. There are many online templates available to develop these plans. Some examples of tips could include the following (Guinta & John, 2018):

- Restrict social media during dinner, social gatherings, and in the bedroom.
- Encourage healthy sleep habits by limiting media use at bedtime.
- As a family, decide how much privacy to give children around social media platforms. Parents might want to become a member of the sites that their children are using.
- Discuss cases of adolescents getting in trouble due to social media use—including cyberbullying and sexting.

As adolescent social media use is becoming more prevalent, mental health, primary health professionals, youth development workers, educators, and parents should inquire about social media and technology use—especially when working with those who have generalized anxiety or depressive symptoms (Muzaffer et al., 2018).

Role of Family and Consumer Sciences in Addressing the Issue

Family and Consumer Science (FCS) professionals provide a perfect platform for educating others about the critical issue of technology use among adolescents. Many of the national standards could be used in correlation to this discussion. The FCS area of human development addresses many of the aspects of this issue. This area includes the following standards (NASAFACS, 2018):

- Analyze principles of human growth and development across the lifespan.
- Analyze conditions that influence human growth and development.
- Analyze strategies that promote human growth and development.

This critical issue will continuously evolve as technology changes. However, professionals in our field can be a great source of knowledge as well as models of appropriate technological behaviors. We can also be active participants in the research involved to find more solutions to address this issue.

FCS professionals in cooperative extension, youth development roles, and education can develop social media and technology programs to educate youth, parents, and communities. Our youth can also become involved through career and technical student organizations such as Family, Career, and Community Leaders of America (FCCLA). FCCLA members can be active participants in educating their peers and communities about healthy digital use by planning and carrying out programs and projects.

There are already some solid programs to utilize, such as *NetSmartz*. *NetSmartz* is an online safety education program associated with the National Center for Missing and Exploited Children (2021). Free resources and presentations are available to educate kindergarten through twelfth grade and parents, guardians, and community members. Our field is unique because we have professionals who work with all of these areas of the life span. No matter what age group we work with, we need to make sure that young people are being taught how to use social media in *positive* ways and adults are being better educated about how to guide their families. Social media can have benefits if used in the right way, and we can provide guidance to help our youth navigate it safely while experiencing these benefits.

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