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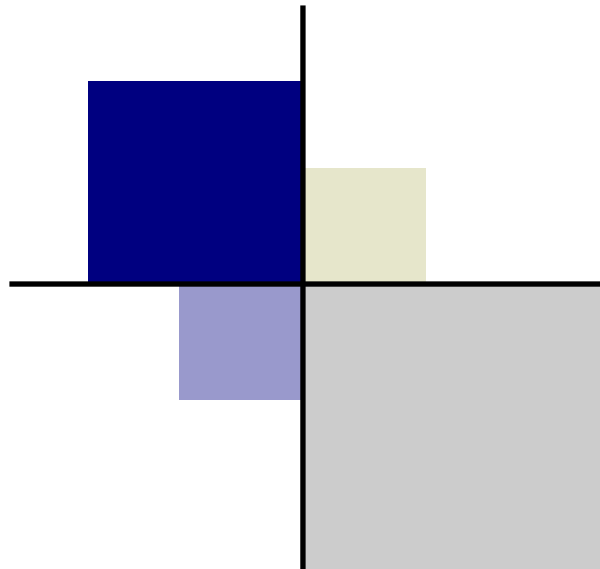
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A Case Study on the Transfer of Training as Influenced by Perceptions of Self-Leadership by Extension Professionals

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Employee potential and development are critical, and training has been identified as a way to create high-performing work cultures and high-potential employees. The purpose of this study was to understand how Extension employees perceive their self-leadership as impacting their transfer of training after they participate in professional development. The study aims to answer the following research question, “How do Extension professionals describe their experiences of transfer of training as influenced by their perceptions of their self-leadership? The methodological approach used for this research was the case study. Data collection methods included a questionnaire, interviews, and document review. A semi-structured interview protocol was used, and explanation building was used for this purpose. Through the coding of data, three themes and 12 subthemes emerged. Findings revealed that while they were specifically not aware of the strategies of self-leadership, participants did use some of the strategies naturally, found success when using the strategies as they related to transfer, and firmly believe Extension faculty need to learn more about self-leadership and the strategies to support transfer and their overall role.

Keywords: Extension, transfer-of-training, self-leadership, professional development

Introduction

Employee potential and development are critical, and training has been identified as a way to create high-performing work cultures and high-potential employees (Sung & Choi, 2014). A high-performance human resource practice has consistently been employee training (Combs et al., 2006). Bhatti and Kaur (2009) stated that training is the most common form of human resource development and increases workforce effectiveness and productivity. According to Beer et al. (2016), over \$356 billion is invested worldwide in employee training programs each year, and training has been identified as a factor in organizational success globally (Zahra et al., 2014). According to Shrivastava (1983), employee training is not only about acquiring new knowledge but also about updating, revising, and meeting the future needs of employees' knowledge, skills, abilities, and habits.

While training is important, training programs are only effective to the extent to which skills and behaviors learned and practiced are transferred to the workplace (Chiaburu & Lindsay (2008). Transfer of skills to the workplace is called transfer of training and is key to the continued efforts to develop employees (Chiaburu & Lindsay, 2008). Grossman and Salas (2011) report that organizations struggle to identify factors that are critical to transfer, and Blume et al. (2010) concluded that there “are no magic bullets for leveraging transfer” (p. 1096).

To remain successful, Extension must attract, develop, motivate, and retain successful educators who will make a difference (Garst et al., 2007; Maddy et al., 2002). The success of employees and the organization depends on how quickly learning from training transfers to the workplace and employees’ practice (Baldwin et al., 2017). The Extension Committee on Organization and Policy recommended that Extension adapt and improve the quality and skills of Extension professionals to transform Extension (ECOP, 2002, 2010). Additionally, knowledge and human capital are increasingly important elements of an organization’s competitive advantage (Gorman et al., 2004).

Theoretical Framework

Leadership theories and research have spent a great deal of time focused on how leaders influence followers (Stewart et al., 2011). However, a specific perspective, self-leadership, was introduced over 40 years ago (Manz & Sims, 1980), focusing on how people lead themselves. The exploration of self-leadership opened new ways of thinking about informal leadership (Fletcher & Käufer, 2003) and how, in organizations, individuals can be empowered to make their own decisions about tasks and implementation of the tasks (Conger & Kanungo, 1988). Self-leadership suggests that people control themselves, their actions, and their behaviors (Manz, 1986; Manz & Neck, 2004; Stewart et al., 2011). Manz (1992) stated that self-leadership is an influence-related process in which people navigate, motivate, and lead themselves toward achieving desired behaviors and outcomes.

Purpose and Research Question

The purpose of this case study is to understand how Extension employees perceive their self-leadership as impacting their transfer of training after participating in professional development. The research question for this study was “How do Extension professionals describe their experiences of transfer for training as influenced by their perceptions of their self-leadership?”

Methods

The qualitative methodological approach chosen was the case study. Yin (2014) asserted that a case study is preferred when examining contemporary events where the relevant behaviors cannot be manipulated. In this case study, professional development training for Extension professionals is considered a contemporary event, and even though the training is intended to teach behaviors, the actual behaviors of the participants after the training cannot be

manipulated. This case study assumes a constructivist view and focuses on gathering different perspectives of participants to see how and why their perspectives address the study (Yin, 2014). The epistemological perspective used for this study was an interpretive/constructivist approach (Merriam, 2009). Constructivism suggests that learning is an active process and new concepts are constructed from prior knowledge to give meaning to experiences (Kumar, 2006). Additionally, an interpretive approach is directed at understanding a phenomenon from an individual's perspective (Creswell, 2009). Interpretive methods yield insight and understanding of behavior (Scotland, 2012).

Subjectivity Statement

The lead author has worked in Nebraska Extension for over 20 years and has served as Professional Development Coordinator since 2019. She has also facilitated multiple professional development programs over the years. One of the coauthors currently has an Extension appointment and facilitates professional development for Extension Educators. Another coauthor has extensive experience in leadership development, while one coauthor has served as the Dean of Nebraska Extension. The final coauthor also has experience facilitating professional development within agricultural education.

Participants

Purposeful sampling was used to allow the researcher to select individuals to understand the central phenomenon (Creswell, 2007). Participants for this study were Nebraska Extension Educators with at least three years of experience as a Nebraska Extension Educator. The years of experience allowed for the time needed for employees to have participated and experienced professional development opportunities.

Data Collection

An open-ended questionnaire, interviews, and document review were used in data collection. Potential participants were emailed an overall synopsis of the study and asked to consider participating by completing the participant interest form using the link in the email. Two reminders were sent, and a link to the consent form was distributed upon agreement to participate. Participants were then sent an email with a link to the questionnaire and given a deadline for participation. Once the deadline passed, ten individuals were randomly chosen from the pool of returned questionnaires to participate further in the case study interviews. The interviews were recorded and transcribed via Zoom, using Delve online software. The questionnaire allowed for data collection on the Educator's perception of self-leadership, and the interview allowed for further examination in relation to transfer of training.

Data Analysis

Data from all three data collection methods were brought together into what Yin (2014) calls the case study database. Concepts were first identified through open coding by examining the data line by line (Tesch, 1990). The constant comparative method was used for coding to

categorize and compare the data (Glaser & Strauss, 1967). Once the category became clear, axial coding was used to analyze one category at a time.

Trustworthiness

According to Dooley (2007), “Trustworthiness relates to the degree of confidence that the findings of the study represent the respondents and their context” (p. 38). The data were shared with another researcher familiar with the topic to scan the raw data as a peer reviewer to assess whether the findings were reasonable and to check for researcher bias (Merriam & Tisdell, 2016). An audit trail with documentation on methodological decisions and reflections was used to ensure the dependability of the findings. In addition, data are traceable back to the original sources, ensuring confirmability and trustworthiness. Triangulation of data was also achieved using multiple data sources and more than one data collection method (Creswell & Poth, 2018; Merriam & Tisdell, 2016). Member checking or respondent validation (Creswell & Poth, 2018; Merriam & Tisdell, 2016) was also used to assist the researcher with the study’s internal validity and credibility. The transcripts were emailed to the participants for verification of their words and to increase the accuracy of their voices. In addition, notes and interpretations of the interviews were given to participants to review and return to see if their experiences and reality were captured accurately.

Findings

The themes and subthemes that emerged are identified in Table 1 and supported with data in the following paragraphs.

Table 1. Themes and Subthemes

Factors of Successful Transfer of Training	Barriers to Transfer of Training	Self-Leadership Understanding
<ul style="list-style-type: none"> •Putting Training into Action •Direct Application to Them/Key Points •Reminder Items •Required 	<ul style="list-style-type: none"> •Time Management •Too Much time, information, opportunity •No Connection/Interest 	<ul style="list-style-type: none"> •Views of Their Own Self Leadership •Behavior Focused Strategies •Natural Reward Strategies •Constructive Thought Pattern Strategies •Importance of Self-Leadership to Extension Role

Factors of Successful Transfer of Training

One theme that emerged was factors of successful transfer of training. The ideas shared were grouped into subthemes, and the ones that were identified most strongly as factors to success included putting training into action, direct application to their job responsibilities, reminder items, and required training.

Putting Training into Action

The subtheme of putting training into action included several similar ideas shared by participants that were grouped. The ideas included approaching training with a plan, developing a plan for implementation, reflecting, doing follow-up after training, and immediately putting the training into use (P1, P2, P3, P4, P5, P6, P7, P8, & P10). When approaching training with a plan, P5 stated,

If you have a plan, then it's easier to make yourself implement it. It really is about taking the time to make a plan, to implement it or go back and revisit it; it's about making the time to follow up.

P7 agreed, "Do the work ahead of time to know what you want to get out of training, really go in with this is what I'm looking for."

Putting training into action for participants also meant having a way to follow up or a plan for implementation after the training. Putting the training into action during or shortly after learning the new information was important (P2, P3, P4, P5, P7, P8, & P10). P5 stated, "I have to start working on it right away. I just dig in and make an implementation plan." P10 agreed, "I am more successful if I can incorporate it into my life right away." P2 compared it to learning other skills and stated, "It's kind of like learning to knit, if you sit down for an hour to learn to knit, that's great, but if you don't continue to knit, it's not." P4 mentioned intention, "I set an intention for what I intend to do this week to put it into practice, then I do it and reflect on it." Additionally, P4 shared that follow-up is helpful:

About a year after the original training, we had a meeting where they gave us some more information, and we talked about how we'd been using it, so there's just been a lot of follow-up to make sure that it stays fresh in our minds.

P3 suggested, "Training has to be important enough that if we attend, it's something we are going to use frequently, not just one time a year."

Participants also highlighted using reflection as a way to put training into action. P10 said, "You schedule out time for the training, so I try to schedule out a half day or day to try and focus on what I learned to implement." P5 stated, "You have to have a high level of self-reflection during training to say, I'm having this awesome experience, but what am I going to do now when I get home to make sure I use this training." Talking to others, using mentors and accountability partners, was also identified as a way to reflect and follow up on training material (P1, P2, P4, P6, P7, & P10).

Direct Application

An additional subtheme under factors to successful transfer was the participants finding a direct application or connection to them in the training or training material, including interest and being able to find key points of material to focus on (P2, P3, P5, P7, P8, P9, & P10). P2 stated, "My level of interest is a big motivator in the transfer of knowledge." P8 stated, "I

find what is most real world that I can get out of it, and then I take that and directly apply it.” P5 acknowledged, “I like to visualize how I can take it back and use it.” P7 agreed, “Sometimes it’s very easy to connect the experience to my practice, and sometimes it’s a bit harder.”

Finding or being given the key points to take home from the training was important to several participants (P3, P8, & P9). P9 stated, “Simple points will stick with me more than a huge barrage of information; I want it condensed into something tangible.” P3 agreed: “I want the bullet points of what we need to know because sometimes after two hours, you kind of miss the point.”

Reminder Items

Another subtheme under factors of successful transfer was the use of reminder items. This included anything participants received or could use to help keep the training in front of them and fresh in their minds (P2, P4, P5, P6, P7, P9, & P10). A few participants noted that keeping the training materials on their desks is effective, so when they see them, they are reminded of what they learned and can use in their jobs (P2, P7, & P9). P6 mentioned using the “little cards or pieces of information from training” as reminders.

Required Training

Under the factors of successful transfer of training theme, a final subtheme was required training. Participants felt that if training was required for something they needed to know, they were more likely to transfer (P2, P3, P4, P5, & P10). P3 stated, “I didn’t have a choice; I had to do it, and I had to use it.” P5 stated, “I knew I had to pass the test after the training to be certified; it was a powerful way to me to implement what I learned.” P4 talked about having required assignments to do to make the training stick, and P10 stated it helped “when our entire office staff had to do the training, and then we could all share, and everyone knew what we were talking about.”

Barriers to Transfer of Training

Another theme identified by participants surrounded barriers to the transfer of training. Subthemes identified were time management, too much, and no connection to, or interest in, the material.

Time Management

A subtheme identified in multiple ways was time management. Participants identified things like being too busy to implement, not making the time, other circumstances, being overwhelmed, and a lack of setting priorities (P2, P3, P4, P5, P7, P9, & P10). P3 stated, “I went to a conference a couple years ago, and it was life altering, one of the best conferences I have ever been to, and I just haven’t made the time to make the changes that I learned.” P2 stated, “I was doing too many trainings and got too overwhelmed with too much on my plate.” Both P4 and P2 agreed that they were too busy at the time and probably should not

have taken that training then. Several participants agreed they can be so busy that they do not allow themselves the time to really focus.

Too Much

Another subtheme was around the idea of too much. Several items fall into this subtheme, such as too much opportunity, which becomes overwhelming to transfer, too complicated training or material, and training spread over too much time (P3, P4, P7, & P9). P4 stated,

We have a lot of opportunity to attend training, and I know I don't transfer and utilize everything for that reason, in fact, I'll go back and think, what did I even attend. Because there is so much opportunity, we jump in, and then it just gets lost.

P9 said, "If it gets too complicated, then I don't care, and I don't bring it with me." P4 acknowledged, "It didn't work well for me to have training and then have a couple days off because I was busy with other things at the same time, and it was hard to remember the information." P3 discussed that sometimes, when we have conferences, they are so long and there's so much involved that you usually end up missing the information you're supposed to be getting because it's just too much. P7 discussed how being gone for training just sets you behind with your other work, and then what you learned becomes too much to go back and think about.

No Connection

A final subtheme under barriers to transfer of training is participants not seeing the application or connection to the material (P2, P3, P4, P7, P8, & P10). P8 stated, "I like to see it in real life before I can apply it." P4 agreed, "I feel like I wasn't able to remember the information and be able to use it in my work or personal life." P2 stated, "I can go into a training and think this is going to be great, and then one little thing doesn't connect, and I'm like, that was not great." P8 said, "I've had times where nothing really hit home with me during training."

Self-Leadership Understanding

In analyzing data from participants on self-leadership, several subthemes emerged, including their view of self-leadership, their definitions, and their use and non-use of self-leadership strategies in the three areas of behavior-focused, natural rewards, and constructive thought patterns. In addition, the subtheme about the importance of self-leadership to Extension work emerged.

Views of Their Own Self-Leadership

Even with a reference guide to self-leadership and the strategies, the group struggled to think about self-leadership as "self" and often referenced "others" in their explanation. P1 said, "I want to be a mentor and support my coworkers." P3 also related it to mentors, saying, "My mentor got me involved in things that I could take back and use and be successful at." P10

was also thinking about others and stated, “You have to bring them alongside when you’re trying to implement something,” and P1 acknowledged self-leadership as “when people follow me.”

In describing self-leadership, other participants mentioned motivation, empowerment, supported not told, initiative, moving things forward, improvement, choice, growth, reflection, discipline, and passion (P1, P2, P3, P5, P6, P7, P8, P9, & P10). P3 stated, “I think you have to be motivated; you can either sit and cry or do something about it.” P10 believes, “We are all in charge of our own leadership.” Similarly, P7 said, “You have to have the willingness and the ideas and the drive to do it.”

Behavior-focused Strategies

Another subtheme under self-leadership was participants’ responses to whether they regularly used any of the behavior-focused strategies of self-leadership. The list of strategies was shared with participants for reference. Behavior-focused strategies aim to increase self-awareness and include self-observation, self-cueing, self-goal setting, self-reward, self-correcting feedback, and practice (Houghton & Neck, 2002).

Participants reported the use of many of the behavior-focused strategies. Self-observation, self-cueing, and self-goal setting were all highlighted, and all participants acknowledged using at least one of the strategies (P1, P2, P3, P4, P5, P6, P7, P8, P9, & P10). P8 stated, “Self-observation that’s one I do, I walk through what’s happening, what’s not going right, what is going right, and talk myself through it.” P4 agreed, “I like to think about what went well and what we want to add or how we need change so the messages are clearer.” Additionally, P7 shared an example: “Things that take a lot of thought, I need to do those in the morning, so I’ve been starting to schedule more of my meetings for like after lunch afternoon.” P9 also had an example:

Choosing the things that need to get done off my checklist that I really need to get done today that are important and get focused on those because you can kill an entire day just on email and other things.

P6 stated, “My self-cueing are reminders on the calendar, different colors on the calendar, and really being organized on my calendar because that is key.” P5 stated that “keeping a to-do list and checking it off, and thinking, am I on track to meet that goal or not is something I do.” P4 shared, “I’m a list-maker, and I like to track the things that I’m doing.” Several participants reported that using little cards or pieces of information received at training as a reminder was a form of self-cueing (P2, P6, P7, & P9). P2 stated, “I keep things like training materials on my desk where I can see them” for self-cueing. Self-practice was also identified as being a strategy used, and P4 stated, “Practicing and looking at myself talking and saying the words over and over again, just to feel prepared so that other people really do see me as an expert, and then I understand what questions they might throw at me.” P6 agreed and said, “I would definitely practice before going on TV. I would write out my answers and try to memorize just the key points so that I didn’t sound scripted but remember to touch on the key

points.” Self-goal setting was another strategy. P10 shared, “I have your goals that I am wanting to do so I can measure the success that I’ve had, and I have them in writing,” and P5 suggests,

For self-goal setting, I ask myself am I reaching this goal and am I doing what I said I was going to do or am I going to get to December and say on no, because I didn’t check myself along the way.

In the document review of agendas, behavior strategies were found to be included, and self-goal setting was found in several trainings where participants were asked to set some self-direction for moving forward on training material in the future. Participants reported the use of many of the behavior-focused strategies. Self-observation, self-cueing, and self-goal setting were all highlighted, and all participants acknowledged using at least one of the strategies.

Natural Reward Strategies

Another subtheme under self-leadership was participants’ responses to whether they regularly used any natural intrinsic reward-focused strategies. The strategies were shared with participants for reference. Natural intrinsic reward strategies emphasize the enjoyable aspects of given tasks and activities and are when incentives are built into the task and a person is motivated by them, increasing competence, self-control, and purpose (Houghton & Neck, 2002).

All participants reported using natural intrinsic reward strategies, doing something pleasurable for themselves after completing a task was most highly identified (P1, P2, P3, P4, P5, P6, P8, P9, & P10). P9 stated, “I might close my eyes for a few minutes; I might go for a walk and look at the ducks and the geese.” P2 shared, “I get up and go for a walk around the building and move to give my eyes a break, and that helps me refresh and is my internal reward for getting the work done.” P4 agreed, “If I can go for a walk while having a discussion with someone, I feel like it’s a natural reward.” P5 stated, “I feel like I reward myself with extra time off, so it kind of makes me check myself and say, have I gotten my stuff done.”

Another intrinsic reward identified by participants is making their environment pleasurable (P3, P7, & P9). P9 stated, “I like to have a nice working atmosphere; I have all kinds of my wife’s cool artwork hanging in my office.” P3 stated, “My office is full of plants; I enjoy watching them grow, and it’s the environment I have set up in my office that makes me feel good and productive.”

Constructive Thought Pattern Strategies

Another subtheme under self-leadership is the use of constructive thought pattern strategies. The strategies were shared with participants for reference. Constructive thought pattern strategies involve the creation and maintenance of functional patterns of habitual thinking (Houghton & Neck, 2002).

Participants could identify strategies they use, especially for visualization (P2, P6, P8, & P10) and positive self-talk (P1, P3, P6, P7, P8, P9, & P10). P2 stated, “I always try to visualize what it's going to look like and kind of map it out in my mind, for the way I see it, being successful.” Additionally, P8 shared, “Looking to the future and evaluating how we do our jobs. I practice this every day by doing a self-assessment and reflections in my head,” and P6 stated, “I step back and try to incorporate positive self-talk.” When thinking about evaluating belief and assumptions as a strategy, P8 shared, “We hear all sorts of assumptions in our communities; it's about stopping and taking the time to think through it and understand what's right and wrong and then process it for yourself, I try to do that.” P10 stated, “My goal is to focus on positive self-talk to direct my energy toward meaningful and impactful outcomes.” P8 agreed, “I can tell you, on a daily basis, I self-talk with myself,” and P4 shared, “I talk positively about information I heard that I want to remember and be able to use later.”

Importance of Self-Leadership to the Extension Role

Another subtheme was the importance of self-leadership to an Extension role. Participants agreed that helping Extension Educators learn more about self-leadership and using the strategies is important to success in the role and could be very beneficial to Extension (P2, P3, P4, P6, P7, P9, & P10). P9 believed, “This would be a great educational topic to do a seminar or something on self-leadership.” P10 supported this and said, “There are a lot of great things that are done in Extension, and then we don't get the growth from it; maybe this would help. P7 and P9 both made similar statements about how important it is that people can lead themselves in Extension. P6 agreed, “If there's a way to learn more about best practices and strategies in our trainings, I think it's key, especially for Extension, I think it's more important than most jobs.”

Discussion and Conclusions

Factors of successful transfer of training emerged as a theme with several connections to the research around training and transfer of training. Baldwin et al. (2017) expressed that the success of employees and the organization depends on how quickly learning from training goes from theory to practice. The longer the participants waited to implement or use the material from training, the less likely they were to transfer the training to practice. Many participants fully agreed that a key to their success in the transfer was approaching training with a plan, developing a plan for implementation, reflection, doing follow-up after training, and putting the training into use immediately. Without this intentional transfer approach, transfer was questionable. It was clear that having a plan, or even thinking about what you want to learn from attending training, made it much easier for participants to implement what they had learned. Aquinis and Kraiger (2009) indicated that training is worth it when the knowledge is put to practice. Extension should help participants think about the implementation of theory to practice in their training programs. Pre- and post-work on plans, intentions, and follow-up would support the idea of quicker transfer and application of training back on the job.

Ultimately, all individuals in the organization are in different places (understanding, commitment, experience, desire, and motivation, to name a few) regarding their ability and desire to transfer training knowledge to their work. Efforts to understand the individual employee and their needs should be a priority. For organizations to address this and be able to try and ensure transfer, it would be a large undertaking, depending on the size of the organization. This supports research that indicates our understanding of real transfer is incomplete (Burke & Baldwin, 1999) and that it remains a challenge to establish a transfer of training theory (Bhatti & Kaur, 2009). Transfer is important for Extension and organizations to keep at the forefront of their planning and implementation of training.

Years of research (Baldwin & Ford, 1988; Holton, 1996; Tracey et al., 1995) have identified three categories of factors that affect training, including trainee characteristics, training design, and work environment. These factors did not emerge as much as expected in the case study. There was no mention of the design of the training or the environment of the training impacting transfer. As the trainees, participants did acknowledge that they influenced transfer, but more in the context of their individual and self-efforts to successfully transfer rather than their own characteristics, as research has indicated. This may be due to the discussion and focus on self-leadership in this study, but it could also support the research that suggests that findings have been inconsistent, and organizations are challenged to pinpoint exactly what factors are most critical to transfer (Grossman & Salas, 2011).

The findings of this study support the continuing effort to understand the training process, and transfer is still a primary concern for researchers and practitioners (Velada & Caetano, 2007). A concerted effort by Extension and organizations to follow up with training participants on transfer could provide more data to an organization on the specific factors that assist or help make successful transfers in that organization. Trainers could consistently incorporate questions about what helped trainees transfer the material to their lives or work in the follow-up evaluation. Additionally, follow-up meetings with accountability partners, developing action plans, setting goals, and attending follow-up sessions on the material are suggested to improve the transfer of training. If done routinely, the organization might have a better transfer rate and be able to evaluate more clearly what works and does not work for Extension as it relates to transfer.

Diamantidis and Chatzoglou (2014) confirm that the confidence individuals have in the ability to improve job performance likely leads to transfer. This was true in the findings as direct application and connection to the material emerged as a subtheme of factors to successful training. Participants mentioned finding what is most relevant to their circumstances and their work, what they are interested in, what they connect to, and what they can directly use in their job in describing direct application for them. This becomes an important mindset for practitioners to apply, ensuring that participants are aware of how the material improves their job. This is supported by research that indicates that the goal of training is the self-development of employees through continuous learning (Cheng & Hampson, 2008), and the intent of training is to improve knowledge and skills in employees,

thus improving the organization through quality and performance (Mokhtar et al., 2019; Tharenou et al., 2007).

An unexpected finding in the case study was that required training or follow-up was considered a success factor, not a barrier. The word “required” was used specifically in several cases. According to participants, Extension offers a vast amount of training, but it was unclear how they perceived it as “required training.” Some seemed to assume that when there are organization-wide opportunities, there is an expectation to attend and that this was helpful. Assignments, accountability partners, and follow-up were all mentioned as helpful to transfer when it was an expected and planned part of the training. While the research included in this study did not look specifically at required training and transfer, research was found to support the ongoing training opportunities that Extension offers. Successful organizations are believed to invest more in training than others (Tharenou et al., 2007). Zahra et al. (2014) agree that training is a necessary human resource practice that can impact organizational success. Developing our ongoing ability to learn is the single most important human resource issue for meeting the challenges of the future (Hamel & Prahalad, 1995).

Participants frequently acknowledged barriers to the transfer of training. This major theme discussed how training led to no changes being made. Blume et al. (2010) stated that organizations are unsure to what extent changes are made once employees are back on the job after training, and Brown and McCracken (2009) acknowledged that little content is transferred to the workplace. This was a sentiment that participants agreed with and acknowledged, but with some lack of ability to explain why for each of them.

While there was a level of understanding around the transfer of training during the interview process, it was clear that participants did not regularly think about transfer. All participants understood the intention of training and that transfer is the goal, but it was clear that being purposeful about it was hit-and-miss for the participants. They did acknowledge that putting training into action was important when encouraged to describe how and when it works. However, it did not seem automatically at the forefront of their thinking. Previous research found that learners leave training with some intention to transfer, but almost immediately, factors may begin to undermine this motivation and intention (Foxon, 1993).

Time management was a large barrier for the participants. This suggests that time management is a skill that needs some focus in the organization, as a wide array of skills are needed to be effective in Extension work, and time management is a major issue. This is supported by Gonzalez (1982), who stated that Extension employees need competence not only in their discipline area but also in management, programming, communication, human relations, and leadership.

It was also interesting to observe that participants were cognizant of the number of opportunities they get for training through Nebraska Extension but fully unaware of how important transfer is to that process and the other outlying factors of providing the training. This was exposed when discussing barriers to transfer when participants suggested that if they did not connect, they did not like or did not have interest, they did not transfer. No one

ever acknowledged the cost of training or time spent in training as a cost, which may be Extension's fault, as clarity around this topic may not be happening. Beer et al. (2016) asserted that \$365 billion is invested worldwide in employee training. Aquinis and Kraiger (2009) agreed that considerable resources are put into training employees. However, according to Chiaburu and Lindsay (2008), training is only effective to the extent that skills and behaviors learned and practiced are transferred to the workplace. It was clear that dollars have been spent where the return on investment in Nebraska Extension has not happened, and participants did not or were unable to acknowledge that this investment in them did not happen. This reminds us that we should not neglect the role employees play in choosing to either transfer or not, or how much, and suggests there may be some essential hidden variables (Cheng & Hampson, 2008).

As with transfer of training, self-leadership was a concept and theory not fully understood or even known by participants, as it relates to clear understanding, directly applying routinely, and using purposefully. In their definitions (after being provided with some basic information), participants could articulate and describe the idea of self-leadership but were not in total command of the theory. It was a mix of words and understanding. What was evident was the agreement among participants that the idea of self-leadership permeates success in Extension work and in helping each of them do their work. While they did not know they were specifically practicing self-leadership strategies before our conversation, most have applied at least some of them in their work. This directly relates to the work of Browning (2018) asserts that in collaborative, decentralized workplace environments, which describes Extension, "training people to become self-leaders who set priorities, take initiative and solve problems is more important than ever" (p. 15). Parvez and Iqbal (2007) declared that self-leadership is when "people are responsible, capable and able to exercise initiative without the external constraints of bosses, rules or regulations" (p. 43). Therefore, the participants were exhibiting high levels of using self-leadership strategies without knowing it because this is how Extension operates, with autonomy and, for the most part, without external constraints. Thus, to be successful, Educators have had to employ these skills on their own. Participants strongly agreed that helping others understand this theory would enhance their effectiveness in Extension work. This is supported by Neck and Manz (1996), who wrote that people can be trained to adapt and enhance their self-leadership skills.

The discussion of strategies was similar to the overall understanding of self-leadership. None of the participants knew the specific identified strategies of self-leadership. However, when the strategies were presented, they could discuss which ones they practice, either naturally or have learned, that are helpful behaviors or ways of operating over time. All participants could identify at least one, and generally several strategies they have employed. Several connections between the success factors of the transfer theme and self-leadership strategies could be made. For example, reminder items to help keep the training in front of them and fresh in their minds were identified as a subtheme and connected directly to the behavior-focused strategies of self-cueing and self-observation but could also be a form of a natural intrinsic reward for some. Additionally, participants talked about setting goals, self-observation, self-practice, incorporating ways to make a task more enjoyable, visualization,

and positive self-talk as influences and factors to transfer, along with identifying them as strategies they use. They did not always use the self-leadership strategies in exact words, which supports the idea that they did not know them as specific strategies but did know that doing these specific behaviors helped them be more effective in their roles and specifically to transfer. This shows a great opportunity for developing self-leadership training to teach the strategies and use them during other training to help with the transfer. For example, once a skill is taught, a trainer could have participants spend some time doing mental imagery of a successful time in the future when they are using the skill, set a goal for using the skill, or think about a reward they would use to influence themselves to use the skill.

While the goal of this research was to discover what aspects of self-leadership Extension employees feel are necessary for the transfer of training to occur or if it matters, the study concludes that the education of training participants on the model and theory of self-leadership would enhance self-leadership and strengthen the transfer of training. Self-leadership says that people control themselves, their actions, and their behaviors (Manz, 1986; Manz & Neck, 2004; Stewart et al., 2011). Parker et al. (2010) and Foxon (1993) agree that when the transfer of training is proactive and self-initiated in nature, it is an integral step towards transfer. Manz and Sims (1989) acknowledged that individuals characterized as self-leaders personally motivate themselves, continually renew their thinking patterns, and direct their efforts. Participants could see the connection between the two and many possibilities for use in their future Extension work. The role employees play in choosing to either transfer or not, or how much, should not be neglected and suggests there may be some essential hidden variables (Cheng & Hampson, 2008). The data supports that self-leadership helps and does not hinder the transfer of training. It may take more training to get there, but self-leadership continues to show potential for application in today's world (Neck & Houghton, 2006), and the benefits would be worth it for the employee and Extension.

Below is a list of recommendations for both practitioners and for future research.

Practitioner Recommendations

- A conversation within organizations about self-leadership as an accepted theory of practice that includes training of strategies, support, and coaching to help employees employ the skills needed to be better leaders of themselves.
- In organizations, acknowledge and discuss transfer as a part of training, allowing participants to consider how they will implement materials. This could also include acknowledging the costs, time, and energy that goes into training for a better understanding of investments and why the transfer of training is important.
- Become more educated in organizations on additional research factors of successful transfer and barriers to transfer to assist in better planning and implementation of training based on research and incorporation of this information consistently in all training.
- Use the self-leadership theory to train new Extension employees, helping them better understand the autonomy of their role and how to be effective in it.

- Use self-leadership strategies with low performers as a tangible way to help them become more effective.
- Redesign the objective and goals of trainings to show better how the training will improve effectiveness/performance on the job.

Research Recommendations

- Further research on self-leadership in Extension across the country and its importance as a leadership theory to the organization.
- Further research using the self-leadership questionnaires to assess an entire organization could be compared to others (this research suggests that Extension would have a higher level of self-leaders). The data could also assist in self-leadership training within organizations, focusing on strategies not being used as ways for growth and improvement.
- Future research on whether self-leadership strategies can help low performers increase their effectiveness on the job.
- Future research on transfer based on the type of training, i.e., personal development, team development, discipline-based training, etc., to determine if the transfer differs based on the topic or area of training and development.
- Further research on self-leadership and transfer of training. Does using the strategies, when they are learned and known, consistently make a difference in transfer?

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Volunteers' Stewardship Action-Taking Experiences During the COVID-19 Pandemic Predicted by Their Motivation Toward Engagement and Ability to Teach Others

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The current study investigates the relationship between volunteer stewardship action-taking, motivation toward engagement in volunteer activities, and the ability to teach others during the COVID-19 pandemic. The final data set included 1,196 responses from the Penn State Extension Master Gardeners and Master Watershed volunteers, which provided a response rate of 39.9%. The results of this study showed that approximately 15.1% of the variation in volunteer stewardship action-taking experiences could be explained by volunteers' motivation toward engagement in volunteer activities and their ability to teach others. Most findings are in line with previous research. Extension and outreach educators and volunteer coordinators can better prepare their Master Gardeners and Master Watershed volunteers for effective responses to their community needs, especially in times of uncertainty. More research is needed in volunteer stewardship action-taking experiences during times of uncertainty and change.

Keywords: volunteer stewardship action-taking experiences, ability to teach others, motivation toward engagement in volunteer activities, Master Gardeners, Master Watershed volunteers

Introduction

Volunteerism, defined as “the act or practice of doing volunteer work in community service” (Merriam-Webster, n.d.-b), has played a significantly prominent role in American culture and civic life since the 1800s (Ott, 2018; Turnbull, 2022). The university-community partnership has been found helpful in addressing various community needs through volunteer programs (Osafu, 2021; Osafu & Yawson, 2019). During the COVID-19 pandemic, individuals took volunteer actions in varied areas, including but not limited to health care (Buckland, 2020; Pickell et al., 2020), public well-being (Kwan et al., 2021), education (Iyengar, 2021), university Cooperative Extension and food supply (Osafu, 2021). Windon and Buchko (2022) described volunteers who could engage in leadership roles as educators, team, and project managers during the pandemic as action-takers and stewards.

Hernandez (2008) defined stewardship as leadership behaviors that “promote a sense of personal responsibility in followers for the long-term well-being of the organization and society” (p. 121). Windon and Buchko (2022) defined stewardship actions as “the actions taken by volunteers who possess expertise in the subject matter, act for the greater good in their communities, actively engage in social actions in leadership roles and make a long-lasting impact” (p. 115). The literature reveals the positive relationships between volunteers’ motivation, satisfaction, and longevity of volunteer engagement in stewardship actions (Bruyere & Rappe, 2007; Jacobson et al., 2012; Stukas et al., 2016 a; Stukas et al., 2016 b). Among some factors that impact the willingness of volunteers to join the volunteer program or organization and be active action-takers are satisfaction with volunteer experiences (Liarakou et al., 2011; Reinklou & Rosén, 2013), the meaningfulness of volunteer work (Faletehan et al., 2021), feelings of belonging and relatedness (Boezeman & Ellemers, 2009; Reinklou & Rosén, 2013), demographic characteristics (Dorn et al., 2018; Merenlender et al., 2016), learning opportunities (Liarakou et al., 2011), and motivation (Ryan & Deci, 2000a). Shock can be a motivating factor that initiates volunteer actions and creates empathy (Neely et al., 2022).

Recent studies recommend exploring the relationship between volunteer motivation, engagement, and action-taking experiences (Windon & Buchko, 2022). Ryan et al. (2001) suggested considering changes in volunteers’ motivations at different stages of their volunteer engagement to impact and nurture their action-taking capacity. Failure to fulfill volunteers’ motives in managing Extension programs could result in high exit rates from the programs, poor recruitment, low engagement, and action-taking capacity (Faletehan et al., 2021; Reinklou & Rosén, 2013). The attraction and retention of volunteers have become even more challenging considering post-pandemic realities (Brennan et al., 2022). The literature shows a lack of research exploring volunteers’ stewardship action-taking experiences caused by the COVID-19 pandemic (Osafo, 2021; San Llorente Capdevila et al., 2020; Windon & Buchko, 2022). The purpose of this study was to assess the relationship between volunteer stewardship action-taking experiences (VSATE) of Penn State Extension Master Gardeners (MG) and Watershed Stewards (WS), their motivation toward engagement in volunteer activities (MTEVA), and their ability to teach others (ATO) during the COVID-19 pandemic.

Literature Review

The question “Why do individuals become involved in volunteer programs, and how do they stay, including in times of emergencies?” never loses its actuality. Research investigating volunteers’ motivation is essential to (1) understand volunteers’ motivation, (2) ensure their satisfaction, (3) positively impact their recruitment and retention, (4) ensure the efficiency and effectiveness of extension programs’ operation, as well as their design, implementation, and maintenance, and (5) provide opportunities for volunteers to get the most optimal outcomes for themselves (Measham & Barnett, 2008; Strong & Harder, 2011; Wright et al., 2015). The researchers working with volunteers, including Master Gardeners (MG) and Watershed Stewards

(WS), suggested that considering the dynamic nature of the action-taking capacity of volunteers and the role of motivation towards volunteers' engagement, it is important to monitor the motivational needs of volunteers that can help to sustain an efficient operation of Extension programs (Liarakou et al., 2011; Ryan et al., 2001; Strong & Harder, 2011).

Pinder (1998) defined *motivation* as “a set of energetic forces that originates both within as well as beyond an individual's being, to initiate work-related behavior, and to determine its form, direction, intensity and duration” (p. 11). The author wrote that motivation determines, predicts, and sustains behaviors and actions toward outcomes. Volunteer work motivation can be *intrinsic*, involving needs that are inherently met by doing the work, or *extrinsic*, involving a drive for results or rewards external to the activity (Davis et al., 1992; Deci et al., 2001; Dysvik & Kuvaas, 2013; Frey, 1997; Tremblay et al., 2009).

Intrinsic Motivation and Volunteer Engagement

Intrinsic motivation can be described from the eudaimonic and hedonic perspectives. From the eudaimonic perspective, *intrinsic motivation* is defined as an “inherent tendency to seek out novelty and challenges, to extend and exercise one's capacities, to explore, and to learn” (Ryan & Deci, 2000a; Ryan & Deci, 2000b, p. 70). Ryan and Deci (2000a) defined *intrinsic motivation* from the hedonic perspective as “the doing of an activity for its inherent satisfaction rather than for some separable consequence. When intrinsically motivated, a person is moved to act for the fun or challenge rather than because of external products, pressures, or rewards” (Ryan & Deci, 2000a, p. 56). This definition of intrinsic motivation echoes the positive psychology theory grounded in Aristotelian principles of virtue theory and his belief that human beings experience good feelings when exercising their innate strengths and virtues or trained abilities. His theory also states that their enjoyment increases when they can realize their capacities through overcoming complexities and challenges, which brings feelings of fulfillment and realization, attachment to the setting or its activities, better health, optimal functioning, and optimal well-being (Csikszentmihalyi, 1991; Fredrickson et al., 2008; Seligman, 2005, 2011a, 2011b). A negative relationship was found between intrinsic motivation and the intention to quit work in the non-profit sector (Renard & Snelgar, 2018).

Some recent studies have shown a positive relationship between intrinsic motivation and work engagement, including non-profit (Renard & Snelgar, 2018) and hospitality sectors (Putra et al., 2017). *Engaged and motivated volunteers* are highly motivated because they do not necessarily volunteer to produce something or be rewarded in any way. They are motivated because they enjoy the tasks that make them happy or satisfied. These feelings of enjoyment, happiness, satisfaction, and meaningfulness are what psychologists call intrinsic or internal rewards. Research shows that meaningful activities, tasks, and/or actions are positively connected to volunteer motivation, commitment, and engagement (Allan, 2019), and attraction and retention of volunteers (Krasny et al., 2014; Ryan et al., 2001). Meaningful work leads to higher intrinsic

motivation, which is positively associated with higher work engagement (Putra et al., 2017; Van Beek et al., 2012). According to work engagement and self-determination theories, engaged and motivated individuals or volunteers are more creative, enthusiastic, persistent, committed, productive, and willing to go the extra mile (Bakker & Demerouti, 2008; Ryan & Deci, 2000b). *Disengaged volunteers* do not invest or rarely invest their time and energy into volunteering; they can complete the training program but usually do not get certificates or engage in volunteer activities. Ryan et al. (2001) distinguished between active (engaged) and inactive (disengaged) volunteers. Engaged or active volunteers are highly committed, have strong friendships within the group, feel a stronger emotional connection to the community, participate in other volunteer groups, and use the volunteer sites for recreation compared to non-active volunteers.

In our study, *engaged volunteers* are also described as those who completed a training program, earned certificates, and volunteered after program completion. To become certified, the participants of the Master Gardener and Watershed Steward programs are expected to attend classes for typically 30-70 hours over a few months or a year and fulfill the required number of hours as volunteer educators (Conway et al., 2003; Langelotto et al., 2015). To maintain certification for participation in the program in subsequent years, MG and WS are expected to continue volunteering a certain number of hours each year and participating in continuing education programs yearly. Additional local requirements may vary. In their collaborative efforts, dedicated MG and WS can donate from 30,000 to 970,000 hours of service per year (Penn State Extension, 2023; University of Connecticut, 2023; Virginia Tech, 2023b); 50,000 hours of service can be valued at \$1.6 million (Virginia Tech, 2023a). Dorn et al. (2018) reported that Extension Master Gardener volunteers had “outserved” their local and state coordinators by providing more years of service. Strong and Harder (2011) said that in 2010, Master Gardener volunteers taught horticultural subject matter to over 71,000 adults in Florida (p. 65).

Engaging in voluntary actions that target the improvement of the lives of others is a form of “collectivism,” which is associated with community involvement (Batson et al., 2002, pp. 437–438). Schrock et al. (2000) found that one motive for becoming MG is the possibility of meeting people. McDougle et al. (2011) found that the opportunity to socialize and meet new people predicted the intensity of volunteer stewardship actions toward social aspects. Stukas et al. (2016a) suggested that other-oriented motivation is positively connected with individual well-being, satisfaction, and intentions to continue volunteering. Jacobson et al. (2012) found that no matter what motivates MG to volunteer and how strong their commitment to the organization is, dissatisfaction with their experiences could lead to their desire to leave the organization. The positive connection between the volunteers’ intention to leave and satisfaction was also found by other researchers (Salas, 2008). From the eudaimonic perspective, inherent satisfaction comes from being engaged in actions that have an internal reward and are aligned with underlying ethics, morals, beliefs, and values (Bennett et al., 2018; Ryan & Deci, 2000a). As the literature showed, individuals who volunteered during the pandemic exhibited greater social responsibility

and a higher desire to contribute to society and communities (Chow et al., 2021; Sengupta & Al-Khalifa, 2022).

External Motivation, Self-Centered, and Other-Centered Reasons to Volunteer

Extrinsic motivation is defined as “an external incentive to engage in a specific activity, especially motivation arising from the expectation of punishment or reward (e.g., completing a disliked chore in exchange for payment)” (American Psychological Association, n.d.). According to Ryan and Deci (2000), *extrinsic motivation* is “a construct that pertains whenever an activity is done to attain some separable outcome. Extrinsic motivation thus contrasts with intrinsic motivation, which refers to doing an activity simply to enjoy the activity itself, rather than its instrumental value” (p. 60). Extrinsic motivation is based on egoistic values. Extrinsically motivated individuals are engaged in voluntary work activities to attain some separable outcome, such as earning a reward, gaining approval, or avoiding punishment (Ryan & Deci, 2000a, pp. 56–60). Examples of external rewards include career-related knowledge and experiences, the development of networks, and others. In other words, an extrinsically motivated volunteer is focused on the outcomes of the activity (e.g., the usefulness of the activity). Jacobson et al. (2012) found that extrinsic recognition and rewards are necessary for retaining volunteers. Deci and Ryan (2000a) and other researchers (Gebauer et al., 2008; Konrath et al., 2012; Stukas et al., 2016b) reported that compared to intrinsically motivated activities, self-oriented motivations (extrinsically motivated activities) were typically associated with reduced volunteer persistence as well as lower psychological and physical well-being. At the same time, Green et al. (1984) found that volunteer satisfaction and retention were positively associated with *non-altruistic reasons* (e.g., useful experience for the future), perhaps because the benefits of volunteering were instrumental and easily recognized. Volunteers motivated by *altruistic reasons* (e.g., helping others and a sense of duty) could experience less satisfaction and have less desire to continue volunteering, possibly because the benefits of volunteer services were less tangible and apparent. The researchers recommended volunteer-based organizations and programs to emphasize both altruistic and non-altruistic benefits of volunteer engagement; this way, they have more chances to recruit and retain volunteers. At the same time, research conducted during times of emergencies and crisis, including the COVID-19 pandemic, showed that volunteer engagement and retention were mainly based on the altruistic values of volunteers (Chow et al., 2021).

Cambridge Dictionary defines *values* as “the principles that help you to decide what is right and wrong, and how to act in various situations” (Cambridge University Press, n.d., para 1). Merriam-Webster Dictionary defines *values* as “something (such as a principle or quality) intrinsically valuable or desirable” (n.d.-a, para 4). *Values* “encompass the full range of a person's goals - social (e.g., esteem), material (e.g., a comfortable life), psychological (e.g., competence), and moral (e.g., compassion)” (Schwartz & Howard, 1984, p. 230). To be regarded as a volunteer, an individual is typically motivated by altruistic or prosocial values as opposed to

monetary gain (e.g., community service) and enjoys the intrinsic rewards that come from the act of volunteering (Bussel & Forbes, 2001; Renard & Snelgar, 2018). The study of (Schrock et al., 2000) found that the main benefits of MG derived from their participation in MG programs related to the enhanced knowledge, personal growth, and satisfaction of their altruistic values. The studies conducted during the COVID-19 pandemic showed that intrinsic and altruistic motives and values were the ones that brought satisfaction to the volunteers (Chow et al., 2021; Mekonen & Adarkwah, 2022). The literature shows that altruistic values are common among master naturalists (Newberry & Israel, 2018), MG (Schrock et al., 2000), and WS (Ryan et al., 2001).

Voluntary actions grounded in *altruistic values* refer to “self-sacrificial acts intended to benefit others regardless of material or social outcomes for the actor” (Schwartz & Howard, 1984, p. 229). Altruistic motivation is truly altruistic only when an individual (a) has a genuine concern/care for others’ welfare, (b) has the desire to help others (e.g., community service), and (c) enjoys the intrinsic rewards coming from the act of volunteering (Bussel & Forbes, 2001). Giving behaviors of volunteers can be caused by shock – positive, negative, or neutral event; shock can create empathy and initiate actions (Neely et al., 2022).

The studies of the volunteering motives of Chinese students during the COVID-19 pandemic showed that altruistic (e.g., concern for the public) and extrinsic (e.g., private gains) motives impacted their volunteering engagement (Geng et al., 2022). Earlier studies found that extrinsic or egoistic values are demonstrated more often (self-interested concerns) and may be more predictive of volunteer behaviors than altruistic values (e.g., Mesch et al., 1998; Stern et al., 1993). Some research results indicated that motivational goals could be different but appear similar on the surface (Dwyer et al., 2013) and that volunteers act on both intrinsic (altruistic or other-centered) and extrinsic (egoistic or self-centered) motives (Cnaan & Goldberg-Glen, 1991; Schrock et al., 2000). Putra et al. (2017) found that extrinsic motivation factors do not diminish the intrinsic motivation of employees, and the recent study published by Ryan and Deci (2000) showed that both extrinsic and intrinsic motivation could predict positive outcomes from the self-determination theoretical perspectives (e.g., enhanced autonomy, competence, and relatedness). The overlaps in research findings between intrinsic and extrinsic motivational factors show that the topic of volunteer motivation should be given serious attention, and the impact of varied factors on volunteer motivation during times of changes, crisis, emergencies, and uncertainties has to be further explored to provide Extension programs with relevant information for their better effectiveness.

Stewardship Action-Taking Experiences and Ability to Teach Others

Stewardship is an outcome of leadership behaviors that promote an organization or community’s long-term well-being through personal responsibility (Hernandez, 2012). Bennett et al. (2018) wrote that “stewardship ethic might be derived from a person’s sense of moral responsibility to

take care of others, a sense of responsibility for community resources, altruistic concerns for the future of the community, or an understanding of what is perceived to be the right thing to do for the community betterment” (p. 602). In our study, volunteer *stewardship actions* are defined as actions taken by individuals, groups, organizations, and networks of actors, with various motivations and levels of capacity, to protect, care, manage, and responsibly use their sources of the local communities (Bennett et al., 2018). Action-taking experiences of Extension MG and WS include varied types of volunteer experiences such as persuasion and education, physical and group/collective actions. Gaining knowledge and skills after training increases volunteer program participants’ confidence and action-taking capacity (Merenlender et al., 2016; Strong & Harder, 2011; Windon & Buchko, 2022). See Table 1.

Table 1. Stewardship Actions: Types and Definitions

Actions	Definition	Examples	References
Educational actions	“Any action by an individual or group specifically aimed at the acquisition of knowledge” (Smith-Sebasto & D’Costa, 1995, p. 16)	Self-education; other-focused education actions	Smith-Sebasto & D’Costa, 1995
Persuasive actions	Actions that are aimed at motivating others to reconsider their behaviors/actions	Persuading others to change attitudes and behaviors	Erdogan & Marcinkowski, 2012; Hungerford & Peyton, 1977; Smith-Sebasto & D’Costa, 1995
Physical actions	“Any action by an individual or group that is its primary consideration, some motor effort and not the exchange of monies aimed at preservation of the natural environment” (Smith-Sebasto & D’Costa, 1995, p. 16)	Picking up litter, sorting trash, recycling, participating in community clean-up projects, and installing household resource-conserving devices	Smith-Sebasto & D’Costa, 1995
Group/Collective actions	The actions are taken as a part of a group	As mentioned above	As mentioned above

Smith-Sebasto and D’Costa (1995) defined *educational actions* as “any action by an individual or group specifically aimed at the acquisition of knowledge” (p. 16). Education actions can be grouped into self-education and other-focused education. Our study defines self-education actions as an individual’s efforts to improve their behaviors or practices by modifying their beliefs and values through self-learning. The study by Measham and Barnett (2008) showed that self-education is a relatively rare motivator, yet seeking to educate others is the most common motivation for volunteering (p. 548). At the same time, Windon and Buchko (2022) showed that MG and WS preferred self-education over educating others and had very low interest in (a) raising awareness about the local community issues (e.g., water, and community gardens) and available resources, (b) spreading information about the actions taken by the Extension and local

organizational partners (e.g., clean-up projects), and (c) developing and delivering education modules and programs (p. 129). The literature shows that the main motivations for environmental stewards are their desire to learn and help the environment (Bruyere & Rappe, 2007; Merenlender et al., 2016; Newberry & Israel, 2018; Schrock et al., 2000; Takle et al., 2016). The psychological benefits include helping the environment, exploring, and being social (Newberry & Israel, 2018).

Other-focused education actions are defined as a volunteer's efforts to improve others' behaviors or practices by modifying their beliefs and values through learning. Volunteers who educate and teach others, for example, about existing community problems and practices that can improve the community's welfare also engage in social actions directed towards helping others, including individuals, groups, and communities (Snyder & Omoto, 2007). The other-focused education actions consist of pro-social behaviors that are beneficial to others, including helping, educating, informing, consulting, persuading, advising, sharing, consulting, and guiding others (Hungerford & Peyton, 1977; Patrick et al., 2018; Schott et al., 2019; Sin et al., 2021; Smith-Sebasto & D'Costa, 1995). Krasny et al. (2014) found that teaching others is one of the strongest motivations for volunteer environmental stewards; New York City's oyster gardeners taught multiple audiences of different ages and felt that by teaching others about oysters, they were able to influence behaviors and even change city government policy.

MG and WS often use persuasive, physical, and group/collaborative actions as leader-educators. *Persuasive actions* are aimed at motivating others to reconsider their behaviors/actions (e.g., individuals, groups, businesses, industry, or government; Erdogan & Marcinkowski, 2012; Hungerford & Peyton, 1977; Smith-Sebasto & D'Costa, 1995). Examples of persuasive actions might include persuading others to behave in a manner that promotes the betterment of the community. The examples of physical actions include but are not limited to restoring public gardens and parks, cleaning up rivers or lakes, planting trees in the community area, and installing rain barrels in the individual gardens (Peronto & Murphy, 2009; Smith-Sebasto & D'Costa, 1995). The actions taken as a part of a group are called *collective actions*.

Collective actions are critical to engaging with the community for the common good. *Community engagement* is "the process of working collaboratively with groups of people affiliated by geographic proximity, special concern, community concern or similar situations to address the issues affecting them" (Alter et al., 2017, p. 3). To be engaged means "to play a meaningful role in the deliberations, discussions, decision-making and/or implementation of the projects or programs" (Alter et al., 2017, p. 3), affecting the community members. Community engagement is a powerful source of environmental, social, and behavioral changes to improve collective well-being. McDougale et al. (2011) found that the intensity of volunteer stewardship actions referred to social aspects. Sengupta and Al-Khalifa (2022), who conducted a qualitative study on the motivations of young women volunteers during COVID-19 in Bahrain, found that their main motivations were (1) love for the nation and fulfillment of their duty towards the country, (2) the

desire to do something for humanity and their fellow human beings, and (3) the opportunity to engage in doing something worthwhile and make a difference to the country. The benefits of community engagement during the pandemic included social connection, feeling proud and empowered, feeling in control of one's own life again, compensation for personal losses and tragedies, and confidence and hope (Sengupta & Al-Khalifa, 2022).

The action-taking capacity of volunteers is impacted by a variety of factors, including religion, societal norms, cultural beliefs, environmental conditions, demographics, values, and motives (Gutierrez & Mattis, 2014; Liarakou et al., 2011; McDougale et al., 2011; Measham & Barnett, 2008). Research studies conducted during the COVID-19 pandemic reported a positive connection between volunteer action-taking experiences and volunteer values (e.g., altruism and desire to help others), a sense of moral duty, and a desire to enhance their skills (Chow et al., 2021; Geng et al., 2022). Several studies stressed the importance of leadership and management competencies for enhanced action-taking experiences of volunteers during the pandemic (Chow et al., 2021; Siqueira et al., 2022; Windon & Buchko, 2022). Previous studies reported the negative impact of no volunteer training/experience on health (own and others) in times of emergencies (Whittaker et al., 2015). Quality volunteer training has been shown to help with recruitment and retention (Fahey et al., 2002; Hager & Brudney, 2004).

Previous studies identified some factors that prevent volunteers from taking voluntary stewardship actions. Among those factors were a lack of knowledge and skills (Lowndes et al., 2006; Reed, 2008), lack of empowerment and inclusion in decision-making (Chess & Purcell, 1999; Florin & Wandersman, 1990; Videira et al., 2006), lack of rights and responsibilities given to local groups to promote and participate in co-management governance (Grafton, 2005), burnout (Chirico et al., 2021; Morse et al., 2020), lack of fit with the environment, context, task, and resources (Englert et al., 2020; Lewig et al., 2007; Ramos et al., 2015), and lack of satisfaction with volunteering experiences (Bozeman & Ellemers, 2009; Cheng et al., 2018; Kulik, 2007). The research shows that the action-taking capacity and experiences of volunteers can negatively be affected by a lack of competency (Alfes & Langner, 2017), lack of efficacy (Bandura, 1982; Bandura et al., 1999; Strong & Harder, 2011), lack of knowledge of the community problems (Pan et al., 2018; Schirmer & Dyer, 2018), and lack of motivation (Newberry & Israel, 2018; Strong & Harder, 2011). Understanding the importance of the relationship between volunteer motivation and action-taking experiences/capacity, we conducted this study to assess this relationship.

Purpose and Research Objectives

The study reported here is an offshoot of a more comprehensive study of volunteer stewardship conducted in 2022 (Windon & Buchko, 2022). This quantitative research aimed to assess the relationship between volunteer stewardship action-taking experiences (VSATE), their motivation toward engagement in volunteer activities (MTEVA), and their ability to teach others (ATO)

among the Penn State Extension MG and WS volunteers during the COVID-19 pandemic. Two research objectives guided the present study:

1. Describe the overall VSATE, MTEVA, and ATO among Penn State Extension MG and MW volunteers during the pandemic (COVID-19).
2. Describe to what extent MTEVA and ATO can explain VSATE during the COVID-19 pandemic.

Method

We used a survey research method to examine VSATE during the COVID-19 pandemic. We utilized an online survey via Qualtrics to collect data from the Penn State Extension MG and MW volunteers. This study examined the relationship between VSATE, MTEVA, and ATO among the Penn State Extension MG and MW volunteers.

Participants and Data Collection

Our target population was 3,000 Penn State Extension MG and WS. We followed Dillman et al.'s (2014) online data collection technique. We used a census approach because it allowed us to collect better demographic data and provide accurate results. We did not use a random sampling approach because the cost was not an issue in this research. The final data set included 1,196 responses, providing a response rate of 39.9%.

Instrumentation, Validity, and Reliability

A newly created survey instrument helped explore perceptions of stewardship action-taking experience, motivation toward volunteer actions, and ability to teach others among Penn State Extension MG and WS during the COVID-19 pandemic. We developed three new scales based on the existing literature. The first scale, the *VSATE (Volunteer Stewardship Action-taking Experience) Scale*, helped measure perceptions of volunteers' education actions. Second, the *MTEVA (Motivation Toward Volunteer Actions) Scale* measured the driving sources of volunteers to be engaged in volunteer activities. Third, the *Volunteer's Perception Regarding the ATO (Ability to Teach Others) Scale* measured the volunteer's perception of ability to teach others. A panel of eight Extension educators, Extension organization administrators, and academic faculty members with expertise in survey methodology reviewed the instrument for face and content validity. The panel of experts determined that the instrument was sufficiently valid. A pilot test was conducted to determine the instrument's reliability. Twenty-six Penn State Extension volunteer coordinators and educators participated in the pilot study. The response rate for individuals completing the pilot study was 83% ($n = 21$). The Pennsylvania State University Institutional Review Board approved the research design. The summary of the instrument, reliability statistics, examples of scale items, and literature used are provided in Table 2.

Table 2. Summary of the Instruments Used in This Research

The instrument, Cronbach Alpha Scale	Examples of scale items	Adopted and recommended items from the literature
<i>VSATE Scale</i> (6 items). Five-point Likert scale: 1 (never) to 5 (frequently). Cronbach Alpha: .83.	“Developing and delivering education modules and programs (e.g., in-class session or online),” “Continuously participating in educational events and updating my knowledge.”	Adopted from the following: Alisat & Riemer, 2015; Cheng et al., 2018; Erdogan & Marcinkowski, 2012; Hungerford. & Peyton, 1977; Kim et al., 2007; Liarakou et al., 2011; Schwartz, 1977; Smith-Sebasto & D' Costa, 1992, 1995; Strong & Harder, 2011.
<i>MTEVA Scale</i> (7 items). The five-point Likert scale ranged from 1 = (strongly disagree) to 5 (strongly agree). Cronbach Alpha: .78.	“Volunteer activities that I am engaged in are personally meaningful to me,” “Volunteer activities I am engaged in allow me to contribute to the community betterment.”	The authors developed five items out of seven. Only two items were adapted from Bruyere & Rappe (2007) and Kim et al. (2007): “Volunteer activities that I am engaged in allow me to express my values” and “Volunteer activities that I am engaged in are personally meaningful to me.”
<i>Volunteer's Perception Regarding ATO Scale</i> (3 items). The five-point Likert scale ranged from 1 = (strongly disagree) to 5 (strongly agree). Cronbach Alpha: .64.	“I would like to improve my knowledge on teaching adults/children.”; “I am confident about my ability to teach specific topics to other volunteers.”	Developed by authors.

Control for Nonresponse Error

We used Miller and Smith's (1983) approach and compared early and late responses to evaluate nonresponse errors in this study. The first 40 respondents were assigned as an early-phase respondent group, and the last forty were identified as a late-phase respondent group. Respondents' early and late phases were determined based on the day and time their questionnaire was submitted. We conducted an independent *t*-test to determine if the group mean for total scores on the three measured constructs differed between the two groups of respondents (early and late). The independent samples *t*-test (alpha level of .05, two-tailed) for equality of means for scale scores of constructs between early and late showed no statistically significant differences between early and late respondents. The *t*-test results suggested that nonresponse bias was not an issue (Lindner et al., 2001; Miller & Smith, 1983), and it revealed that the data collected from study participants were representative of the entire study population. We proceeded with caution in interpreting the study findings since the study participants were not a random sample. The results of this study will only apply to the study participants and cannot be generalized to the entire population of volunteers in the state.

Data Analysis

We used SPSS® version 26 to conduct data analysis for our study. This study used the VSATE as the dependent variable. The independent variables (MTEVA and ATO) were treated as interval data. We used descriptive statistics to describe the first research objective. We applied the Pearson correlation coefficient for the second research objective to measure associations between VSATE during the COVID-19 pandemic, MTEVA, and ATO. A multiple linear regression analysis helped to explain the relationship between the variables of interest. Also, we used the standards of the Davis Conventions (1971) to describe the magnitude of the correlation between the independent and dependent variables.

Results

The first research objective was to describe the VSATE, MTEVA, and ATO among Penn State Extension MG and MW volunteers during the COVID-19 pandemic. The mean summative score for the VSATE, MTEVA, and ATO is shown in Table 3. A higher score indicates a higher level of agreement with the scale statement. A lower score indicates a lower level of agreement among study participants' scale statements.

Table 3. Mean and Standard Deviation of VSATE, MTEVA, and ATO During the Covid-19 Pandemic

Item	<i>N</i>	<i>M</i>	<i>SD</i>
Volunteer Stewardship Action-Taking Experiences (VSATE)*	1,100	2.32	.787
Motivation toward Engagement in Volunteer Activities (MTEVA)**	1,196	4.03	.537
Ability to teach others (ATO)**	1,102	3.48	.517

Note. *The scale's items were measured using a five-point Likert scale ranging from 1 = (*never*) to 5 (*frequently*); ** The scale's items were measured using a five-point Likert scale ranging from 1 = (*strongly disagree*) to 5 (*strongly agree*).

The second research objective was to Describe to what extent MTEVA and ATO can explain VSATE during the COVID-19 pandemic. Application of the Pearson correlation coefficient showed a significantly low positive association between VSATE and MTEVA ($r = .280, p \leq .001$) and a moderate positive association with the ATO ($r = .321, p \leq .001$). A multiple linear regression analysis was conducted to determine the relationship between VSATE (the dependent variable), MTEVA (the independent variable), and ATO (the independent variable). The assumption of normality was tested, and an examination of the residuals and the boxplot showed a normal distribution shape. The results indicated that a significant proportion of the total variance in VSATE during the COVID-19 pandemic was predicted by the motivation toward engagement in volunteer actions and the ATO $F(2, 1,089) = 96.723, p \leq .001$. Multiple R^2 indicated that approximately 15.1% of the variation in VSATE during the COVID-19 pandemic could be explained by MTEVA and ATO (Table 4).

Table 4. Multiple Regression Analysis Between VSATE during the COVID-19 Pandemic and MTEVA and ATO

Model Fit					Change Statistics				
	<i>R</i>	<i>R</i> ²	Adj. <i>R</i>	<i>S.E.</i>	<i>R</i> ²	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p-value</i>
1	.388	.15	.149	.73	.151	96.723	2	1,089	.001

Note. *p* < .05

Analysis of variance in overall VSATE is presented in Table 5. Within the final model, the MTEVA was a significant predictor of volunteers’ stewardship action-taking experiences ($\beta = .224$; $p \leq .001$), as well as the ATO ($\beta = .275$; $p \leq .001$). Multiple relations coefficients are presented in Table 6.

Table 5. Analysis of Variance in VSATE during the COVID-19 Pandemic

Model	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p-value</i>
Regression	102.410	2	51.205	96.723	.001
Residual	576.515	1,089	.529		
Total	678.925	1,091			

Note. *p* < .05

Table 6. Multiple Relations Coefficients

Model	<i>B</i>	<i>SER</i>	β	<i>p-value</i>
Constant	-.234	.193		.227
Motivation toward engagement	.339	.043	.224	.001
Ability to teach others	.340	.035	.275	.001

Note. *p* < .05

Discussion and Recommendations

The knowledge gained through this work can expand current understanding regarding the nature, scope, and value of volunteer stewardship action-taking. Theoretically, this study takes an interdisciplinary approach that can apply to the volunteer stewardship literature in Extension education and nonprofit sectors, specifically to environmental volunteer education research.

The literature related to environmental volunteers is substantial. However, there is a lack of volunteer stewardship action-taking studies among community volunteers. The originality of this article is in generating essential insights about volunteer stewardship action-taking, especially in times of uncertainty, such as the COVID-19 pandemic. The findings of our study are consistent with previous studies. The results of this study showed that MTEVA and their ATO significantly predicted VSATE during the COVID-19 pandemic during the pandemic (COVID-19). Ockenden and Hutin (2008) found that allowing volunteers to participate in decision-making and provide input can increase volunteer engagement and enthusiasm. Measham and Barnett (2008) wrote

that volunteers seeking to educate others were likely to motivate others to volunteer. Mayr (2017) emphasized that the training for volunteer leaders should include topics related to volunteer motivation (Grabsch & Moore, 2021) and application to real-life situations (Konuk & Posner, 2021). Stewardship is an outcome of leadership behaviors promoting an organization's well-being (Hernandez, 2008).

A limitation of this study was that we used a convenience sample. Our participants were an available primary data source. A randomized sample of all MG and WS volunteers at Penn State would have strengthened this study. We collected data during the COVID-19 pandemic (late Spring 2021) from existing MG and WS that could affect participants' responses specifically to the stewardship action-taking experiences and motivation toward engagement. Neely et al. (2022a) indicated that the volunteer motivation factor initiates volunteer actions and creates empathy.

The results of our study suggest that volunteer coordinators and Extension and outreach professionals should stimulate volunteers to take action in their local communities by encouraging them to participate in a program that focuses on volunteer motivation toward engagement in volunteer actions and skill enhancement, particularly the enhancement of volunteer leaders' ability to teach others. Windon and Buchko (2022) found that the relevance of the Extension volunteer programs was positively connected to volunteers' satisfaction and retention.

In times of uncertainty, Extension and environmental educators and volunteer coordinators should consider (1) conducting a needs assessment to examine the factors that affect local volunteer leaders to take stewardship actions in local communities, (2) revising or developing volunteer management programs that will help to enhance the stewardship action-taking experience among local community leaders, and (3) increasing volunteer leaders' motivation toward engagement-by enhancing the volunteer-leader skills, including the capacity of volunteer leaders to teach others in their community.

At the same time, the findings can be helpful to other volunteer programs in other states if their volunteers take similar to our participants' roles and have to be better prepared to address the communities' needs in these roles, especially in times of emergency like the COVID-19 pandemic. Being better prepared for community volunteer leaders' roles can help motivate other community members to engage in volunteer activities, especially during sudden changes and demands.

For future research, we encourage future researchers to revise our instrument using the panel of experts from their state and conduct a pilot test. We suggest future research focus on identifying different factors that can affect volunteers' stewardship action-taking experiences, including the impact of community trust and commitment. We also recommend conducting further research that helps to build a more rigorous scientific base in VSATE during times of uncertainty and

change. We also propose that future research address the same research problem with different samples and locations; volunteer motives can vary due to their dynamic nature and the impact of direct and indirect factors.

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Determining the Health Literacy Skills of Extension Audiences in Maryland

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Strong health literacy skills empower people to make informed health decisions, especially those with chronic health conditions striving for positive health outcomes. Half of all people living in Maryland report having at least one chronic disease. Research examining the health literacy of Marylanders is limited. This paper reports how establishing a baseline for health literacy levels of Marylanders can identify major factors affecting the health literacy skills of Extension audiences and lays the important groundwork to develop Extension programs and explore the best delivery methods tailored to the needs of subpopulations. Using the Newest Vital Sign, a validated tool that uses the Nutrition Facts label for measuring health literacy, a cross-sectional study surveyed 636 people living in 23 counties and Baltimore City. The tool was adapted to include the new Nutrition Facts label (effective 2020). Results indicated education ($p < .001$), race ($p < .001$), and gender ($p = .02$) were strongly associated with an individual's health literacy. Extension educators should not make assumptions that the health information they provide is easily understood. Further, they should explore the best approaches to assess the health literacy skills of their target audiences to ensure that information is clearly communicated and can be used to make informed health decisions.

Keywords: health literacy, Newest Vital Sign, Extension, health programs

Introduction and Literature Review

Improving health communication by increasing health literacy within U.S. populations is a priority goal outlined in *Healthy People 2030* (U.S. Department of Health and Human Services [HHS], n.d.). The advisory committee that developed the goals and objectives for this public health framework broadened the definition of health literacy to include personal and organizational health literacy. The framework defines *personal health literacy* as the degree to which individuals can find, understand, and use information and services to inform health-related decisions and actions for themselves and others (HHS, 2021). *Organizational health literacy*

focuses on the degree to which organizations equitably enable individuals to find, understand, and use information and services to inform health-related decisions and actions for themselves and others (HSS, 2021). At the individual level, adequate health literacy skills play a pivotal role in preventing and managing chronic diseases and other health concerns (Miller et al., 2015). Conversely, limited health literacy has been linked to unhealthy lifestyles, including smoking, poor diet, and lack of physical activity, all of which increase the risk of mortality and premature death (Mayberry et al., 2018; Wolf et al., 2007). Individuals with low health literacy skills also tend to have poorer health outcomes and quality of life (Jayasinghe et al., 2016), and they are less likely to use preventive care (Fernandez et al., 2016) compared with those with higher health literacy skills.

According to the 2003 National Assessment of Adult Literacy, only 12% of adults in the United States had proficient health-literacy skills, while more than one-third (36%) had basic or below-basic health-literacy skills and were unable to perform necessary tasks to manage their health (Kutner et al., 2006). In addition, the Centers for Disease Control and Prevention (CDC) reported that nine out of 10 adults struggle to understand and use health information when it is unfamiliar or includes complex terminology (CDC, 2023).

At the organizational level, Cooperative Extension is committed to improving the health literacy of its audiences (Koukel et al., 2018). For instance, the Extension Committee on Organization and Policy (ECOP) developed the 2014 National Framework for Health and Wellness, which identifies health literacy as a key priority (Braun et al., 2014). In 2020, the framework was revised and renamed Cooperative Extension's National Framework for Health Equity and Well-Being. The updated framework continues to reinforce the need to address health inequities among certain populations, such as people of color and those living in rural areas, in regard to how health is communicated and understood (Burton et al., 2021).

Extension educators have the expertise to translate research-based health information into programs and resources for their communities; however, information should be both written and communicated orally at a level that is appropriate for each intended audience (Johnson & Verma, 1990). During the COVID-19 pandemic, people were exposed to an excessive amount of information about the spread and prevention of the virus that was confusing or misleading (or both). Misinformation was especially evident among those with low health literacy skills (Paakkari & Okan, 2020). For Extension educators, this represented a call to quickly disseminate clear, credible information about the virus using multiple innovative education methods to reach target audiences.

Extension's Family and Consumer Sciences (FCS) program is well recognized for its high-quality chronic disease management and prevention interventions (Remley et al., 2018). However, understanding the health literacy levels of potential audiences is crucial for FCS educators to design and offer programs that provide health information that is easily understood.

Six of the top 10 leading causes of death in the United States are diet-related chronic diseases that are preventable by adopting healthy eating habits (CDC, National Center for Chronic Disease Prevention, 2022). In Maryland, heart disease, some types of cancer, stroke, and diabetes are among the top 10 causes of adult deaths in the state. Over 3.5 million people reported having one chronic disease, and nearly 1.5 million had two or more (Partnership to Fight Chronic Disease in Maryland, n.d.). An individual's understanding of a diagnosis and the information needed to manage a chronic health condition effectively can be improved by having adequate nutrition and health literacy skills.

Though some studies have assessed the health literacy skills of Maryland's healthcare professionals (Horowitz & Kleinman, 2012; Koo et al., 2016; Weatherspoon et al., 2015), there is limited research on the health literacy of Maryland's citizens. To the authors' knowledge, no statewide health literacy statistics are available, nor have studies examined the health literacy of Maryland's general population. Therefore, the objectives of this study were to:

- establish a baseline for the health literacy levels of Marylanders,
- identify Extension audiences in Maryland with limited health literacy, and
- identify best methods for reaching these audiences.

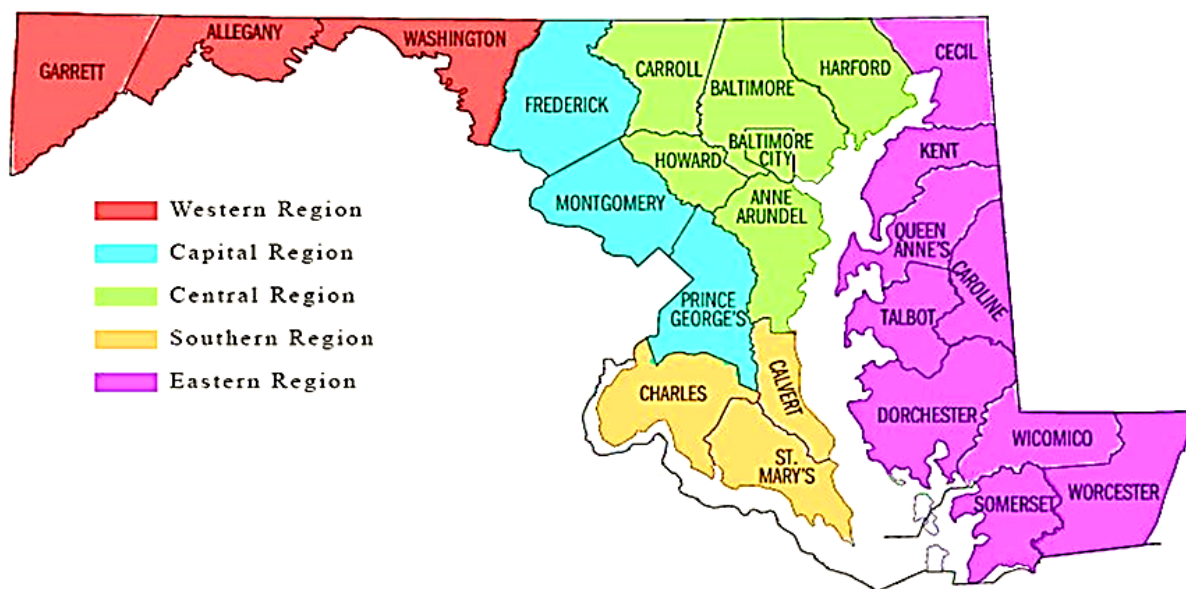
This study focused on consumers' use of the Nutrition Facts (N.F.) label, which is widely utilized by practitioners, educators, and other related audiences to assess health literacy (Mansfield et al., 2020; Persoskie et al., 2017). The label contains nutrient and portion information that is critical for managing diet-related health conditions that are prevalent in the state. In 2020, the Food and Drug Administration (FDA) updated the N.F. label to reflect new scientific information. Also, it made design changes to make it easier for consumers to choose healthy foods (FDA, 2020).

Methods

Study Design and Setting

This cross-sectional study examined the health literacy levels of people living in Maryland. The state's 23 counties and Baltimore City (see Figure 1) were clustered into five geographic regions: western, capital, central, southern, and eastern, which included the entire eastern shore of Maryland. These regions are similar to the programming clusters used by the University of Maryland Extension's (UME) field faculty, who implement health promotion programs in their communities. Regions were then grouped into three categories: (1) rural (i.e., western, eastern, and southern counties), (2) capital (i.e., capital-area counties), and (3) central (i.e., central counties). The Institutional Review Board at the University of Maryland, College Park, Maryland, approved and granted exemption status for this study (1096600-1).

Figure 1. Regional Map of Maryland Counties and Baltimore City



Recruitment

A stratified random sample of participants ($n = 636$) was recruited by purchasing a contact list from QualtricsXM (<https://www.qualtrics.com>), a web-based survey software company. The sample was geographically representative of the state's 23 counties and Baltimore City. Eligible participants were required to (a) live in the state, (b) be 18 years of age or older, (c) be able to read English, and (d) consent to the study. Individuals who did not meet the criteria were excluded from the study. Additionally, the authors provided Qualtrics with regional quotas based on current county populations to program into the contact list. Once a quota was reached, no more participants from that region were recruited.

Data Collection

From September 2017 to October 2017, a one-time, online, English-only survey assessing health literacy and key predictors of health literacy was administered through QualtricsXM. Participants were provided a web link directing them to the survey. The first page of the survey was the consent form. Participants interested in completing the survey were instructed to review the form and type in their name as a signature for consent and requirement prior to starting the survey. If people did not type in their names, they were not able to complete the survey and participate in the study. Once participants signed the consent form, they were directed to the survey, which took approximately 7–10 minutes to complete. Individuals who did not complete the required consent form could not access the survey.

Measures

The survey combined two instruments: the validated Newest Vital Sign (NVS) instrument (Pfizer, 2011) and a nutrition knowledge survey. Additionally, the survey included questions about past food label education, program delivery preferences, and demographic information. The NVS instrument, a highly recognized health literacy tool with demonstrated good internal consistency (Cronbach’s $\alpha = .76$), was used to measure health literacy (Weiss et al., 2005). (Since its development, the NVS instrument has been adapted and validated for other languages and countries; Weiss, 2018.) The instrument, consisting of a series of six open-ended questions using the pre-January 1, 2020 N.F. label (for ice cream), requires participants to find and use information from the label to make calculations, hence assessing both reading and numeracy skills. For this study, we adapted the tool by using closed-ended questions, offering multiple response options for each question (see Table 1).

Table 1. Adapted Questions and Response Options for the Newest Vital Sign Health Literacy Instrument

Question	Response Options
1. If you eat the entire container, how many calories will you eat?	(1) 576 calories (2) 1,380 calories (3) 1,840 calories (4) I don’t know
2. If you are allowed to eat 74 grams of carbohydrates as a snack, how much of this food could you have?	(1) 2/3 cup (2) 1 1/3 cup (3) 2 cups (4) I don’t know
3. Your doctor advises you to reduce the amount of saturated fat in your diet. You usually have 42 grams of saturated fat each day, which includes one serving of this snack food. If you stop eating this snack food, how many grams of saturated fat would you be consuming each day?	(1) 34 grams (2) 38 grams (3) 41 grams (4) I don’t know
4. If you usually eat 2,500 calories in a day, what percentage of your daily value of calories will you be eating if you eat one serving?	(1) About 5% (2) About 10% (3) About 20% (4) I don’t know
5. Please read the ingredient list below. Pretend that you are allergic to the following substances: penicillin, peanuts, latex gloves, and bee stings. Is it safe for you to eat this snack?	(1) Yes (2) No (3) I don’t know
*Percent Daily Values (DV) are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	
Ingredients: Cream, Skim Milk, Liquid Sugar, Water, Egg Yolks, Brown Sugar, Milkfat, Peanut Oil, Sugar, Butter, Salt, Carrageenan, Vanilla Extract.	
6. If no, why not?	Open-ended response

Researchers using closed-ended questions in web-based studies have reported higher yield percentages for answers that are identical in both question forms compared with open-ended questions and produce fewer missing data (Reja et al., 2003). Thus, as an example, for Question 1, “If you eat the entire container, how many calories will you eat?”, our adaptation changed the response from being open-ended to close-ended, allowing respondents to choose from one of four possible answers: (1) 576 calories, (2) 1,380 calories, (3) 1,840 calories (correct answer), and (4) I don’t know. We also used the NVS instrument to measure health literacy using the post-January 1, 2020 N.F. label (i.e., in effect January 2020). The same six open-ended questions were adapted to closed-ended questions for the post-January 1, 2020, N.F. label to determine if the FDA’s changes made it easier for consumers to use the label. In line with the NVS instrument implementation and scoring guidelines, each correct answer was scored 1 point, with a maximum score of 6 points (Pfizer, 2011). A score of 0–1 suggests a high likelihood (50% or more) of limited health literacy. A score of 2–3 indicates the possibility of limited health literacy, and a score of 4–6 almost always indicates adequate health literacy (Pfizer, 2011). In this study, a score of 0–3 was labeled as limited health literacy, and a score above 3 was labeled as adequate health literacy. The six questions for both the pre-January 1, 2020, and the post-January 1, 2020 labels were scored separately. In addition to the 12 questions for both N.F. labels, participants were asked one question about prior food label education.

Six demographic questions were asked to understand and explain any differences in Nutrition Health Literacy scores: gender, race, ethnicity, income, education, and geographic location. One question asked about prior food label education (e.g., participation in a class/workshop or reading about food labels in brochures and booklets). One question asked participants to rate the likelihood of attending health-related education programs in seven education program-delivery methods: (1) in-person, (2) web-based live, (3) web-based recorded, (4) mobile app (e.g., cell phone, tablet, etc.), (5) YouTube video, (6) combination of the above methods, and (7) other. Responses were measured using a 5-point Likert scale and were used for internal Extension programming purposes.

Data Analysis

Using SPSS version 24.0 (<https://www.ibm.com/products/spss-statistics>), we performed descriptive statistics to describe the demographics of the sample. Wilcoxon signed-rank test determined health literacy score differences between the pre-and post-January 1, 2022, N.F. label. Spearman rank correlation assessed associations among variables. Logistic regression examined the effects of independent variables on the dependent variable, that is, the level of health literacy (limited vs. adequate). Independent variables were sociodemographic characteristics and previous food label education (yes/no).

Results

Sociodemographic Characteristics of Study Participants

Table 2 reports the participants' demographic characteristics. Of the 636 participants who completed the survey, approximately one-half (50.2%) were female, and the majority (71.5%) were White. In this sample, a mean ± S.D. age of 46.9 ± 16.5 years and an educational level of bachelor's degree or higher (54.2%) were reported. Less than half of the participants (46.5%) reported household incomes equal to or above \$75,000. Approximately 15% of participants resided in the rural region of Maryland; however, most resided in the capital and central regions. Most participants (70.8%) responded that they had never received any food label education; however, approximately one quarter (25.5%) reported receiving some food label education in a class/workshop or reading about food labels in brochures and booklets. Table 2 also shows the comparison between participants' demographic characteristics and their health literacy skills.

Table 2. Participants' Demographic Characteristics and Levels of Health Literacy

	Mean (S.D.) or N (%)			p-value
	All (n = 636)	Limited HL [‡] (n = 129)	Adequate HL [‡] (n = 507)	
Age (range 18–88 years)	46.9 ± 16.5	42.7 ± 16.2	48.0 ± 16.4	.001**
18–24 years	49 (7.7)	19 (14.7)	30 (5.9)	.002**
25–39 years	206 (32.4)	46 (35.7)	160 (31.6)	
40–60 years	209 (32.9)	40 (31.0)	169 (33.3)	
> 60 years	172 (27.0)	24 (18.6)	148 (29.2)	
Gender				.056
Female	319 (50.2)	55 (42.6)	264 (52.1)	
Male	317 (49.8)	74 (57.4)	243 (47.9)	
Race/Ethnicity				<.001**
White/Non-Hispanic	455 (71.5)	65 (50.4)	390 (76.9)	
Black/African American	109 (17.1)	38 (29.5)	71 (14.0)	
Asian/Pacific Islander	37 (5.8)	13 (10.1)	24 (4.7)	
Hispanic or Latino	26 (4.1)	10 (7.8)	16 (3.2)	
Other	9 (1.4)	3 (2.3)	6 (0.6)	
Education				<.001**
< High school graduate/GED	101 (15.9)	41 (31.8)	60 (11.8)	
Some college or associate degree	190 (29.9)	38 (29.5)	152 (30.0)	
> Bachelor's degree	345 (54.2)	50 (38.8)	295 (58.2)	
Annual Income				.004**
Less than \$25,000	66 (10.4)	23 (17.8)	43 (8.5)	
\$25,000–\$49,999	141 (22.2)	34 (26.4)	107 (21.1)	
\$50,000–\$74,999	133 (20.9)	24 (18.6)	109 (21.5)	
\$75,000 and over	296 (46.5)	48 (37.2)	248 (48.9)	

	Mean (S.D.) or <i>N</i> (%)			<i>p</i> -value
	All (<i>n</i> = 636)	Limited HL [¥] (<i>n</i> = 129)	Adequate HL [¥] (<i>n</i> = 507)	
Region				NS
Rural counties	97 (15.3)	17 (13.2)	80 (15.8)	
Capital counties	226 (35.5)	56 (43.4)	170 (33.5)	
Central counties	313 (49.2)	56 (43.3)	257 (50.7)	
Previous Food-Label Education, %				.01*
Never received any education	450 (70.8)	77 (59.7)	373 (73.6)	
Participated in a class/workshop	51(8.0)	15 (11.6)	36 (7.1)	
Read about food labels in brochures	111(17.5)	28 (21.7)	83 (16.4)	
Not sure	24 (3.8)	9 (7.0)	15 (3.0)	
Types of Preferred Education, (Likely to attend, %)				
YouTube	294 (46.2)	67(51.9)	227 (44.8)	NS
Web-base, recorded	287 (45.1)	58 (45.0)	229 (45.2)	NS
Mobile app	242 (38.1)	60 (46.5)	182 (35.9)	NS
Web-based, live delivery	235 (37.0)	57 (44.5)	178 (35.1)	NS
In-person	158 (24.8)	57 (44.2)	101 (19.9)	<.001**
Combination of the above	277 (43.6)	71 (55.0)	25 (22.7)	.005**

Note. ¥ Newest Vital Sign score 0–3 = limited health literacy; score 4 and above = adequate health literacy.

§ Chi-square test of independence and Mann-Whitney U test were used for categorical and continuous variables, respectively. Statistically significant at **p* < .05; statistically highly significant at ***p* < .01; N.S. = not significant.

Prevalence of Limited Health Literacy and Demographic Associations

The findings revealed that 20.3% of participants (*n* = 129) had a limited health literacy level. When comparing limited health literacy to adequate health literacy groups (see Table 2), the limited health literacy group was younger (*p* = 0.001) and less educated (*p* < .001), had lower income (*p* = .004), and included more racial or ethnic minorities (*p* < .001). A significantly higher proportion of the adequate health literacy group responded that they had never received food-label-related education (*p* = .01). Individuals with limited health literacy preferred in-person education (*p* < .001) as well as a combination of web-based education platforms (*p* = .005).

Key Factors Affecting Health Literacy

Logistic regression was conducted to identify key factors affecting health literacy (see Table 3). The Hosmer-Lemeshow test indicated that the data fit the model well. The logistic regression model was statistically significant (*p* < .000) and explained 21% (Nagelkerke R²) of the variance in health literacy.

Table 3. Effects of Key Predictors on Health Literacy Levels

Variables	Beta	Exp(B) Odds Ratio	96% Confidence Interval	p-value
Constant				
Age ^ 18–24 years				
25–39 years	.02	1.02	.45–2.29	.96
40–60 years	.30	1.35	.60–3.08	.47
> 60 years	.44	1.55	.65–3.72	.33
Gender ^ Male	.54	1.72	1.10–2.67	.02*
Region ^ Rural				
Central	-.26	.77	.38–1.55	.46
Capital	-.02	.98	.50–1.94	.96
Race & Ethnicity^ White/Non-Hispanic				
Asians	-1.34	.26	.12–.60	.002**
African Americans	-.89	.41	.23–.72	.002**
Hispanic/Latino	-.75	.47	.17–1.35	.16
Other	-1.17	.31	.07–1.37	.12
Education ^ ≤High school/GED				
Some college or AA	1.16	3.18	1.73–5.86	<.001**
> BS degree	1.43	4.19	2.24–7.86	<.001**
Annual Income ^ < \$25k				
\$25,000–\$49,999	.45	1.57	.72–3.43	.26
\$50,000–\$74,999	.43	1.53	.69–3.42	.30
> \$75,000	.32	1.37	.64–3.72	.42
Food label education ^ Never received				
Yes (class/workshop, brochures, etc.)	-.16	.85	.52–1.40	.53

Note. ^ Reference category. Statistically significant at * $p < .05$; statistically highly significant at ** $p < .01$.

Beta = beta coefficient, Exp(B) = exponentiation of the beta coefficient, which is an odds ratio

Gender, education level, ethnicity, and race were strong predictors of health literacy level. The odds of having adequate health literacy were 1.72 times greater for females ($p = .02$). Individuals with some college or an associate degree were 3.18 times more likely to have adequate health literacy, and those with a bachelor’s degree or higher were 4.19 times more likely compared with individuals with high school or less than high school ($p < .001$, $p < .001$), respectively.

Race and ethnicity were also associated with health literacy. Compared to non-Hispanic Whites (reference group), the odds of having adequate health literacy were statistically significantly lower among Asians and African Americans, 74% and 59%, respectively ($p = .002$, $p = .002$). Compared with non-Hispanic Whites, Hispanic and Latino groups also had lower odds (i.e., a lower chance) of having adequate health literacy, but it was not statistically significant. Being male and non-White and having less education were associated with limited health literacy after controlling for covariates.

Comparison of Pre-January 1, 2020, and Post-January 1, 2020, N.F. Labels

Participants' NVS scores for the original and new N.F. labels were compared to determine whether the new changes helped consumers interpret the information more easily. Average NVS scores using the original and new labels were 4.71 ± 1.43 and 4.75 ± 1.45 , respectively, indicating participants' scores were above three and that they had adequate health literacy reading both labels. Participants' NVS scores between the original and new N.F. label were not statistically significantly different.

Discussion

Health literacy in Maryland's general population has not been well studied despite the existence of health disparities that disproportionately affect less educated, low-income, and/or racial and ethnic groups in the state. To the authors' knowledge, this is the first study assessing the health literacy of Maryland adults. The following discussion focuses on the three study objectives identified earlier in this article.

Establish a Baseline for the Health Literacy Levels of Marylanders

Adequate health literacy skills are essential for individuals to navigate the complex health system in the United States. As people become more confident communicating with their healthcare providers, they are better able to understand their health-related needs. Adhering to diet, medication, and other instructions provided by their healthcare team empowers them to make more informed decisions about their health.

Extension educators have an obligation to provide health information that is accessible and easy to comprehend for people to improve and achieve personal health-related outcomes. Yet, lacking a baseline metric, it cannot be known if educators are offering needed and relevant programming. Educators may be required to assess the health literacy skills of their audiences to accomplish this. This research helps our Extension team to identify, develop, and/or adapt programs and educational resources tailored to the health literacy skills and the specific health needs of the communities they serve.

Identify Extension Audiences in Maryland with Limited Health Literacy

Results from this study support findings in existing literature that social determinants of health, such as education level, race, and income level, are associated with health literacy levels (Braveman & Gottlieb, 2014). Education was a key predictor of health literacy. Maryland adults in this study who were more educated (i.e., had completed some college and/or earned bachelor's or advanced degrees) had higher health literacy than those who had attended some high school or earned a high school/GED diploma. These results were not surprising and are supported by previous research (van der Heide et al., 2013).

Race/ethnicity was also a key indicator of health literacy, a finding also supported by previous research (Chaudhry et al., 2011). Asian and African American Marylanders had lower health literacy skills compared with their White/non-Hispanic counterparts. This is a concern since chronic diseases are 1.5 to 2 times more prevalent in minority populations. Chronic diseases such as obesity, hypertension, high cholesterol, and diabetes are more prevalent in adult Black populations compared with Whites in Maryland (Maryland Department of Health, n.d.). The highest contributor to medical costs among all health conditions and lost employee productivity is chronic disease-related health problems (Partnership to Fight Chronic Disease in Maryland, n.d.).

Women in this study had higher health literacy than men, a finding supported by previous research (Clouston et al., 2017; Shah et al., 2010). One explanation for the difference in health literacy between males and females is that the NVS instrument requires participants to read and interpret food labels. Women may be more familiar with reading food labels due to their traditional roles in purchasing and preparing foods (Jackey et al., 2017).

Living in a specific geographical region or in a rural or urban area in Maryland was not a predictor of health literacy. Participants living in the capital and central regions of the state were more likely to have limited healthy literacy skills than those living in the rural region; however, the difference between the two regions was not statistically significant. Counties in the capital and central regions have urban, suburban, and rural areas, but we did not ask participants to specify the areas where they lived.

Identify Best Methods for Reaching These Audiences

The role of Extension has traditionally centered on educators delivering programs and resources in person to their audiences. To retain current audiences and recruit new ones, educators may need to pivot and create new learning experiences that are more learner-centered and promote more interaction and participation using multiple delivery methods. For many educators, this may require training in different program delivery methods (web-based instruction, hybrid, podcasts, etc.). In our study, Marylanders with limited health literacy preferred in-person education as well as a combination of web-based education platforms. These results also prompted new research in 2019 to test education program delivery methods (i.e., online and hybrid workshops) in rural communities. This was especially timely during the COVID-19 pandemic when the need for web-based synchronous and asynchronous instruction and audio education programs for audiences with visual impairments were in high demand since in-person education was prohibited. Barriers to web-based and hybrid delivery methods are important to consider, especially with rural populations that may not have adequate access to the internet.

There were some limitations to this study. First, using a stratified sample across regions in the state produced a small number of rural participants and limited diverse ethnic and racial populations. Future studies focusing on specific rural populations and ethnic communities could

provide a more in-depth understanding of health literacy among these populations. Also, the sequence of the appearance of the original and new N.F. labels in the survey might have been a limitation. All participants viewed and responded to questions related to the original N.F. label first, followed by the new N.F. label. Randomizing the appearance of these labels could possibly alter health literacy scores. While the NVS instrument was validated for in-person administration, public health practitioners have used other delivery methods, such as computer or telephone, producing similar results (Mansfield et al., 2018; McKee et al., 2015; Russell et al., 2019). Opportunities for further research include determining health literacy by geographic regions and urban and rural areas. Identifying which education delivery methods work best for limited-literacy audiences represents another potential area for research. Finally, future studies could focus on determining whether the current N.F. label is easier for consumers to use, especially those with low health literacy.

Applications of Study Outcomes

Study results were shared at an FCS in-service meeting to encourage educators to consider the health literacy skills of their audiences when developing health- and nutrition-based education programs and resources. To further enhance their health communication skills, University of Maryland Extension educators also attended health literacy/clear communication workshops provided by the university's School of Public Health, Horowitz Center for Health Literacy. In these workshops, FCS educators were introduced to the CDC's Clear Communication Index (CCI), designed to assess whether health resources are written in plain language that can be easily understood by the general public (CDC, 2019). Educators began using this tool to incorporate simple, effective, and clear language in current and new written and oral program resources. For example, the CCI was used to score *Recipe Swaps: Common Substitutions for Making Recipes Healthier*, a new peer-reviewed consumer fact sheet; Session 1 of *Dining with Diabetes*, a national Extension program for testing a new online and hybrid course method; and blog postings developed for the FCS team's *Breathing Room* blog.

The N.F. label provides vital nutrient and ingredient information for consumers to make informed decisions about their health. FCS educators updated existing label information in current nutrition-related curriculums by incorporating the new N.F. label and clear and simple messages about how to use the food labels. Including easy-to-understand language in the curriculums allows audiences with limited health literacy who have chronic diet-related conditions and difficulty reading food labels to learn how to choose healthful foods to manage their health.

Conclusions

Adequate health literacy skills play a daily role in the lives of individuals making decisions about their health, whether they are following medical instructions or reading food label information to choose and purchase healthy foods. Indeed, it has been well-documented that health literacy is a

key determinant of health inequities across many groups (Rikard et al., 2016). Those with limited health literacy skills are at a disadvantage in understanding health information. In addition to making poor health-related decisions, they may not recognize the connection between lifestyle choices, such as following a healthy diet and being active, and the impact of those choices on their health.

Extension educators should assess the health literacy skills of their audiences rather than assuming that the health information they provide is easily understood. There are several approaches to assessing health literacy. First, in addition to the NVS instrument used in this study, Ylitalo et al. (2018) identified numerous other screening tools available to formally assess health literacy, including the Test of Functional Health Literacy in Adults (TOFHLA), the Rapid Estimate of Adult Literacy in Medicine (REALM), and the U.S. Health Literacy Scale (HALES). Second, educators could use a simple technique like teach-back—an informal approach that requires participants to summarize information provided during a health-related Extension program to determine if it was communicated effectively and understood. Lastly, the CDC’s CCI can be used by educators interested in assessing their current written resources and developing new ones to predict how easily they will be understood and used by their audiences. Assessing and knowing the health literacy skills of a target audience will help Extension educators deliver health information that is written in plain, clear language and that is easily understood.

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Equipping Extension Professionals to Lead Volunteer Systems: An Evaluation of an Online Course

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Extension professionals enter their role with content-specific expertise; however, experience in volunteer leadership and management competencies is often limited. This study focused on the effectiveness of the Achieving the Extension Mission Through Volunteers (AEMTV) course in preparing professionals to use the Identification, Selection, Orientation, Training, Utilization, Recognition, Evaluation (ISOTURE) model to learn and apply volunteer systems concepts in a cohort-based online learning environment. We used quantitative and qualitative methods to assess how the course impacted participants and the programs they lead. Data from 127 participants indicated they increased their knowledge, improved volunteer systems, and influenced the quality of programming delivered in communities. Our research confirmed that the ISOTURE model (Boyce, 1971; Dolan, 1969) continues to be an effective framework for learning and applying volunteer systems management practices. We recommend that Extension collaborates across states to formalize and create additional online professional development relevant to all program areas to elevate Extension's impact nationally.

Keywords: professional development, ISOTURE, online learning, volunteer systems, volunteers, achieving the Extension mission through volunteers

Introduction and Literature Review

Extension professionals enter their role with content-specific expertise; however, experience in volunteer leadership and management competencies is often limited. Volunteers are critical in the delivery and outreach of Extension programs, leading to changes in community conditions and contributions to public value (Allred et al., 2011; O'Neil et al., 2021; Van Den Berg & Dann, 2008). Volunteer development is a core competency to Extension professionals' work (Cooper & Graham, 2001; Diem, 2009; Donaldson & Vaughn, 2022; Heck et al., 2009; Stone & Rennekamp, 2004).

The North Central Region Volunteer Specialists identified an absence of consistent and accessible training on volunteer leadership development and managing volunteer systems. Achieving the Extension Mission Through Volunteers (AEMTV) course was developed to address this need for Extension professionals who utilize volunteers to deliver programs (North Central Regional 4-H Volunteer Development, 2021). This national cohort-based online course increased availability for in-depth professional development and created a space for collaborative learning across Extension disciplines (Robideau & Santl, 2020).

Non-credit adult learners need to understand and commit to the increased time required to complete online course activities (Vu et al., 2014). Active participation leads to application when the learner designates time on their professional calendar to engage in cohort learning (Robideau & Santl, 2020). This is a new experience for professionals who are accustomed to shorter online or in-person workshops that occur at specified times.

North Central Extension Deans and Directors and 4-H Youth Development Program Leaders provided financial support for course development. We utilized the team approach to online development that follows the ADDIE (Assess, Design, Develop, Implement, Evaluate) model (Robideau & Vogel, 2014). This approach capitalized on the content expertise of experienced Extension professionals and delineated clear roles to facilitate course development. Roles included one project manager, three educational designers, and 14 content experts from eight states. North Central Volunteer specialists and an Extension evaluation specialist led the evaluation.

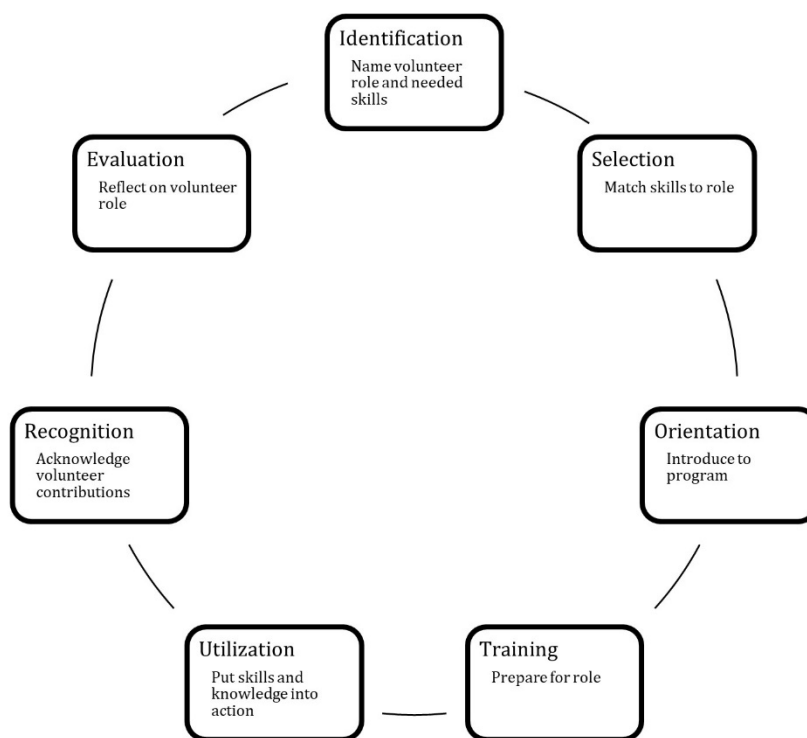
Content experts identified three areas of research that provided the course framework:

1. The Identification, Selection, Orientation, Training, Utilization, Recognition, Evaluation (ISOTURE) Model (Boyce, 1971; Dolan, 1969).
2. The Developmental Stages of an Extension Professional (DSEP) Model (Rutledge, 2021).
3. Communicating the Public Value of Extension Programs to Stakeholders (Franz, 2015; Kalambokidis, 2004).

We were intentional in the design of a cohort-based online learning experience for multiple disciplines. These three research areas also provided the framework for the evaluative study.

The first was the **Identification, Selection, Orientation, Training, Utilization, Recognition, Evaluation (ISOTURE) model** (Boyce, 1971; Figure 1). This model provided the framework of the course. The course modules prepared participants to implement volunteer development and administration practices. Boyce (1971) outlined a seven-step process for working with volunteers, otherwise known as the ISOTURE model. ISOTURE stands for *identification* of the volunteer, *selection* of the role that is best suited for the volunteer, *orientation* of the volunteer to the role and organization, *training* the volunteer and adding to their knowledge and skill set, *utilization* of the volunteer in the role they have been selected and trained to carry out, *recognition* of the volunteer’s contributions, and *evaluation* of the volunteer’s role.

Figure 1. “ISOTURE Model”



Effective organizations utilize a volunteer framework (Culp, 2012; Windon et al., 2021), like ISOTURE. Boyd (2004) identified the importance of professional development around the seven ISOTURE steps to be effective volunteer managers. Washburn et al. (2020) indicated that the readiness of the professional to involve the volunteer in program planning and implementation starts with meaningful engagement of volunteers. Ongoing evaluation of volunteers is important to recognize their meaningful contribution and sustain their engagement (Culp, 2012). Volunteers help expand the programmatic reach of Extension professionals; therefore, it is important to provide leadership development opportunities for volunteers (Boyce, 1971).

Next, the **Developmental Stages of the Extension Professional (DSEP) model** (Rutledge, 2008) provided a framework to prepare professionals to work with volunteers and support volunteer development. The DSEP model of service, education, management, and leadership builds on Boyce's (1971) research of ISOTURE volunteer engagement practices and transformational leadership (Bass & Avolio, 1990), resulting in increased Extension outreach. Rutledge's framework connects to the "Utilization" step in ISOTURE, intentionally engaging volunteers throughout the stages. The DSEP model depicts how professionals can move through the developmental stages and encourages staff to assess the situation and adjust their leadership style to build capacity in volunteers. Rutledge's leadership and management experiences over 40 years as a county educator, area educator, program specialist, and program leader allowed him to test and apply research, resulting in the creation of the DSEP model (Rutledge, 2021).

The third area of research was **Communicating the Public Value of Extension Programs to Stakeholders** (Franz, 2015; Kalambokidis, 2004). This provides a structure for professionals to empower volunteers to create message points around communicating the public value of Extension programs. The work of Extension volunteers leads to changes in communities and contributions that have impacts far beyond the local program where they volunteer. The public value of Extension volunteers has been documented and supports the need to focus on volunteer systems in the development of Extension professionals. As Extension budgets tighten, attention needs to be placed on engaging volunteers in community programming that increases civic engagement, better connects communities, makes communities stronger, and improves the health of communities, resulting in increased public value (O'Neil et al., 2021). This includes supporting and partnering with Extension volunteers as they contribute value to the communities in which they live and work (Franz, 2011).

Professionals in the course engage in content, reflect on their work, and apply volunteer systems concepts to their programs. They spend four to six hours per week completing designated modules while interacting with online activities, including pre-recorded presentations, discussion boards, and live webinars. The online learning community extends beyond geographical borders and supports networking across states and disciplines. Nearly 1,000 professionals representing multiple program areas from 40 states took the course between 2015–2022. Figure 2 (AEMTV Course Outline) contains the course details and content.

Figure 2. AEMTV Course Outline

Course Week	AEMTV Course Content	Cohort Participant Notes
Week 1	<p>Intro Week: The first week of the course is very important! Before we dig into the content, we work to develop our online learning community, ensure all participants are familiar with the course site, understand how to write & interact in Discussion Boards, and ensure that everyone has the technology they need to be successful.</p>	Block 30 min. to 2-hour segments of “course work” on your calendar this week, adding up to 4-6 hours
	<p>Video Conference Call #1 Creating Your Online Learning Community Cohort facilitators will guide a conversation, with time for questions and comments.</p>	Participate in a Video Conference Call with your cohort. Link will be provided by facilitators.
Week 2	<p>Module 1: Volunteerism in Extension After this Module you will be able to:</p> <ul style="list-style-type: none"> ● Define volunteerism and how critical volunteers are to Extension programs. ● Recognize the elements of an effective volunteer delivery system and the role of the volunteer program manager within the context of local Extension programming. ● Assess current volunteer delivery systems including specific elements of volunteer development, volunteer system management and personal readiness. ● Identify your personal approach to volunteerism as it relates to your volunteer program manager role. <p>Module 2: Trends and Motivations After this Module you will be able to:</p> <ul style="list-style-type: none"> ● Articulate trends in volunteerism, including identifying generational differences in volunteers, differentiating between traditional volunteers and potential new volunteer types 	Block 30 min. to 2-hour segments of “course work” this week, adding up to 4-6 hours
	<p>Webinar #1: Volunteerism in Extension and Course Introduction</p>	Participate in 1 of the 2 webinar presentations. Link on course site.
Week 3	<p>Module 3: Identifying and Recruiting Volunteers After this Module you will be able to:</p> <ul style="list-style-type: none"> ● Conduct a community assessment of volunteer capacity ● Create a volunteer role description to match identified needs ● Develop a volunteer recruitment plan 	Block 30 min. to 2-hour segments of “course work” on your calendar this week, adding up to 4-6 hours

<p>Week 4</p>	<p>Work Week</p> <ul style="list-style-type: none"> This week is designed to provide an opportunity to dive deeper into the first few weeks of content and to catch up with any incomplete course activities to ensure you are prepared to participate in Modules 4-6. 	<p>Work Week – Content Deep Dive, Block the time you need to complete coursework to this point</p>
	<p>Video Conference Call #2: Deeper Dive into Topics Identified by Cohort Cohort facilitators will guide a conversation, with time for questions and comments. Then, there will be an opportunity to dig deeper into course topics that are of interest to the cohort group</p>	<p>Participate in Video Conference Call with your cohort. Link will be provided by facilitators</p>
<p>Week 5</p>	<p>Module 4: Selecting and Matching Volunteers After this Module you will be able to:</p> <ul style="list-style-type: none"> Identify best practices of selecting volunteers Locate local policies and procedures related to your program area Explain components of a volunteer orientation 	<p>Block 30 min. to 2-hour segments on your calendar of “course work” this week, adding up to 4-6 hours</p>
<p>Week 6</p>	<p>Module 5: Supporting Volunteers After this Module you will be able to:</p> <ul style="list-style-type: none"> Determine appropriate training for volunteers using role description. Apply formal and informal methods of recognizing volunteers according to their individual motivation. Build rapport with volunteers that reflect professional boundaries and communication. Apply appropriate coaching methods to volunteer systems management. Implement a comprehensive volunteer support system that includes training, coaching, and recognition. 	<p>Block 30 min. to 2-hour segments of “course work” on your calendar this week, adding up to 4-6 hours</p>
	<p>Webinar #2: Handling Volunteer Dilemmas and Practicing Feedback</p>	<p>Participate in 1 of the 2 webinar presentations. Link provided on course site.</p>
<p>Week 7</p>	<p>Module 6: Communicating Public Value After this Module you will:</p> <ul style="list-style-type: none"> Understand the impact of volunteers to Extension and how they extend the university's reach. Distinguish the difference between individual, organizational and public value. Understand methods to assess stakeholder perspectives. Demonstrate how communicating value can be integrated into programming. Articulate the impact of volunteer involvement in your local program. 	<p>Block 30 min. to 2-hour segments of “course work” this week, adding up to 4-6 hours</p>
	<p>Video Conference Call #3: Put it to Practice Cohort facilitators will guide a conversation, with time for questions and comments. Cohort members each share an example of how they will use content from the course.</p>	<p>Participate in the final Video Conference Call with your cohort.</p>

	Webinar #3: Communicating Public Value and Applying ISOTURE to your work	Participate in 1 of the 2 webinar presentations. Link provided on course site.
	Course Completion	Last day course is moderated by cohort facilitators. Course is open through March.

Purpose of Study

This paper focuses on the effectiveness of the AEMTV course in preparing professionals to use the ISOTURE model to learn and apply volunteer systems concepts in a cohort-based online learning environment. The DSEP model results will not be discussed. We designed and administered an evaluation to

1. Document the ISOTURE model knowledge gained by individuals.
2. Assess to what extent participants applied course learnings to their role.
3. Determine the extent to which participants increased their networking with other professionals.
4. Assess the impact of a cohort-based online learning experience.

Methods

Census

We focused on the experiences and outcomes of professionals who participated in the AEMTV course. The census represented four years of cohort participants from 2015 (pilot year) through 2018. Prior to recruiting participants, state volunteer specialists confirmed email addresses for individuals who completed the course and were still employed by Extension. After accounting for incorrect email addresses, 379 individuals were invited to participate in the study.

We had 154 respondents (41% response rate) from 17 states. Those missing significant data or key variables were removed from the analysis, resulting in 127 respondents. The majority of respondents (54%) had five or fewer years of Extension experience. Table 1 illustrates the demographics of the census: gender, race/ethnicity, and program area.

Table 1. Covariates / Demographic Information (N = 127)

Characteristic	n	%
Gender		
Female	91	72
Male	18	12
Preferred not to respond	20	16

Characteristic	<i>n</i>	%
Race / Ethnicity		
American Indian / Alaska Native	1	1
Black / African American	2	2
White	101	79
Preferred not to respond	12	18
Program Area		
4-H Youth Development	85	67
Agriculture (Master Gardeners, etc.)	24	19
Family Living / Health & Well Being / Human Development	6	5
Natural Resources	2	1
No Response	10	8

Instrument Design

We designed a questionnaire to measure each course outcome. The study used quantitative and qualitative methods to assess how the course impacted participants and the programs they lead. Each research objective was assessed with both quantitative and qualitative questions. This methodology was useful for addressing a mixed methods approach (Stoecker & Avila, 2021). We developed an online survey using a retrospective pretest-posttest design to measure course participants’ understanding and application of the ISOTURE model (Boyce, 1971), the DSEP model (Rutledge, 2008), and the online learning experience, including networking.

A closed-ended 4-point Likert scale, from *Strongly Disagree* (1) to *Strongly Agree* (4), was used to collect quantitative data. Questions were divided into three constructs containing multiple items to understand Extension professionals’:

1. knowledge and readiness (eight items aligned with the ISOTURE model),
2. behavior changes (six items), and
3. programmatic changes (six items) when working with volunteers.

By analyzing each item separately, we measured a single knowledge and readiness construct by combining individual items into a single metric. Quantitative survey questions related to this article can be found in Tables 2 and 3.

The reliability of the scales for the three main constructs was tested using Cronbach’s alpha. The Cronbach alpha results were .910 for knowledge and readiness items, .736 for behavior change items, and .684 for programmatic changes when working with volunteers. The results indicated (knowledge and readiness) scales were strong and (programmatic changes when working with volunteers) were moderately reliable (Bernardi,1994; Bonett & Wright, 2015; Field, 2013).

We made a deliberate decision to include open-ended questions to align with each construct and learn more about the subject being studied through the participant’s qualitative comments. Their comments added to the richness of the data and supported the quantitative results (Fielding,

2012). The goal of qualitative research is to formulate ideas and theories to learn more about the subject being studied (Rossman & Rallis, 2003), so we included open-ended questions aligned with the ISOTURE model (Boyce, 1971), the DSEP model (Rutledge, 2008), and the online learning experience (Robideau & Matthes, 2021). We used the Creswell and Plano Clark (2017) mixed methods triangulation to design the evaluation. This design compares and contrasts quantitative and qualitative results and then interprets the two together. Creswell and Plano Clark (2017) noted this method is “used when a researcher wants to directly compare and contrast quantitative statistical results with qualitative findings or to validate or expand quantitative results with qualitative data” (p. 62).

The survey was reviewed by the University of Wisconsin IRB, which determined that an IRB was not needed since it was a course evaluation. Data were collected using a single Qualtrics electronic survey. Dillman’s (2007) tailored design method was used to increase the response rate. We piloted the survey with participants in multiple states to ensure question clarity and construct alignment. We used an introductory email message to alert course participants to the survey and the importance of the evaluation. We then sent a message with the first survey link and two reminder emails over a four-week period to individuals who had not completed it.

Data Analysis

We conducted a simple frequency analysis of individual items and calculated basic descriptive statistics, including mean and standard deviation. As an initial step, all data were cleaned following the recommendations of Morrow and Skolits (2012), and information was de-identified. Tests for normality and outliers were completed following the guidance of Gordon (2010). We examined the three main constructs measured on the questionnaire: (a) eight-item measure of knowledge and readiness, (b) six-item measure of application/behavior change, and (c) six-item measure of programmatic change. Mean scores for each construct were generated in order to provide an overall score. We tested the reliability of these measures using Cronbach’s alpha. All statistical analyses were conducted using STATA 14.1 (StataCorp, 2015). To analyze the retrospective pretest-posttest items for change, we used paired sample *t*-tests and calculated effect size using Cohen’s *d*. We used analysis of variance to test for differences that could be attributed to covariates, including program area, years working with Extension, and generations.

Questions guiding our qualitative analysis were “As a result of taking this course as an Extension professional, (a) Describe how you work with volunteers differently and (b) Share one way you have moved from doing a project, event, or activity yourself to empowering volunteers to take leadership for that project, event, or activity.” We conducted thematic coding of open-ended responses to understand how the course led to participants’ increase in knowledge and behavior change. Qualitative responses were coded and analyzed using MAXQDA (VERBI Software, 2017) and a collaborative data jam process (Schmieder et al., 2018) to develop summarizations, initial theories, and visualizations. Primary coding aligned with the ISOTURE

model (Boyce, 1971), the DSEP model (Rutledge, 2008), and online learning (Robideau & Matthes, 2021). Through this process, other emergent themes were identified. Using Creswell and Plano Clark’s (2017) methods, further validation of items was confirmed as the research team found similar themes in responses to the open-ended items for each set of questions.

Results

The quantitative and qualitative analysis demonstrated the online course met the needs of learners, regardless of their age, gender, or program area. All items tested at the 95% confidence level. No statistical differences between demographic groups, disciplines, or states were found.

ISOTURE Knowledge Gained

The findings demonstrated how participants applied the ISOTURE model to their work with volunteers in Extension programs. The quantitative results confirmed the course met the objectives (see Table 2). Respondents rated each item using a 4-point Likert scale ranging from *Strongly Disagree* (1) to *Strongly Agree* (4).

Table 2. Respondents Knowledge and Readiness to Utilize the ISOTURE Model (N = 127)

Survey Question	% Strongly Agree/Agree	Mean Score	SD
As a result of participating in the Achieving the Extension Mission Through Volunteers Course (AEMTV), I can:			
Articulate to others how volunteerism impacts Extension Programming	95.3	3.26	0.566
Analyze my program’s current volunteer delivery system	92.9	3.21	0.5846
Develop role descriptions that align with volunteer roles	95.3	3.24	0.559
Align recruitment with the specific volunteer role	88.1	3.09	0.597
Apply best practices in selecting volunteers	92.9	3.23	0.593
Apply coaching strategies when working with volunteers	90.6	3.09	0.550
Articulate my approach to volunteerism	89.7	3.13	0.591
Understand volunteers need different types of recognition	96.8	3.45	0.613

In the qualitative ISOTURE analysis, we explored what participants learned and applied. It was guided by this question, “As a result of taking this course, describe how you work with volunteers differently.” We coded and analyzed 79 unique responses. Integrated quantitative and qualitative analysis is discussed in each element of the ISOTURE model below.

Boyce (1971) discussed the importance of identifying volunteers for specific roles. During the AEMTV course, participants identified Extension volunteer positions, wrote role descriptions to meet those needs, identified individuals who have those skills, and recruited them to be volunteers in the created positions (Boyce, 1971). After completing the course, 95% of

participants strongly agreed or agreed they could develop role descriptions that align with volunteer roles; 52% reported they created role descriptions.

We coded 54 qualitative statements from 44 respondents who reported examples of how they identified program needs and volunteer roles, recruited volunteers, and used role descriptions post-course. A Minnesota participant shared, “I’m more intentional in selecting volunteers for roles, and rather than just write a position description for recruitment, we use it as a guiding piece to their work.”

Selection is the process of evaluating the experience, skill set, and interest of prospective volunteers to determine alignment with existing volunteer positions (Boyce, 1971). Volunteer selection begins with screening potential volunteers and matching their skills to the position, which increases the likelihood of success in volunteering. After completing the course, 93% of respondents could apply best practices for selecting volunteers, 88% could align recruitment with the specific volunteer role, and 70% reported they recruited volunteers for new positions.

Thirty-four respondents gave qualitative examples of selection. One Wisconsin participant said,

I consider their intrinsic and extrinsic motivators and try to tailor volunteer options to their specific needs and goals. I am more thoughtful in reaching out to specific volunteers that would be a good fit for particular roles rather than having an open-door recruitment plan.

A Missouri horticulture participant said, “I place volunteers where they are best suited and where they have an interest. I use their ability to match them up to projects, rather than just asking for people to volunteer for something.”

Orientation is the process of introducing volunteers to program expectations. Training prepares volunteers with the knowledge, skills, and attitudes necessary to be successful in their role (Boyce, 1971). While only three course participants talked about developing and implementing an orientation, 23 respondents shared how they prepared volunteers, including role-specific training on curriculum content, and program delivery.

A Maine participant shared,

After the course, I invited all of the involved volunteers to come in for a “Professional Development” time. I did some teaching on how they could vet curriculum, how to plan their own meeting times, and how to set up shareable documents so that they could take turns with the teaching. It worked great!

Utilization is the process of providing the opportunity for volunteers to put acquired knowledge and skills into action and to function in a supportive environment (Boyce, 1971). Utilization is maximized when professionals match, prepare, and support volunteers to move into leadership

roles based on their skills and abilities. Professionals provide feedback and encourage volunteers to try new roles, creating opportunities for growth. We coded 20 qualitative statements from 17 respondents who identified building relationships with volunteers to coach, supervise, discipline, assess dilemmas, and provide feedback. Twelve people shared examples of how they maintained volunteer relationships. Ninety percent of the respondents indicated they learned coaching strategies.

Results documented examples of increased program quality. Course participants understood the benefits of recruiting volunteers to teach content in subject matter areas where participants lacked knowledge.

One Indiana participant commented,

For the last two years, I have offered a Container Gardening program by myself, covering just the basics and giving a general demonstration. This week, I offered the program again, but this time, I got my Master Gardeners [*sic*] volunteers [*involved*] in the process. ... Overall, this program was, by far, the best that I have delivered because I was able to engage my volunteers and encourage them and use the [*sic*] as a resource for a better educational experience of the participants.

Another Wisconsin participant stated,

We focus on citizen science programming, so I've made more efforts to empower volunteers to design their own projects based on questions relevant to their roles as citizen scientists rather than employing a top-down protocol for what data to collect and how to collect it.

It is important for professionals to understand different types of recognition to meet the motivational needs of volunteers (Boyce, 1971). After the course, 63% recognized volunteers according to their individual motivation. A Wisconsin participant shared, "I had an increased understanding in how to assess the motivations and rewards that could be utilized, which lead to a better fit of volunteers to needs."

We coded 24 qualitative statements from 23 respondents identifying how they recognized volunteers. A Missouri participant working with Master Gardeners stated, "I am more cognizant of their needs as well as the needs of the chapter. I continually thank volunteers and tell them how important they are...".

Evaluation captures the success of a volunteer in a specific role, offers the opportunity to provide feedback, assists in achieving personal goals, and improves their effectiveness to impact program success (Boyce, 1971). Participants gained skills to create, revise, evaluate, and grow volunteer systems. This study yielded four coded qualitative statements that reflected knowledge gained

related to the evaluation of volunteers. A North Dakota participant said, “I had never consider [sic] formally seeking evaluation from volunteers on their experience. This really resonated with me as a considerably important part of sustaining happy volunteers.”

Applied Course Learnings

Our quantitative and qualitative analysis confirmed that participants applied knowledge gained in the course as they worked with volunteers. Participants identified how they changed their behavior by applying ISOTURE constructs to strengthen their management of volunteer systems, which impacted community programming. Respondents reported completion of multiple knowledge and readiness tasks (Table 3) taught in the course related to the ISOTURE model and Communicating the Public Value of Extension Programs to Stakeholders.

Table 3. Respondents Behavior Change and Application of the ISOTURE Model and Communicating the Public Value of Extension Programs to Stakeholders (N = 127)

Survey Question	%	No. of Participants
After taking the course, which of the following items have you completed (check all that apply):		
Created role descriptions for volunteers	52	66
Recruited volunteers for new positions	70	89
Recognized volunteers according to their individual motivation	63	80
Communicated with stakeholders the value of volunteers in my program	69	87
Used my elevator speech to communicate with potential volunteers and stakeholders	50	63
Used the Decision-Tree to address challenging situations	15	19

The results in Table 4 show statistically significant ($p < .001$) improvements for each statement. Using Cohen’s d , we calculated the effect sizes of these changes from medium ($> .5$) to large ($> .8$) effects, highlighting large increases in average scores. After the course, more than 90% of respondents agreed or strongly agreed that volunteer systems management practices were reflected in their personal approach.

This indicates that the course effectively changed how Extension professionals work with volunteers and use research-based practices to empower volunteers to plan, lead, and teach programs. An Illinois participant shared, “There was a lot of value in the course. ... I find myself pulling out different things ... it's not an overnight process, but certain skills learned throughout the course begin to appear.”

Table 4. T-Tests for Application and Behavior Change of Respondents (N = 127)

	Before		After		Mean Difference	<i>t</i>	<i>d</i>
	% Strongly Agree/Agree	Mean Score	% Strongly Agree/Agree	Mean Score			
I empower volunteers to take the lead on projects that interest them	81	2.91	100	3.61	0.70	13.57***	1.36
I recruit others to deliver programs	68	2.72	95	3.32	0.61	10.81***	0.71
I include volunteers in setting the vision for the program	76	2.86	95	3.36	0.50	9.42***	0.87
I delegate tasks to volunteers so I don't have to be at every event/activity	61	2.64	96	3.38	0.73	12.28***	1.20
I am comfortable letting others teach volunteers	72	2.82	90	3.19	0.37	7.84***	0.55
Most aspects of the program are my responsibility	80	2.96	58	2.61	-0.35	-6.27***	0.51

Note. Respondents rated each item using a 4-point Likert scale ranging from “Strongly Disagree” (1) to “Strongly Agree” (4). *** $p < .001$ (tested at 95% confidence threshold).

Online Learning and Networking Experience

The online learning environment was an effective platform for participants to increase their skills in managing volunteers; 90% agreed it met their needs as adult learners. A Minnesota participant shared, “The course design, along with information through the online platform, provide [*sic*] a valuable opportunity to learn about volunteer systems ... with others who are working with volunteers to gain additional perspectives and a broader network of colleagues.” The course influenced 30% of participants to develop online learning content or teach online; this was an unintended outcome. An Indiana participant stated, “I currently use Zoom, Recorded Videos, and open chat sessions to both train and recruit volunteers. This is as [*sic*] a direct result of the course.”

Two benefits of the cohort learning environment for participants are accessibility and networking (Robideau & Vogel, 2014).

1. Accessibility

Because of the online format, more professionals were able to access this training. One participant from Missouri commented that they found the course to have “convenient and relevant subject matter.” Travel and specific time needed for in-person training was decreased in this learning environment, as a Wisconsin participant shared, “It is well done and flexible for staff’s challenging schedules.” Although accessibility of online learning is a benefit, professionals did indicate a challenge to designate time to complete course content. “You really need to block schedules and dedicate time,” a Wisconsin participant noted, “It is too easy to get caught up in the daily emergency and not put the dedication into the online course.”

2. Networking

Participants valued the course design, which incorporated networking across states, program areas, and experience levels. A Minnesota participant reflected, “It certainly brought a richness to the learning environment to have a variety of Extension areas, length of tenure, and geographies across the country represented.”

Discussion board groups with 30–35 people shared ideas and applied course content. Live webinars brought the groups together in a synchronized experience. A Nebraska participant noted, “I really appreciated the discussion during the course and have used many of the ideas that other participants shared...”

Developing a trusted learning community is imperative for a positive networking experience. A Nebraska participant mentioned that the course provided “...the opportunity for collaboration to discuss volunteer successes and challenges in a safe space.” There was a strong learning

community during the course; however, less than 20% continued to network with others after completion.

Table 5 summarizes the key themes that emerged during the data jam process (Schmieder et al., 2018) from the qualitative responses describing the benefits of the online learning environment.

Table 5. Benefits of the Online Learning Environment

Qualitative Code - Key Themes	No. of Statements	No. of Respondents
Intentional networking	49	40
Continued learning and developing online	23	23
Advantages of overall online experience	20	16
Online learning community – sense of belonging	16	14
Taught online after taking the course	16	11
Strategies to improve online learning experience (dedicate time to course)	14	11

Limitations

A limitation of this study is that a retrospective evaluation could lead to variance within the sample from when respondents completed the course to when they completed the survey. We also recognize there are limitations when interpreting the results. When course participants self-report, they use their perceptions at the point of evaluation. They may be under- or overreporting their knowledge gained and behavior changed (Donaldson & Grant-Vallone, 2002).

Discussion and Implications

Professional development in Extension needs to include volunteerism as a core competency for all experience levels, age groups, and program areas and utilize online learning as a delivery method. This includes identifying volunteer leadership development and best practices in managing volunteer systems as training components for individuals who work with volunteers (Barnhart, 2008; Safrit et al., 2005). Program quality is impacted by professionals' preparedness in their roles (Garst et al., 2014). It is necessary to equip all Extension professionals with a framework, like ISOTURE, to manage volunteer systems.

A Minnesota participant described how the course prepared them for their work with volunteers,

It provides a solid framework to approach volunteer management. It is the only course like it for Extension professionals. It gives great ideas and a great path for colleagues to follow as they work with volunteers at many stages. It professionalizes aspects of this work in an important way.

Identification and Selection

Creating role descriptions that articulate needed skills attracts the right volunteer for the right position and increases engagement and retention. Our study found that respondents who completed the course assessed the volunteer needs of their program and identified specific roles to address those needs. Professional development offerings need to include time for professionals to assess the skills and talents of prospective volunteers and conduct targeted recruitment for the positions to increase the likelihood of both volunteer satisfaction and program success.

Orientation and Training

Our study confirms the difficulty Extension professionals have in differentiating between orientation and training. Orientation provides an introduction to the role and responsibilities of the position. Training, however, provides focused learning on topics for volunteers' growth and development. These two are frequently combined and are not as effective when doing so. Both orientation and training impact volunteer engagement; however, they have different roles.

Pierucci and Noel (1980) established orientation as one factor that contributes to a volunteer continuing with an organization. Fahey et al. (2003) identified training as the most significant piece of volunteer retention, and lack of training is the biggest contributor to volunteer turnover. Extension professionals need to understand how to develop an orientation plan that includes an introduction to the volunteer's role and the organizational structure. Training is necessary for continued volunteer skill development to increase volunteer retention. Both orientation and training are necessary to strengthen Extension volunteer systems.

Utilization

Volunteer engagement needs to be a key focus of professionals' efforts because utilizing volunteers provides organizational benefits (Terry et al., 2011). Programs are a higher quality experience and more relevant to audiences when professionals are taught how to intentionally engage volunteers when teaching content-specific areas when the professional may not be the expert (Rutledge, 2008). When a volunteer offers their talents to an organization, it is important to utilize their unique skill set to support the program. This allows time for the Extension professional to shift their focus to other program needs. When this happens, the Extension program builds capacity, and volunteers feel valued for their contributions. Our study participants identified the importance of building relationships with volunteers, maintaining those relationships, and coaching volunteers to try new roles that create opportunities for personal growth.

Recognition

Extension professionals in the AEMTV course learned to further value volunteers and not take them for granted. Course participants understood the importance of recognizing volunteers based on individual motivation. Professional development content should link motivation to recognition because it demonstrates to the volunteer that they are valued and appreciated. Recognition of a volunteer's contribution enhances their satisfaction, which affects their willingness to continue to serve the organization (Arnold et al., 2009).

While most volunteers are recognized at least annually, incorporating multiple appreciation methods is necessary for retention. Thanking volunteers and highlighting their value to your organization are paramount.

Evaluation

Extension professionals need to learn how to intentionally plan for evaluation throughout the volunteer's involvement with the organization. Boyd (2003) identified evaluating volunteer efforts and accomplishments as an important competency for the management of volunteer programs. As indicated by our study's qualitative data, professionals should understand how to provide feedback to volunteers. This includes listening and having conversations about the volunteer's experience, what was accomplished, how the experience could be improved, and the volunteer's plans for the future. The evaluation process strengthens the relationship between the volunteer, the professional, and the organization. When professionals make changes based on the evaluation, volunteers feel valued (Boyd, 2003).

Online Learning

When using an online course for professional development, communicate clear time expectations in publicity, during the registration process, in pre-course communication, and as the course begins. In our course, the number of hours needed to complete the work was communicated, but some participants were not prepared for the time commitment. A Wisconsin participant shared, "Don't underestimate the time this course takes. Plan it, block it, and don't let things sneak into the time that is blocked."

Engaging professionals in training that models the use of virtual learning strategies provides participants with an experience that increases their confidence in both learning and teaching online (He, 2014). Discussion boards, pre-recorded presentations, and real-time webinars provide time to practice virtual learning and imagine how technology can be used in volunteer development. Learners increase confidence and reduce anxiety by experiencing online teaching strategies. AEMTV participants gained confidence and skills in virtual learning, which was an unintended outcome of the course.

The results of this study demonstrate the effectiveness of the Achieving the Extension Mission Through Volunteers course in preparing Extension professionals to learn and apply volunteer systems concepts in a cohort-based, online learning environment. Course participants increased their knowledge, improved volunteer systems, and influenced the quality of programming delivered in communities. Our research confirmed the ISOTURE model (Boyce, 1971) continues to be an effective framework for learning and applying volunteer systems management practices.

Leveraging human and financial capital across states was critical in the design, development, and implementation of the course. We encourage additional research on evaluating the impact of volunteers when they are prepared to communicate the public value of Extension programs. We recommend that Extension collaborates across states to formalize and create additional online professional development relevant to all program areas to elevate Extension's impact nationally. Suggested content includes teaching and learning strategies, program evaluation, and equitable programming. Investing in professional development delivered through distance learning is essential to expand online course offerings in any profession. This saves time and money and fosters stronger cross-disciplinary and multi-state work.

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Super Parents: Preliminary Findings of a Group-Based Parenting Intervention

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Super Parents is a group-based, Extension-led parenting program developed to enhance the parent-child relationship. Implemented by trained Head Start staff using the train-the-trainer model, this effort is achieved by teaching positive parenting practices, increasing parents' knowledge of child development, instructing parents in activities and exercises for enhancing their child's executive function skills, and encouraging the use of mindfulness techniques in parenting. The specific aims of our study were to evaluate the program's effectiveness among parents of young children ages 0 to 5 by examining changes in parenting attitudes, mindfulness, executive function, parenting efficacy, stress, and child behavior. Through the use of pre-program and post-program measures, increases were observed in a number of positive parenting behaviors and child outcomes, along with decreases in multiple negative parenting and child behaviors. Findings from this study can inform implementation decisions of other parenting programs or trainings administered by Extension educators.

Keywords: parenting, intervention, executive function, responsive parenting, mindfulness

Introduction

In the early 1990s, a team of parent education specialists from the Cooperative Extension Service developed the National Extension Parent Education Model (NEPEM; Smith et al., 1994; see also DeBord et al., 2006). This model was developed to give educators a common ideology, approach, and universal terms to consider when developing, implementing, evaluating, and

replicating parent education programs. The NEPEM was constructed around six categories of parenting skills: self-care, understanding, guiding, nurturing, motivating, and advocating. With this model as a guide, parent education programs in Extension have become numerous and address many different challenges that parents can face, including parenting adolescents (Abell & Ludwig, 1997; Allen et al., 2014), nutrition and obesity prevention (Benke et al., 2013), increasing parental involvement (Catchpole & Arnett, 2014), and literacy training and reading enhancement (Brandon et al., 2018; Zapata et al., 2020).

This article introduces a group-based Extension-led parenting intervention that uniquely couples positive parenting techniques found in the 1,2,3,4 Parents! program (Popkin et al., 1996) with stress-reducing mindfulness techniques and brain-building activities for parents to use with their young children to enhance executive function/self-regulation skills. This parenting intervention, known as Super Parents, was designed for parents with children under the age of 5 and holds promise for Extension educators who wish to help parents build strong relationships with their children while promoting healthy self-regulation skills.

While a wealth of benefits have been attributed to parent education programs and interventions, including increased positive parenting behavior, deepened knowledge of child development, and greater confidence in parenting (Morris et al., 2020), recent literature has suggested various ways in which mindfulness behaviors can benefit parenting, including reducing parenting stress (Jespersen et al., 2021) and increasing parents' capacity to focus on childrearing efforts (Coatsworth et al., 2010). Mindfulness is conceptualized as the self-regulation of attention and non-evaluative acceptance of present experiences (Campbell et al., 2017). Considering outcomes associated with parenting stress, recent literature has noted it as being a major social and environmental risk factor that can contribute to a number of adverse child outcomes, including increased externalizing behavior such as aggression (Costello et al., 2014), childhood anxiety (Rodriguez, 2003), and diminished social and emotional functioning in terms of social cognition and emotional coping (Crum & Moreland, 2017; Lopez et al., 2011). To combat these issues, however, research has revealed that mindfulness training can contribute to positive child outcomes in terms of reduced emotional distress (Britton et al., 2010), increases in optimism and positive emotionality (Schonert-Reichl & Lawlor, 2010), and improved social competence (Harnett & Dawe, 2012). As such, parent education programs that can enhance positive parenting behavior and knowledge while also diminishing levels of parenting stress (e.g., through mindfulness training) could effectively mitigate the adverse effects of stress on parent and child functioning.

In addition to mindfulness, executive function is an area in which parenting programs and interventions have received additional content in recent years (Morris et al., 2020). Executive function and self-regulation skills are the mental processes that enable individuals to focus attention, process instructions, plan, and perform goal-oriented behavior (Hofmann et al., 2012), and these skills begin developing in the earliest stages of childhood. The noted increase in

programming related to executive function and self-regulation is due to their key role in child behavior modification, along with the finding that executive function skills tend to stabilize by early adolescence (Deater-Deckard, 2014). Moreover, emphasis on the development of executive function skills in early childhood has been found to be associated with resilience (Diamond & Lee, 2011) and academic achievement (Bull et al., 2008). Additionally, parents with elevated executive function skills tend to be more responsive and nurturing in their parenting while being more likely to initiate interactions with their children (Treat et al., 2019), while parents with lower levels have been found to utilize harsher parenting practices (Deater-Deckard et al., 2012).

With these factors in mind, Extension educators can use Super Parents as a model for incorporating scientifically grounded practices (in this case, mindfulness and executive function training) into the implementation of evidence-based interventions to address the particular needs of their community members better while adhering to guidelines outlined in the NEPEM model.

Program Development and Modification

Super Parents is unique in comparison to other Extension-developed interventions in two ways. First, it infuses mindfulness training with parenting skills training to enhance parent and child behavior by first training the parent and then encouraging the parent to train their child. Practicing mindfulness offers several benefits in the context of parenting. For example, parents who practice mindfulness are better able to focus their attention, intentionally self-regulate emotion in the context of the parent-child relationship, and remain aware of emotions for both the self and child (Coatsworth et al., 2010). Specific mindfulness exercises included in the program are activities such as controlled/deliberate breathing, where parents are instructed to take a moment to breathe deeply to regain control of their emotions and thereby lower their stress levels. Another activity called the Mind Jar presented parents with a jar filled with liquid and glitter to teach parents to separate their parenting experiences from worries and distractions (glitter), which cloud the clarity of the liquid. These mindfulness activities are taught to the parents within each program session to give them new tools to enhance their own mindfulness behavior. Furthermore, parents are encouraged to take these newly acquired skills and teach them to their children to enhance their child's self-regulation skills.

The next unique feature of the Super Parents program is its focus on teaching parents the importance of executive function (EF) skills and providing exercises and activities for enhancing EF in their own children. The Super Parents program seeks to strengthen EF in participants' children by introducing parents and caregivers to a number of brain-building games within each program session. The activities designed to enhance EF processes included Simon Says-type games, freeze dance, and memory and attention games. Importantly, parents were given information about how these "games" help build their children's brains and were encouraged to try them in their homes.

In addition to encouraging parental mindfulness and providing guidance for developing executive function and self-regulation abilities, educators presented positive parenting practices via 1,2,3,4 Parents! that parents could implement in their own families. Responsive, or positive, parenting has been identified as a key factor in influencing the developmental trajectory of young children's executive function and social-emotional development (Baumrind, 1966; Holden et al., 2014). Practices associated with responsive parenting include considering what the child is experiencing in their interactions with parents, providing consistent levels of warmth and acceptance, nurturing feelings of acceptance as a unique individual, and providing consistent responses to the child's cues (Morris et al., 2013).

By building executive function, teaching mindfulness practices, nurturing and modeling positive parenting techniques, and encouraging self-care in accordance with the NEPEM model, it was posited that the Super Parents intervention would be an effective parenting program that Extension educators could implement to influence parenting attitudes, parenting efficacy, parental executive function, and mindfulness in positive ways. It was also posited that improvement in each of these areas could contribute to increasing parents' ability to nurture their relationship with their young child and aid in building their child's executive function and social-emotional skills.

This study had two primary hypotheses based on the various content focuses of the Super Parents program:

1. Parents would report increases in their own positive parenting attitudes, parenting efficacy, executive function, and mindfulness behavior, with decreases in parenting stress at the completion of the program when compared to their scores collected at the beginning.
2. Parents would report increases in their child's prosocial behavior and decreases in conduct problems and hyperactivity at the completion of the program when compared to their scores collected at the beginning.

Method

This project was led by one Extension educator who assembled both a development team, which consisted of university researchers, parents, family advocates, and mental health specialists, and an evaluation team, which consisted of university researchers and graduate students. The project development team oversaw the modification of 1,2,3,4 Parents! into what became Super Parents. This program was implemented over three years. In the first year, the development team presented the program to parents in three Head Start schools in a southern state. These parenting sessions were attended by parents and school staff members. Attendance by staff members served as a portion of training for the staff who would continue to implement the program in future sessions following the development phase. Training was implemented and perpetuated

within each of the Head Start schools using the train-the-trainer model. In the second year, the development team worked closely with the Family Advocates and Mental Health Specialists at these schools and provided additional training on the presentation and evaluation of Super Parents, as the advocates and specialists became responsible for presenting and evaluating the program in their own schools after the second year. Data included in this article came from the third year of implementation, where Family Advocates and Mental Health Specialists began leading program sessions for parents and staff independently. The Oklahoma State University institutional review board reviewed and approved the study described in this article.

Sample

The sample included 68 participants (55 parents and 13 staff members; 25% Spanish-speaking; 88.2% female; 33.3% Caucasian, 22.2% African American, 33.3% Hispanic, 4.8% Native American, 6.4% Other; 80.7% biological mothers; 31.1% single-parents). Fifty-eight (58) completed both pre- and post-test measures, and 51 completed both the pre-test and 3-month follow-up measures. Parents (not staff) reported about the behavior of a target child in the 0–5 age range ($M = 2.63$, $SD = 1.42$).

Procedures and Measures

Trained staff members at each Head Start school (i.e., Family Advocates, Mental Health Specialists) implemented Super Parents through six interactive 2-hour sessions utilizing the video-based Active Parenting 1, 2, 3, 4 Parents! curriculum, which focuses on positive, responsive parenting, child development, and self-care. These Active Parenting sessions were enhanced with content related to the previously outlined principles of mindfulness and executive function development, including the breathing activities and glitter jar to encourage mindfulness and the brain-building games and exercises to strengthen executive function. Over three years across the three Head Start schools, the program was offered a total of eight times in English. Additionally, two trained Head Start staff members implemented a version of the program that had been translated into Spanish with one group of Spanish-speaking parents.

In addition to program implementation, the evaluation team developed identical pre-tests and post-tests using measures related to parenting approaches and attitudes, perceived parenting stress, executive function, and mindfulness. The team administered pre-tests at the beginning of the first program session and post-tests at the conclusion of the sixth session. In addition, the evaluation team scheduled follow-up data collection (post-test) three months after the participants' final session. Of the 58 participants who completed the program, 50 were available for the three-month follow-up, resulting in a retention rate of 86%. The specific measures utilized can be found in Table 1 (parent outcomes) and Table 2 (child outcomes). In addition to these measures, the post-test included questions regarding participants' impressions of the Super Parents program.

Table 1. Measures for Parent Outcomes

Construct	Measure	Citation	Sample Item	Score Range
Positive Parenting	Parenting Young Children	McEachern et al., 2012	“Speak calmly with your child when you are upset with them.”	1 – 5
Self-Efficacy	Parenting Self-Agency Measure	Dumka, Stoerzinger, Jackson, & Roosa, 1996	“I feel sure of myself as a mother/father.”	1 – 4
Executive Functioning	Brief Behavioral Rating Inventory of Executive Function	LeJeune, Beebe, Noll, Kennedy, Isquith, & Gioia, 2010	“I don’t plan ahead for tasks.”	1 – 3
Mindfulness	Cognitive and Affective Mindfulness Scale	Feldman, Hayes, Kumar, Greeson, & Laurencean, 2007	“I am able to focus on the present moment.”	1 – 4
Parenting Stress	Parental Stress Scale	Berry & Jones, 1995	“I feel overwhelmed by the responsibility of being a parent.”	1 – 5

Table 2. Measures for Child Outcomes

Construct	Measure	Citation	Sample Item	Score Range
Conduct Problems	Strengths and Difficulties Questionnaire	Goodman, 1997	“Often loses temper.”	1 – 3
Hyperactivity	Strengths and Difficulties Questionnaire	Goodman, 1997	“Restless, overactive, cannot stay still for long.”	1 – 3
Prosocial Behavior	Strengths and Difficulties Questionnaire	Goodman, 1997	“Often offers to help others (parents, teachers, other children).”	1 – 3

Results

As shown in Table 3, paired samples *t*-tests comparing pre-test and immediate post-test measures showed significant increases in positive parenting attitudes, parenting efficacy, parent mindfulness, and a marginal decrease in parenting stress. Additionally, parents reported that their children experienced significant increases in prosocial behavior and significant decreases in conduct problems and hyperactivity.

Table 3. T-tests Comparing Pre-test and Post-test Measures

Variable	Pre-test		Posttest		N	t
	M	SD	M	SD		
<i>Parent Outcomes</i>						
Positive parenting attitudes	16.91	8.07	21.09	7.34	58	4.87***
Parenting efficacy	3.29	.54	3.47	.38	53	2.47**
Parent executive function	2.30	.31	2.33	.30	57	1.27
Parent mindfulness	40.35	6.48	41.91	6.72	57	1.68*
Parent perceived stress	1.74	.57	1.64	.57	56	-1.39 ⁺
<i>Child Outcomes</i>						
Child conduct problems	1.40	.37	1.32	.29	45	-1.82*
Child hyperactivity	1.99	.47	1.73	.37	45	-4.19***
Child prosocial behavior	2.41	.40	2.63	.29	45	4.09***

Note. * $p < .05$.

Similarly, *t*-tests comparing the pre-test and the three-month follow-up data revealed significant increases in positive parenting attitudes, parenting efficacy, parent executive function, and a decrease in parenting stress. Additionally, significant increases were observed in child prosocial behavior, with significant decreases in child conduct problems and child hyperactivity (see Table 4).

Table 4. T-tests Comparing Pre-test and 3-month Follow-up Measures

Variable	Pretest		3-month Posttest		N	t
	M	SD	M	SD		
<i>Parent Outcomes</i>						
Positive parenting attitudes	15.94	8.01	17.44	7.72	50	1.69*
Parenting efficacy	3.32	.63	3.59	.50	49	3.13**
Parent executive function	2.28	.34	2.40	.35	50	2.07*
Parent mindfulness	41.14	8.04	42.57	8.30	51	1.12
Parent perceived stress	1.79	.60	1.60	.62	50	-2.18*
<i>Child Outcomes</i>						
Child conduct problems	1.40	.36	1.31	.30	51	-2.27*
Child hyperactivity	1.98	.46	1.75	.47	51	-3.71***
Child prosocial behavior	2.40	.38	2.51	.42	51	1.84*

Note. * $p < .05$.

Further, regarding their impressions of the program, nearly all participants rated the overall experience of the Super Parents program as good (21.3%) or excellent (76.6%). Additionally, participants largely rated the program as applicable to their families. Finally, when asked about the program's best features, many participants discussed similar content aspects, including mindfulness activities, new parenting techniques, executive function games, and learning the importance of self-care.

Discussion

The pre-test to post-test evaluation (see Appendix) of the Super Parents program suggests that parents developed positive attitudes toward parenting, increased their feelings of efficacy in parenting, and enhanced their ability to practice mindfulness. In terms of child outcomes, the findings indicate that children displayed significant increases in prosocial behavior as well as significant decreases in child conduct problems and hyperactivity, as reported by their parents. Considering the Super Parents program's unique approach related to mindfulness, other parenting programs designed to foster mindfulness have found similar outcomes in regard to parenting stress, including the Mindfulness-Based Childbirth and Parenting Program (MBCP), which has been found to reduce parenting stress and postpartum depression mothers (Lönnberg et al., 2020), as well as the Mindfulness-Based Positive Behavior Support (MBPBS) program, which has been found to reduce parenting stress while also decreasing child behavior problems (Singh et al., 2006). It is notable, however, that the number of available parenting programs utilizing mindfulness practices designed for parents of young children is scant (Morris et al., 2020; Singh, 2021). The positive findings from this study illustrate the need for additional intervention programming related to mindfulness and stress reduction for parents of young children, a combination not yet readily available in the current state of parenting programs and interventions.

Several studies have indicated that educating parents about specific parenting practices can influence overall parenting attitudes. For example, presenting parents with information describing healthy alternatives to corporal punishment can lead to parents showing less approval of such practices (Holden et al., 2014; Taylor et al., 2017). In the case of the Super Parents program, learning about the beneficial outcomes associated with positive parenting and mindfulness techniques may have contributed to enhanced overall positive parenting attitudes, a limitation discussed further below.

The pre-test to three-month follow-up findings were similar to the pre-test to post-test findings for both parents and children. Unique to the data collected for the three-month follow-up, significant differences in parental executive function were found. Considering Super Parent's unique focus on building executive function, a wealth of research has indicated that parental executive function may be a factor of notable consideration when seeking to enhance parenting behavior and attitudes and positive child outcomes (Blair et al., 2014; Cumming et al., 2022; Gonzalez et al., 2012). The relative consistency in findings going from pre- to post-survey and pre-survey to three-month follow-up is very promising as it shows that parents' perceptions of improvements did not diminish over that time period. It should be noted, however, that without additional reminders or re-training, mindfulness behavior gains from parenting programs have been found to diminish (Lönnberg et al., 2021). Future studies could follow up on these findings at later time points, including six months to a year.

Despite encouraging findings from our study, there are several limitations to consider. First, parents were not randomly assigned to conditions, and there was no control group, limiting conclusions about effectiveness. Additionally, data were all self-reported, and the sample was not particularly large. Moreover, relying solely on parent reports for both their own attitudes and their child's behavior introduces the possibility for positive attribution and social desirability biases, where parent perceptions of the positive aspects of the program may have influenced their responses about both themselves and their child (Caputo, 2017). As such, future evaluation efforts should consider the addition of a behavioral observation component or a third-party (e.g., teacher, school staff member, etc.) respondent to enhance the validity of survey results. Nevertheless, preliminary findings from this study provide initial evidence of the effect of combining an evidence-based parenting curriculum (1,2,3,4 Parents!) with other science-based practices (i.e., mindfulness and executive function training) to meet community needs and achieve positive parenting and child outcomes.

Conclusion

The National Extension Parenting Education Model (NEPEM; Smith et al., 1994) endorsed group-based parenting programs. We found evidence of this in our parenting groups as we noted significant increases in positive parenting attitudes and parenting efficacy/confidence in parenting skills. The Super Parents intervention, designed by coupling the positive parenting techniques in 1,2,3,4 Parents! with the stress-reducing and cognitive skills of mindfulness (Hölzel et al., 2011) and executive function (Traverso et al., 2015), holds great promise for helping parents and children build strong relationships and healthy self-regulation skills. Additionally, this program meets the criteria for the six themes outlined in the NEPEM, including teaching self-care through offering support to parents and aiding in managing parental stress; understanding by helping parents observe and understand their child's development; guiding through teaching parents how to model desired behavior and set reasonable limits; nurturing through emphasizing and expressing affection and compassion and listening to their child's feelings and ideas; motivating by teaching parents how to help their child process and manage information through executive function skills; and advocating by stimulating supportive and cooperative family environments. Our findings indicate that the Super Parents program, designed to improve parenting attitudes, executive function, and mindfulness in parenting, had many of the posited positive effects on multiple parenting and child outcomes. These findings provide a foundation for the implementation of similar parenting programs or trainings by Extension educators in other states. Further, they provide a template for combining community partnerships with scientifically grounded practices to meet the particular needs of communities and the families within them (Coatsworth et al., 2010).

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Appendix

Pre/Post Assessment

Demographic Questionnaire

1. Are you currently:

- Married
- Divorced
- Widowed
- Separated
- Never married but living with significant other
- Never married, not living with significant other

If you are/were married, for how long?

If separated or divorced, when did you separate?

2. Please provide info on all the children currently living in your home (under 19 years of age): gender, ages, and their relationship to you, for example: male, 10 years old, stepson.

<u>Gender</u>	<u>Age</u>	<u>Relationship</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

3. Please provide info on all the adults, who are 19 years of age or older and currently living in your home: gender, age, and their relationship to you or your child(ren).

<u>Gender</u>	<u>Age</u>	<u>Relationship</u>
_____	_____	_____
_____	_____	_____

5. What is your annual household income?

- \$10,000 or less
- \$10,001 to \$20,000
- \$20,001 to \$30,000
- \$30,001 to \$40,000
- \$40,001 to \$50,000
- \$50,001 to \$60,000
- \$60,001 to \$70,000
- \$70,001 to \$80,000
- \$80,001 to \$90,000
- \$90,001 to \$100,000
- Over \$100,000

6. The highest level of education you completed?

- Grade 6 or Lower
- Grade 7
- Grade 8
- Grade 9
- Grade 10
- Grade 11
- Grade 12 or GED
- Some college/technical
- Graduate of 2 Year College
- Graduate of 4 Year College
- Post graduate

7. Your age: _____

8. Your gender: Male Female

9. Primary Language Spoken in the Home:

- English
- Spanish

 4. Are you currently employed? Yes No

If so, what is your occupation?

_____ Other (please specify):

10. What is your ethnic background?

_____ Black/African American

_____ Asian American/Pacific

Islander

_____ White/European American

_____ Hispanic/Latino

_____ Native American

_____ Other (Please Specify):

11. Your

relationship to

Mother

Father

Other

Child:

(specify):

Child Demographics

12. Child 1 birth date: _____

How old is your child? _____

13. Child's gender: Male Female

14. Please list child's medical diagnoses or conditions:

15. What is your child's ethnic background?

_____ Black/African American

_____ Asian American/Pacific Islander

_____ White/European American

_____ Hispanic/Latino

_____ Native American

_____ Other (Please Specify)

Strengths and Difficulties

For each item below, please mark the circle for Not True, Somewhat True or Certainly True of your target child. It would help us if you answered all items as best you can even if you are not absolutely certain.

		Not true	Somewhat true	Certainly true
1.	Considerate of other people’s feelings.	①	②	③
2.	Restless, overactive, cannot stay still for long	①	②	③
3.	Often complains of headaches, stomach-aches or sickness	①	②	③
4.	Shares readily with other children, for example toys, treats, pencils	①	②	③
5.	Often loses temper	①	②	③
6.	Rather solitary, prefers to play alone	①	②	③
7.	Generally well behaved, usually does what adults request	①	②	③
8.	Many worries or often seems worried	①	②	③
9.	Helpful if someone is hurt, upset or feeling ill	①	②	③
10.	Constantly fidgeting or squirming	①	②	③
11.	Has at least one good friend	①	②	③
12.	Often fights with other children or bullies them	①	②	③
13.	Often unhappy, depressed or tearful	①	②	③
14.	Generally liked by other children	①	②	③
15.	Easily distracted, concentration wanders	①	②	③
16.	Nervous or clingy in new situations, easily loses confidence	①	②	③
17.	Kind to younger children	①	②	③
18.	Often lies or cheats	①	②	③
19.	Picked on or bullied by other children	①	②	③
20.	Often offers to help others (parents, teachers, other children)	①	②	③
21.	Thinks things out before acting	①	②	③
22.	Steals from home, school or elsewhere	①	②	③
23.	Gets along better with adults than with other children	①	②	③
24.	Many fears, easily scared	①	②	③
25.	Good attention span, sees work through to the end	①	②	③

Parenting Young Children (PARYC)

Instructions: Below is a list of activities parents engage in. Rate how often you engage in these activities with your child.

1	2	3	4	5	6	7
Not at all						Most of the time

Supporting good behavior	1	2	3	4	5	6	7
1. Play with your child in a way that was fun for both of you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Stand back and let your child work through problems s/he might be able to solve?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Invite your child to play a game with you or share an enjoyable activity?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Notice and praise your child's good behavior?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Teach your child new skills?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Involve your child in household chores?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Reward your child when s/he did something well or showed a new skill?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Setting limits	1	2	3	4	5	6	7
1. Stick to your rules and not change your mind?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Speak calmly with your child when you were upset with him or her?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Explain what you wanted your child to do in clear and simple ways?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Tell your child what you wanted him or her to do rather than tell him/her to stop doing something?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Tell your child how you expected him or her to behave?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Set rules on your child's problem behavior that you were willing/able to enforce?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Make sure your child followed the rules you set all or most of the time?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Proactive parenting	1	2	3	4	5	6	7
1. Avoid struggles with your child by giving clear choices?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Warn your child before a change of activity was required?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Plan ways to prevent problem behavior?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Give reasons for your requests?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Make a game out of everyday tasks so your child followed through?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Break a task into small steps?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Prepare your child for a challenging situation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Parenting Self Agency Scale

		Rarely			Always
1.	I feel sure of myself as a mother/father.	①	②	③	④
2.	I know I am doing a good job as a mother/father.	①	②	③	④
3.	I know things about being a mother/father that would be helpful to other parents.	①	②	③	④
4.	I can solve most problems between my child and me.	①	②	③	④
5.	When things are going badly between my child and me, I keep trying until things begin to change.	①	②	③	④

Brief Behavioral Rating Inventory of Executive Function

Please read each of the following statements and rate how often each of the behaviors has been a problem during the past month.

1=Never

2=Sometimes

3= Often

		1	2	3
1.	I am disorganized.	0	0	0
2.	I need to be reminded to begin a task even when I am willing.	0	0	0
3.	I overreact emotionally.	0	0	0
4.	I talk at the wrong time.	0	0	0
5.	I misjudge how difficult or easy tasks will be.	0	0	0
6.	I don't notice when I cause others to feel bad or get mad until it is too late.	0	0	0
7.	I have trouble prioritizing things.	0	0	0
8.	I forget what I am doing in the middle of things.	0	0	0
9.	When people seem upset with me, I don't understand why.	0	0	0
10.	I get emotionally upset easily.	0	0	0
11.	I have good ideas but cannot get them on paper.	0	0	0
12.	My anger is intense but ends quickly.	0	0	0
13.	I start things at the last minute (such as assignments, chores, tasks).	0	0	0
14.	I have difficulty finishing a task on my own.	0	0	0
15.	People say that I am easily distracted.	0	0	0
16.	I rush through things.	0	0	0
17.	I leave my room or home a mess.	0	0	0
18.	I get disturbed by unexpected changes in my daily routine.	0	0	0
19.	I don't plan ahead for tasks.	0	0	0
20.	People say that I don't think before acting.	0	0	0
21.	I have trouble finding things in my room, closet, or desk.	0	0	0
22.	I have trouble doing more than one thing at a time.	0	0	0
23.	My mood changes frequently.	0	0	0
24.	I don't think about consequences before doing something.	0	0	0

Cognitive and Affective Mindfulness Scale – Revised (CAMS-R)

People have a variety of ways of relating to their thoughts and feelings. For each of the items below, rate how much each of these ways applies to *you*.

		1	2	3	4
		Rarely/Not at all	Sometimes	Often	Almost always
		1	2	3	4
1.	It is easy for me to concentrate on what I am doing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.	I am preoccupied by the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.	I can tolerate emotional pain.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.	I can accept things I cannot change.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5.	I can usually describe how I feel at the moment in considerable detail.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	I am easily distracted.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7.	I am preoccupied by the past.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8.	It’s easy for me to keep track of my thoughts and feelings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9.	I try to notice my thoughts without judging them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10.	I am able to accept the thoughts and feelings I have.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11.	I am able to focus on the present moment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12.	I am able to pay close attention to one thing for a long period of time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Parental Stress Scale

The following statements describe feelings and perceptions about the experience of being a parent. Think of each of the items in terms of how your relationship with your child or children typically is. Please indicate the degree to which you agree or disagree with the following items by placing the appropriate number in the space provided.

1 = Strongly disagree 2 = Disagree 3 = Undecided 4 = Agree 5 = Strongly agree

		1	2	3	4	5
1	I am happy in my role as a parent.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	There is little or nothing I wouldn't do for my child(ren) if it was necessary.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	Caring for my child(ren) sometimes takes more time and energy than I have to give.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	I sometimes worry whether I am doing enough for my child(ren).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	I feel close to my child(ren).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	I enjoy spending time with my child(ren).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	My child(ren) is an important source of affection for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	Having child(ren) gives me a more certain and optimistic view for the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	The major source of stress in my life is my child(ren).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	Having child(ren) leaves little time and flexibility in my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	Having child(ren) has been a financial burden.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	It is difficult to balance different responsibilities because of my child(ren).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	The behaviour of my child(ren) is often embarrassing or stressful to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	If I had it to do over again, I might decide not to have child(ren).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	I feel overwhelmed by the responsibility of being a parent.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	Having child(ren) has meant having too few choices and too little control over my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	I am satisfied as a parent.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	I find my child(ren) enjoyable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

IMPRESSIONS OF PARENTING PROGRAM

Thank you so much for your participation in this class! We want to know how useful this experience was for you. Please answer the following questions to help us plan for future classes.

Date: _____ Group Location: _____
City State

Workshop Title: _____ Leader: _____

Please rate this workshop by circling the appropriate number according to the following scale.

Excellent = 4 Good = 3 Fair = 2 Poor = 1 Not Available = NA

Setting:	4	3	2	1	NA	Parent’s Guide:	4	3	2	1	NA
Leader’s Presentation:	4	3	2	1	NA	Home Assignments:	4	3	2	1	NA
Videos:	4	3	2	1	NA	Overall Experience:	4	3	2	1	NA

Please read each statement and fill in the circle below the number that best describes your experience:

Strongly Disagree = 1 Disagree = 2 Agree = 3 Strongly Agree = 4

	1	2	3	4
1. The information discussed was useful to my family.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. The leaders seemed to know their information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Information was presented in a way that was clear and understandable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I will share the “games” and activities I learned in this class with my children.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I felt comfortable talking with at least one other person in the class.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I learned new parenting information I will use as I parent my children.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. The leaders welcomed comments, questions and discussion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I gained new insight into how I think about parenting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How many sessions/classes did you attend?

How many sessions/classes were available?

Did you receive a Parent’s Guide for the class?

What did you like most about the videos?

Were the home assignments helpful?

Did the Leader provide enough time for discussion?

What were the most helpful aspects of the program?

What could be improved?

Would you recommend this group to a friend?

_____ Yes _____ No

If no, please explain:

Would you attend another Active Parenting class conducted by this Leader?

_____ Yes _____ No

If no, please explain:

Examining College Students' Attitudes Toward Poverty During the Adult Role of the Community Action Poverty Simulation

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Family and Consumer Sciences (FCS) and Extension professionals need to understand the lived experience of poverty because it affects every aspect of an individual's life. Poverty is related to inadequate nutrition and food insecurity, lack of access to health care, insufficient child care, unsafe neighborhoods, lack of affordable housing, under-resourced schools, and a lower quality of life. Attitudes toward poverty vary widely among Americans and can be categorized as either internal/individual attributions (e.g., laziness, welfare dependency, etc.) or systemic/structural attributions (e.g., unemployment, inflation, etc.). Individuals holding internal attributions toward poverty are more likely to have negative feelings toward impoverished individuals. As such, efforts to educate FCS college students, Extension agents, and all Americans on the day-to-day reality of those in poverty are important. Extension-sponsored Community Action Poverty Simulation (CAPS) programs are effective in changing participants' attitudes toward poverty. This research used Reflexive Thematic Analysis to analyze 56 reflection papers written by college students enrolled in a family resource management course. Three themes emerged from the research: (a) empathy, (b) a turn from internal attributions, and (c) systematic attributions. This research has implications for Extension and FCS professionals offering CAPS programming in higher education settings.

Keywords: attitudes toward poverty, poverty simulation, Community Action Poverty Simulation, experiential learning, Extension, teaching about poverty

Introduction

Poverty spans all Extension, human services, and Family and Consumer Science (FCS) areas. Poverty can sometimes leave individuals without sufficient housing, malnourished, lacking health care, and with a lower quality of life. As of March 2023, an estimated 10.7% of U.S.

households were living in poverty (Columbia University's Center on Poverty and Social Policy, 2023). Additionally, the U.S. Census Bureau reports that the national poverty rate in 2021 was 12.8% (Benson, 2022). While Americans are generally sympathetic to those living in poverty, beliefs and attitudes toward poverty vary widely (Coryn, 2002; Ekins, 2019). Research shows that both internal factors (e.g., laziness, welfare dependency) and external factors (e.g., unemployment, inflation) contribute to poverty. However, many people believe that internal factors (particularly laziness) are the sole causes of poverty (Hunt, 2002, 2004). Research shows that individuals holding internal attributions toward those living in poverty are more likely to have negative feelings toward those individuals (Zosky & Thompson, 2012). As such, efforts to educate college students, Extension agents, and Americans alike on the lived reality of those in poverty are worthy of undertaking (Parks, 2023).

Community Action Poverty Simulation (CAPS)

The Missouri Community Action Network (MCAN) created the Community Action Poverty Simulation (CAPS) in 2003. The purpose of CAPS is to expose individuals to the realities of poverty in the United States. This live-action role-play program enables policymakers, teachers, business owners, and students to experience the realities those living in poverty may encounter. CAPS features several family types, including single parents, grandparents raising grandchildren, and homeless adults. The objectives of the simulation are to (a) promote poverty awareness, (b) increase understanding of poverty, (c) inspire local change, and (d) transform perspectives about poverty (MCAN, n.d.). Participants assume a role as either a community worker, an impoverished adult, or an impoverished child. Over 2,000 organizations have used CAPS (MCAN, n.d.), including Extension programs at land-grant institutions. Examples extend to North Dakota State University Extension (Pankow, 2006), University of Georgia Extension (Chapman & Gibson, 2006; Nickols & Nielsen, 2011), and University of Tennessee Extension (Franck et al., 2016).

The CAPS program is used by Extension programs in several ways. First, CAPS is used to teach Extension professionals about the lived experiences of poverty (Pankow, 2006). Oftentimes, Extension agents serve low-income families through their various programming. Therefore, teaching them about the lived realities of poverty will be advantageous. Additionally, CAPS has been used to teach Family and Consumer Science (FCS) students (Nickols & Nielsen, 2011) about the lived realities of poverty. Some of these students may work as FCS or Extension professionals, necessitating the need to use CAPS in higher education. Lastly, CAPS has been used to teach teachers, business leaders, and community members about poverty (Chapman & Gibson, 2006; Franck et al., 2016).

This research explored whether students' attitudes toward poverty were different before and after participating in CAPS. The sampled students were enrolled in a family resource management course at a large public land-grant institution in the South. The program was offered by a local

state Extension agent, making it both a Family and Consumer Sciences (FCS) and an Extension program. This research contributed to the literature by adding to the body of Extension and FCS studies that have used CAPS with a specific focus on family resource management.

Literature Review

Use of CAPS in Extension Programs

CAPS has been used among university Cooperative Extension programs to educate their agents about poverty (Chapman & Gibson, 2006; Franck et al., 2016; Pankow, 2006). North Dakota State University Extension, which has been offering CAPS programming since 1996, conducted a study of 420 participants from 2001 through 2003 (Pankow, 2006). Post-simulation surveys revealed that 80% of the participants had changed perceptions of those living in poverty. Open-ended responses from follow-up phone interviews ($n = 14$) revealed that participants completed some form of action and gained a better understanding of poverty. Further, Chapman and Gibson (2006) showed that CAPS is effective in changing participants' attitudes and increasing the participants' level of confidence in helping the poor. Franck et al. (2016) offered CAPS to teachers in a local school. Of the 102 participants, 56 reported increased awareness of poverty and empathy for impoverished and homeless children.

Additionally, many Extension professionals have hosted CAPS programs for FCS post-secondary education courses. Most studies, with the exception of Nnakwe (2021), showed significant changes in attitudes toward poverty when FCS students participated in CAPS. Research by both Arnett-Hartwick and Davis (2019) and Arnett-Hartwick and Harpel (2020) used Yun and Weaver's (2010) scale and determined there were marginal changes in attitudes toward poverty among their sampled participants. Yun and Weaver's (2010) 21-item Attitude Toward Poverty (ATP) scale is widely used in CAPS literature and assesses undergraduate ATP pre and post-CAPS. Kihm and Knapp (2015) used the scale embedded with the CAPS simulation and saw general changes in participants' understanding of poverty.

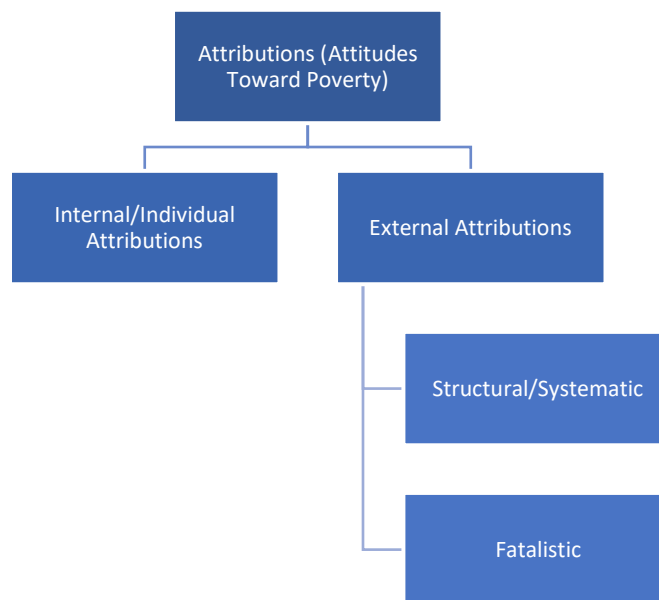
Theoretical Framework

This research used Attribution Theory to develop a theoretical framework for attitudes toward poverty. Attributions toward poverty are specific attitudes about the causes of poverty. According to Attribution Theory, observers (i.e., the student-participants) make judgments about actors' (i.e., those living in poverty) economic status and financial decisions (Heider, 1958). Attribution Theory might explain why affluent households attribute poverty to an actor's individual deficits (i.e., welfare dependency, laziness, and drug addiction) and those living in poverty attribute their economic status to external factors (Feagin, 1972; Hunt, 2004). Attribution Theory has been used in higher education to assess students' change in attributions for poverty. Further, observers distinguish between internal/individualism and systematic/structuralism.

Internal attributions are the most widely held attributions for poverty among American adults and college students alike (Feagin, 1972; Hunt, 2004). Internal attributions suggest that the person is living in poverty due to their own “individual failing” (Rank et al., 2003). Examples of individual failings include laziness, poor morals, welfare dependency, lack of human capital, sexual immorality, poor decision-making, and substance abuse (Bradshaw, 2007; Zosky & Thompson, 2012). Those who ascribe to the internal attribution may hold that if low-income individuals would maintain full-time employment, then they would escape poverty. A systemic/structural attribution suggests that a person is poor due to the ongoing “structural failings” (Rank et al., 2003) present in American society. Examples include the lack of a living wage, inflation, discrimination, unemployment, and other inefficiencies in the market (Brady, 2019; Mutikani, 2022).

See Figure 1 for a visual representation of this study’s theoretical framework. As depicted in the model, internal attributions refer to laziness, poor morals, welfare dependency, lack of human capital, sexual immorality, poor decision-making, and substance abuse. The external attributions consist of structural attributions (e.g., lack of a living wage) and fatalistic attributions (e.g., luck).

Figure 1. Attitudes and Attributions of Poverty Based on Heider (1958)



Methodology

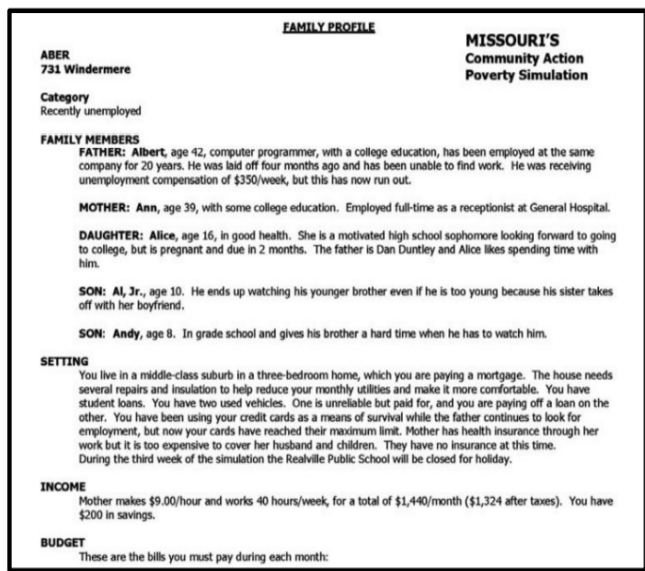
This research used deductive coding analysis to examine a sample of 56 student reflection papers. These students simulated adults as a part of their enrollment in either a Fall 2015, 2016, 2017, 2018, or 2019 family resource management class. These CAPS simulations were hosted by University of Georgia Extension Program by a local FCS Extension agent, thus rendering it both an FCS and Extension program. This research was approved by the University of Georgia’s Institutional Review Board. For confidentiality, the authors renamed the student papers

according to their simulated character’s name and the year they were enrolled in the course (e.g., Yuri Yarrow in 2019) instead of using the students’ names.

Description of the Community Action Poverty Simulation (CAPS)

CAPS is set in the fictitious Realville, USA, where 26 low-income families neighbor each other. Each participant is assigned a role: adult, child, or community worker. Up to 88 participants can simulate a family role (i.e., an adult or child), and at least 15 people can simulate the community worker role. The participants simulating a family role arrange themselves into a group of chairs corresponding to their family. These families are given a Family Profile printed handout explaining their household structure, income level, and assets. Household structures can vary from recently unemployed breadwinners to single mothers and even grandparents raising grandchildren. For instance, the Aber family features a 42-year-old recently unemployed husband, a 39-year-old stay-at-home wife, two minor sons, and a 16-year-old pregnant daughter. See Figure 2 for a sample Family Profile of the Abers.

Figure 2. Aber Family Profile



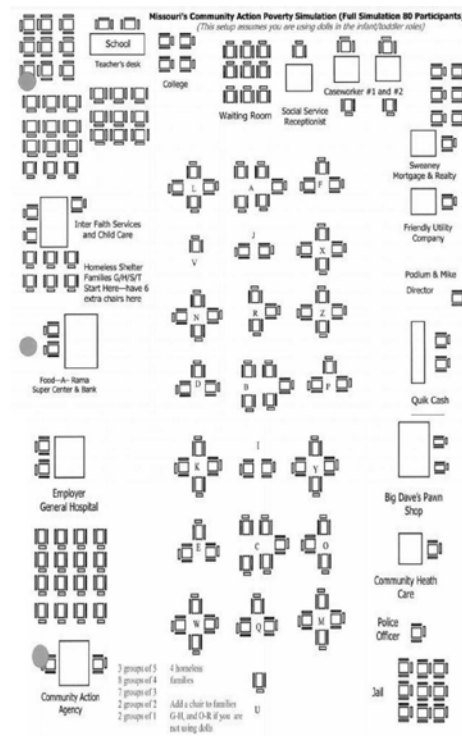
The 56 sampled personal reflections were only authored by students who simulated the adults from the following families: Aber, Boiling, Chen, Duntley, Epperman, Fuentes, Smith, Tiskit, Ussar, Vimmer Wiscott, Xanthos, Yarrow, and Zuppot. These families were selected since they were the ones that appeared the most often across the five semesters:

- The **Aber, Boiling, and Chen** families feature recently unemployed husbands with three minor children. Their teenage daughters are dating and have been impregnated by the 17-year-old sons from Duntley, Epperman, and Fuentes families.

- The **Duntley, Epperman, and Fuentes** families are each headed by a 34-year-old recently separated single mother. They have 14-year-old daughters and 17-year-old sons who have impregnated the Aber, Boiling, and Chen families.
- **Smith, Tiskit, Ussar, and Vimmers** are 85-year-old widows. Although they live in poverty, they are in relatively good health and rely on Social Security. Unfortunately, they do not have any children or anyone to help care for them.
- **The Wiscotts, Xantos, Yarrow, and Zuppots** families are grandparents raising grandchildren. The grandsons in the family have been diagnosed with Attention Deficit Hyperactive Disorder (ADHD). The mothers of the grandchildren were incarcerated for substance abuse, and their fathers are not in the picture.

Although not the focus of this paper, a discussion on the community workers is important to establish context. The community workers maintain table stations located around the periphery of the room. See Figure 3 for a diagram of the room layout. The community workers serve the family members and represent the institutions we, as consumers, encounter in everyday life. They include a banker, a doctor, a school teacher, and staff who represent social assistance programs. For instance, the supercenter clerk accepts Electronic Benefits Transfer (EBT) cards to process the character’s Supplemental Nutrition Assistance Program (SNAP) benefits. The Social Service Office Caseworker connects student-participants with benefits such as Temporary Assistance to Needy Families (TANF) and SNAP.

Figure 3. Layout of the CAPS Room



Dataset and Sampling Procedures

Fifteen student reflection papers were drawn from Fall 2015, and 10 were sampled from Fall 2016 students. In Fall 2017 and 2018, 12 and 8 student reflection papers were sampled, respectively. In Fall 2019, 11 student reflection papers were sampled. Therefore, this research analyzed a total of 56 student reflection papers. These students were enrolled in the same family resource management course at a large public university in the South. Table 1 shows the number of student reflection paper data by semester.

Table 1. Adult Family Member Participants by Semester

	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Total
Student Enrollment	98	66	97	100	99	460
Adult Roles	15	10	12	8	11	56

Purposive sampling is a standard sampling procedure used in qualitative research. It involves a series of strategic choices about with whom, where, and how one does research and how the sample is conducted (Palys, 2008). This approach is grounded in the notion that there is no one best sampling strategy since the sample should depend on the research purpose and the ontological and epistemological arrangement (Creswell & Creswell, 2017). Whereas quantitative research is focused on questions about the representativeness, generalizability, significance, and central tendency of a group, this form of qualitative research is less concerned with the majority but is concerned with a particular case or specific group of individuals. Purposive sampling, within the context of this paper, involves specifically choosing student papers from those who simulated the adult roles.

Each student compiled a two-to-four-page reflection paper. The students responded to five reflection questions:

1. Please provide a thorough description of your experience. (What role were you in during the simulation? What challenges did you face?)
2. Please describe how you felt about your experience during the CAPS.
3. What did you learn from CAPS?
4. What were some of your takeaways (highlights/key points) from this experience?
5. Did this simulation change your attitudes toward poverty?

Reflexive Thematic Analysis (RTA)

This research used Braun and Clarke's (2006) six-phase Reflexive Thematic Analysis (RTA) approach to analyze students' attitudes before and after completing the CAPS simulation. The six phases of RTA include

- Phase 1: Reading and re-reading the data

- Phase 2: Generating initial codes
- Phase 3: Constructing themes
- Phase 4: Reviewing themes
- Phase 5: Defining and naming themes
- Phase 6: Producing the report

During phase 1, each student's reflection paper was read twice. While reading the paper, the lead researcher highlighted phrases and maintained a list of initial codes. Only one author conducted the data analysis, which is acceptable for this form of qualitative data analysis (Braun & Clarke, 2006). During phase 2, the lead author compiled the initial codes from the first and second readings. In the third phase, she organized those codes into meaningful themes. During phase 4, the researcher reviewed themes, ensuring that all the codes in that theme were relevant to the theme. Then, in phase 5, she named and renamed the themes until the themes' names fit with the codes. The researcher knew when all the candidate themes reflected the data when a specific name and brief description of the theme were generated. The sixth and final phase corresponds with the results section.

Results

This research constructed three themes to address the research questions: (a) empathy, (b) a turn from internal attributions, and (c) systematic attributions.

Theme A: Empathy

As reflected in this theme, students expressed a newfound empathy for those living in poverty. Prior to the simulation, many expressed being originally apathetic. Specifically, many students outright stated that their affluent or middle-class background precluded them from even having to think about poverty, thus leading to an apathetic attitude. In the simulation, the fifty-two-year-old Yuri Yarrow character is a grandfather with a physical disability who is raising his two minor grandchildren with his wife. The student that simulated Yuri Yarrow in 2019 stated:

My view on poverty really didn't change too much. I do however have a deeper level of empathy for the impoverished folks that I encounter in my life. It is always easier to make snap judgements about people instead of truly getting to know them and what makes them uniquely themselves. If anything, this activity further enforced my views and convictions about poverty. The issues that impoverished folks face are often very deep as well as cyclical and they won't be fully helped with band aid solutions.

This theme shows the students, if nothing else, gained "a deeper level of empathy" as a result of the CAPS simulation. Another student who simulated Doris Duntley referenced how the simulation allowed them to take a walk in someone else's shoes. Doris Duntley is a single

mother that was recently abandoned by her husband. The student who simulated Doris Duntley in 2015 stated:

Before the poverty simulation, I had not given too much thought on the hardships of being a single parent. ... The poverty simulation served as a good reality check. It demonstrated a route that anyone can end up taking if they are not careful. It was quite scary to experience what living in poverty was like. I do not ever want to end up living paycheck to paycheck and live in constant fear of being evicted from my home. Living in poverty would mean having to devote most if not all of my time to finding income. There would not be much time for leisure and even if there were, I would not have the resources for entertainment. The simulation was overall effective in teaching the hardships of living under the poverty line and value of time.

As expressed by this student, CAPS was an effective “reality check” that enabled participants to experience poverty and begin to empathize with those who are living in it.

Theme B: A Turn from Internal Attributions for Poverty

Many of the students in this sample originally held internal/individualistic attributions of poverty. However, after completing CAPS, many students reported seeing the role that systematic/structural attributions play in perpetuating poverty. An individualistic belief system attributes a poor person’s poverty status to some personal deficit of the individual (Brady, 2019). Examples include lack of education, low work ethic, laziness, or lack of sound morals. Laziness is one of the predominant explanations of poverty. It explains that people are poor simply because they are lazy and do not want to work. Specifically, many of the students stated that they originally associated those living in poverty with a dispositional attribution. After completing the simulation, many students no longer felt laziness was the sole explanation for poverty. In the simulation, the character Vince Vimmer is an 85-year-old homeless widow living in relatively good health and poverty. One student simulating Vince Vimmer in 2018 stated:

I am a refugee, my family lost everything and some close family during a genocide. We moved a lot from one country to another, in search for shelter and peace. However, upon each move, we were welcomed by poverty. ... In 2011, we ... were very fortunate and were granted a resettlement in the USA. Although I grew up poor, I was sheltered from some of the impacts by my parents. I was a recipient of their successes and shielded from worries. They did everything they could for me and my siblings to live well. Therefore, I thought that there is always a way out of poverty, and that people who result to bad behavior because of being poor was a result of complacency. This idiotic thinking of mine changed during the simulation. Being able to assume the adult role really gave insight of decisions, sacrifices adults, and probably my parents, also had to decide on to make ends meet. ... My hope is that my fellow classmates and I will use this experience to change our views on poverty and to find ways to help others in need.

The student simulating Vince articulated that he originally felt poverty was always a choice since he watched his parents constantly find ways for them to escape it as it occurred. However, once the student began to encounter challenges in the simulation, he noticed the difficulties associated with living in poverty. He thus began to ascribe poverty less to the dispositional attributions of poverty. Additionally, the student simulating 85-year-old widow Eunice Ussar in 2017 stated:

The biggest thing I can take away from this simulation is that most of the time, the people living in poverty are not there because they are lazy. Instead the people living in poverty are mainly there because of unforeseen events such as death in the family, car breakdown, accidents. I would never believe that something so small could make a family go from alright to in big trouble.

The student simulating Eunice expressed that poverty is not simply just the result of laziness. Like many of the other students, this one expressed that poverty can be the result of unforeseeable events or bad luck.

Theme C: Systematic Attributions

Systematic attributions suggest that families live in poverty because they are being exploited, discriminated against, or are not afforded the same opportunities as everyone due to a broken economic system. In the simulation, the character Anthony Xanthos is a 52-year-old diabetic grandfather who is co-raising his minor grandchildren with his wife. A student who simulated Anthony Xanthos in 2016 discussed being double charged by the Utility Company due to not having a receipt. According to this student,

My experience at the poverty simulation showed me that individuals and families could be making every effort to prevent their decline into poverty but face tremendous adversity in seeking out employment or additional resources. The simulation also showed me the plight individuals and families are subject to from financial institutions and collection agencies. Families in poverty simply do not have the resources to devote towards fighting unfair charges or bills and are given little to no leeway in paying their outstanding obligations. The realtor in the simulation was going to evict my family for failing to pay our mortgage payment, even though we had all the funds at our disposal to paying off a portion of the debt.

As mentioned by the students, poverty can be perpetuated by shady financial practices and a lack of access to consumer protection laws. The student simulating Stella Smith in 2018 reported being a victim of criminal activity, which resulted in her losing even more money. As a result, the student who simulated Stella Smith in 2018 stated,

My next priority was making sure I had a way of defending myself. ... I missed a whole week's worth of meals ... keeping in mind that I was an 85-year-old retired widow and the money being given to me by the government was not cutting it at all.

By being a victim of theft, the student was able to see better how being the victim of criminal activity can put someone in a deeper financial situation.

Conclusion

This research explored students' attitudes toward poverty before and after the CAPS program. The sample was drawn from 56 reflection papers authored by students across five different years. These students were enrolled in the same family resource management course at a large public university in the southeast. Using Reflexive Thematic Analysis (Braun & Clarke, 2006), this research constructed three themes: (a) empathy, (b) a turn from internal attributions, and (c) systematic attributions.

Discussion of the Themes

Many students in this study developed a newfound empathy for those living in poverty. This finding aligns with Nickols and Nielsen (2011), who revealed that students in their study often believed poverty was primarily caused by laziness and poor decision-making prior to the poverty simulation experience. As guided by Attribution Theory, the research found that students (as observers) expressed holding both internal and external attributions of poverty (Heider, 1958). This paper adds to the literature by using Attribution Theory to assess students' change in attributions for poverty. As noted in the literature, this research found that college students may have negative attitudes and hold internal attributions of poverty (Hunt, 2004). This research also showed that educational interventions such as CAPS can enable students to turn from internal attributions as the sole cause of poverty to appreciate the role structural attributions hold. In congruence with other research (Arnett-Hartwick & Davis, 2019; Arnett-Hartwick & Harpel, 2020; Nnakwe, 2021), this research demonstrates that students reported attitudinal changes about poverty following a poverty simulation.

Implications and Limitations

This study adds to the literature by analyzing multi-semester, qualitative data emanating from an Extension-hosted CAPS program. However, this research is not without limitations. Qualitative research has limited ability to establish generalizability. As such, these findings cannot be generalized to all Extension programs or all college students. However, they do reflect this particular group of student-participants. Extension program specialists could benefit from using CAPS with college FCS students. Additionally, future research in this area might consider using mixed methods analyses to assess attitudes toward poverty further. Future research might explore

the use of other poverty simulations on FCS and Extension audiences such as Spent (Parks & Worthy, 2023).

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A Snapshot in Time: Consumer Behavior at the Start of COVID-19

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During the early stages of the coronavirus pandemic, consumers faced challenges related to obtaining household items due to shortages and limitations in shopping. Researchers from the University of Tennessee conducted a national, web-based consumer survey of 300 consumers in late April 2020 to better understand consumer behavior, shopping patterns, and demand shifts for goods and services. Major findings demonstrate that consumers have increased shopping for essential products from brick-and-mortar national chains, avoided brick-and-mortar small businesses, and have chosen to shop more by themselves, often choosing to forgo spending from across all product categories, compared to prior to the pandemic. Additionally, results indicate that lower levels of positive emotions and active resilience are responsible for higher levels of shopping frequency. Additionally, lower levels of passive resilience and optimism are associated with increases in co-shopping behaviors. Findings from this study provide insight into the changes among consumers during trying times and the influence of consumers' emotions and individual characteristics in helping to explain these changes in family resource management and mental health, as well as consumer resilience amidst changing macroeconomic conditions.

Keywords: online shopping, shopping patterns, emotional responses, resilience, optimism, consumer behavior, expenditures, COVID-19

While the COVID-19 pandemic has highlighted the importance of good health and wellness globally and at home, it has also had an economic impact on macro- and micro-economies through an economic downturn (Yeyati & Filippini, 2021), which has brought changes to the way consumers spend and save money; specifically, consumers are facing challenges in paying for usual household expenses (e.g., food, mortgage, medical; Baker et al., 2020; Garner et al., 2020). Shelter-in-place orders, government-imposed shutdowns, and the need for social distancing have substantially altered lives across the United States by encouraging consumers to remain at home (Garner et al., 2020). Additionally, positive events, such as stimulus checks and child tax credit checks, allowed for additional family resources (DeParle, 2021). As consumers

navigated these unprecedented times to care for themselves and their families, they often transitioned their purchase transactions to the online environment as a strategy to increase selection in the midst of supply-chain issues and to actively avoid potentially crowded brick-and-mortar retail stores (National Retail Federation [NRF], 2020).

Studying consumer behavior during the onset of the COVID-19 pandemic offers an ideal opportunity to understand better how individuals respond in the face of a global health crisis, specifically and in general times of distress. Most early COVID-19 studies focus on epidemiology, clinical investigations, treatments, and patient outcomes (Addo et al., 2020). Additionally, many current studies examining the economic impacts of COVID-19 approach their inquiry from a macroeconomic perspective, sometimes overlooking how the pandemic has impacted the day-to-day (i.e., microeconomic) realities of households (Martin et al., 2020). Studies examining consumer responses to COVID-19 have only started to emerge in the literature (Bachman et al., 2020; Baker et al., 2020; Serido, 2020). A deeper understanding of consumer behavior during this time can help better inform the family resource management literature via understanding how consumers respond during times of crisis. Extension educators can acquire knowledge of consumers' responses to crises to help build capacity during stressful times (Cronin et al., 2018). These studies are necessary in order to inform practitioners of rapid changes in consumers as they prepare for unexpected events and large-scale stressors.

Considering the unexpected nature of the COVID-19 pandemic, the studies used to frame and inform our understanding of pandemic consumer behavior come from market data, government reports, and empirical works found in the crisis and natural disaster literature (Bachman et al., 2020; Baker et al., 2020; Garner et al., 2020). Given the paucity of research related to pandemic consumer behavior, this study fills an important gap in the literature, thus deepening our understanding of consumer behavior in rapid and unexpected times of crisis. Specifically, the purpose of this study was to examine consumer behavior at the start of the COVID-19 pandemic.

Beyond expanding our empirical understanding of consumer behavior during times of distress, findings from this study can be used to help families deal with the economic fallout resulting from the COVID-19 pandemic (Yeyati & Filippini, 2021). Extension educators have a long history of providing information and support in times of crisis (Tobe et al., 2016); as such, practitioners and extension educators can use the findings from this study to help frame the delivery of educational programs as well as their approaches to families facing economic hardship during the time of COVID-19.

Literature Review and Conceptual Framework

Consumer Expenditures and Product Categories

Family resource management theory posits that external stimuli have an impact on the behaviors of individuals and family systems (Deacon & Firebaugh, 1988). External forces, such as the

COVID-19 pandemic, have had an influence on the demands and resources of individuals and families, which in turn influence people's actions or inactions. According to this theory, consumers' expenditures, choices across product categories, and shopping behaviors are expected to be influenced by the COVID-19 pandemic. The impact of COVID has also led to changes in expenditures, choices, and shopping behaviors, which are mainly due to individuals' economic situations prior to the pandemic (Baker et al., 2020).

Research shows a varied and, at times, vastly different financial reality for families in the face of COVID-19. Families able to keep their jobs and work from home have survived and even thrived in the COVID-19 economy (Fitzsimmons, 2020; Prime et al., 2020). Other families, especially those in the middle and bottom of the social strata, live with heightened concerns about COVID-19 and its impact on their financial livelihoods (*Wall Street Journal*, 2020), particularly for the younger generation (Garner et al., 2020). For essential employees working directly with customers, such as food service workers, these concerns were amplified; employees needed to work in public spaces to get paid, even if this made them at greater risk of contracting COVID-19 (Faghri et al., 2021). However, failure to work in these environments increased the risks of financial hardship (Faghri et al., 2021). At the onset of the pandemic, individuals living in economic hardship had difficulty paying for the usual household expenses (e.g., food, mortgage, medical; Garner et al., 2020), likely due to reductions in work hours, layoffs, and job loss work—all of which compounded the financially fragile reality of these households (Friedline et al., 2020; Zabek & Larrimore, 2020).

COVID-19, consumer concern over income reductions, and a nebulous economic outlook have all fueled shifts in current and anticipated consumer purchasing (Binder, 2020). As with other large-scale economic shocks, such as the housing bust and great recession, COVID-19 has impacted the everyday consumption and expenditures of families (Serido, 2020). While these events are unexpected, given the cyclical nature of the economy (e.g., recessions), families can prepare in advance by creating a disaster and contingency plan that includes emergency protocol and additional savings to continue to support the family (Setiadi & Frederika, 2022). While during other large-scale economic shocks, there was a noticeable decrease in overall spending, the COVID-19 pandemic also brought noticeable differences in the types of products purchased (Garner et al., 2020). In light of COVID-19, changes in consumer spending have been noted across all product categories (Baker et al., 2020). In general, consumer spending on goods has been resilient through the pandemic, while consumer spending on services has seen marked reductions (Bachman et al., 2020). However, a deeper look into spending, according to the U.S. Household Pulse Survey in December 2020 (Garner et al., 2020), demonstrates a greater prevalence of protective consumer behavior, including avoiding eating at restaurants and opting for curbside pickup. Additional data indicate that, during the onset of the pandemic, clear drops in consumer spending were largest for travel and clothing (Coibion et al., 2020). The large declines in travel and clothing spending are consistent with Du and Kamakura (2008), who found that consumers decrease their discretionary spending, thus allowing for smaller changes in non-

discretionary spending. While large declines were seen in travel, entertainment, and clothing, other categories, such as food, saw only modest decreases (Coibion et al., 2020). After the lockdowns were lifted, consumer spending rebounded in the third quarter of 2020. Yet, a full return to consumer spending, especially in the entertainment, service, and travel sectors, is not anticipated until early 2022 (Bachman et al., 2020).

Online Shopping and Co-shopping

Restrictions on brick-and-mortar shopping, as well as changes in product inventory, had an impact on consumer shopping behaviors. According to a recent survey conducted by the NRF, over 90% of consumers have changed their shopping behaviors in response to COVID-19 (NRF, 2020), including shifts in shopping channels (e.g., a greater frequency of online shopping). In the face of widespread government lockdowns, many consumers became more familiar with online shopping and other shopping channels (e.g., curbside pickup) in order to meet shopping needs once fulfilled through brick-and-mortar patronage and to avoid crowds (Garner et al., 2020; NRF, 2020). While all channels experienced product inventory issues, the online channel allowed for greater search capabilities to locate needed products (Baig et al., 2020). That is, product inventories were disrupted due to supply chain shortages (i.e., factory closures) and inconsistent demand for particular products (furniture, DIY products, etc.). However, online shopping provided additional sources for needed products that may not have been available in local stores (Roggeveen & Sethuraman, 2020).

It is important to note, however, that consumers' increased use of e-commerce is not consistent across product categories or consumer segments. Analysis of marketing research reveals that consumer shopping online has increased, especially for essentials (e.g., food) and home entertainment (e.g., puzzles), with lower increases noted for discretionary items (e.g., clothing; Coggins et al., 2020). When lockdown orders were relaxed and/or lifted, many consumers continued to depend on online shopping either as a sole shopping channel or one used in conjunction with offline purchasing options (Nielsen, 2020). Their continued reliance on online shopping varies with some cited reasons, including safety concerns and the need to maximize value (NRF, 2020).

As demonstrated in the research, shopping with others (i.e., co-shopping) is more likely to happen when consumers are uncertain of their ability to evaluate products and brands (Mangleburg et al., 2004). Typically, co-shopping refers to consumer groups who collaborate and coordinate their shopping endeavors (Chan & Li, 2010). Shopping with others helps consumers make purchase decisions by reducing perceptions of risk and uncertainty (Kiechker & Hartman, 1993). In other words, shopping with others allows one to ask, "Have you tried this?" or "Does this fit me correctly?"; thus gaining others' opinions when shopping. For this study, co-shopping is conceptualized more broadly to include the practice of shopping with others,

regardless of access or cost benefits. Co-shopping has yet to be examined against the backdrop of uncertainty and crisis. This study seeks to address that void in the literature.

Consumer Emotions and Individual Characteristics

Boss's (2017) family stress theory explores how stressors impact the family system. Frequent stressors can lead to personal and family crises, including emotional and psychological crises. External disturbances (natural disasters, pandemics) can also have an impact on the coping responses of the family unit (Serido, 2020). How individuals and their families view a stressor/situation is often influenced by gender, age, race, ethnicity, and class; however, such demographic influences are beyond the scope of the current study. Consumers' adaptation and coping in a crisis situation can be influenced by their financial situation and decision-making skills, how they respond to stressful situations, and their personal and family resiliency (Dollahite, 1991; Patterson, 2002).

In the face of traumatic events, individual factors (e.g., individual's emotional response and awareness of the traumatic events) have an impact on the ways individuals cope (Sneath et al., 2009). Various emotional reactions (i.e., anger, anxiety, sadness, fright) are documented in traumatic situations (Jin et al., 2012; Kim & Cameron, 2011), implying the possibility of multi-faceted emotional reactions when facing disasters. In other words, just like any unexpected or turbulent event, there are no specifically prescribed emotional reactions to such events (Jin et al., 2012; Kim & Cameron, 2011). Thus, it is likely that consumers may experience varied or multiple emotional reactions throughout the COVID-19 pandemic. In disaster literature, researchers predominately focused on the influence of negative emotions (e.g., anger, anxiety, sadness) in responding to a crisis (e.g., the role of negative emotions in influencing behavioral intentions; Choi & Lin, 2009; Jin et al., 2012; Kim & Cameron, 2011). While less developed, a growing body of research has worked to identify positive psychological responses (e.g., resilience) to individuals' crisis coping (e.g., Bonanno, 2004). For example, the literature notes that positive emotional responses serve as a way to cope by helping individuals reframe a threat as a challenge and providing motivation and sustainable coping efforts that are needed over the long term. (Folkman, 2013). When faced with external situations beyond one's control, emotion-focused coping mechanisms can be employed as a means of self-control. For example, when faced with a disaster, individuals may not be able to solve external (e.g., physical impact) issues; as such, emotional coping strategies are carried out to cope with, manage, and control stress induced by such stressful events (Lim et al., 2019).

As for psychological aspects, a critical psychological status in response to stressful events includes resilience and/or the optimistic capacity of individuals (Bonanno, 2004; Riolli et al., 2002). Resilience refers to the ability of an individual to remain psychologically stable and healthy when faced with a disruptive event, such that they can more easily overcome the trying time (Bonanno, 2004). In addition to resiliency, consumers' level of optimism can play a strong

positive role in how they respond to disaster (Riulli et al., 2002). Optimism, an individual characteristic, refers to an individual's general tendency to anticipate positive outcomes (Riulli et al., 2002). This positive future orientation can help consumers frame future economic conditions in a positive light (Puri & Robinson, 2007). Such positive psychological responses can lead to proactive actions, which can serve as a source of hope for individuals in times of hardship (Prawitz et al., 2013). Currently, there is a lack of empirical evidence identifying which and how consumers' psychological and emotional experiences affect consumer behaviors during times of crisis.

The need to better understand how consumers changed their behavior at the onset of the COVID-19 pandemic is based on the following three research questions:

1. Has COVID-19 changed consumer shopping behaviors in terms of product categories and retail channels?
2. Have consumers changed their shopping behaviors in terms of co-shopping and monthly expenditures for various product categories as a result of COVID-19?
3. How are consumers' emotions during COVID-19 and individual characteristics (resilience and optimism) related to their current decision-making in terms of shopping frequency, change in monthly expenses, and co-shopping?

Method

Data Collection Protocol

Data were collected using Qualtrics as an online survey panel across the U.S. ($N = 315$) at the onset of the COVID-19 pandemic in March 2020. Respondents were compensated for their participation in the study through Qualtrics. While the research was conveniently collected, several steps were taken to reflect a more representative sample of the general U.S. population. Specifically, quotas were implemented to reflect demographic characteristics (i.e., gender and income) of the general U.S. population. This study sought to understand better consumers who modified purchasing as a result of COVID-19. A filter question was used, "When did you first start to modify, if at all, your shopping and purchase behavior for COVID-19?" As such, respondents who reported not modifying their shopping or purchasing behavior for COVID-19 did not qualify for this study and could not participate. As a result of this screening protocol, a total of 1,664 individuals initiated the survey, but only 315 consumers qualified for completion. Those who did qualify first read a brief introduction about the research and answered questions about emotional responses (resilience and optimism) and their shopping behaviors with national chain stores and small businesses at the onset of the pandemic. Last, demographic information was collected. In total, participants responded to 41 questions.

Sample of Study

Of the respondents, ages ranged from 18 to 77 years old, with an average of 45 years old. Gender was evenly split (female: $n = 159$, 50.5%; male: $n = 154$, 48.9%; other: $n = 2$, 0.6%); income was relatively evenly distributed across the sample, with the majority of participants having a household income over \$60,000 annually. Unfortunately, changes in income due to the COVID-19 pandemic were not measured in this survey. The majority of respondents identified as white/Caucasian ($n = 233$, 74.0%), followed by African American ($n = 28$, 8.9%), Hispanic ($n = 23$, 7.3%), Asian American/Asian ($n = 23$, 7.3%), and others ($n = 8$, 2.6%). Participants were also well educated, with the majority having some college, a college degree, or a postgraduate degree ($n = 253$, 80.3%). At the time of data collection in April 2020, respondents reported modifying their shopping behavior due to COVID-19 (more than a month ago: $n = 202$, 64.1%; 2–4 weeks ago: $n = 89$, 28.3%; 1–2 weeks ago: $n = 16$, 5.1%; in the past week: $n = 8$, 2.5%) and spending extra money in their preparation (i.e., “Did you spend any extra money on products as your prepared for COVID-19?”, less than \$100: $n = 73$, 23.2%; between \$100–\$199: $n = 49$, 15.6%; between \$200–\$299: $n = 56$, 17.8%; between \$300–\$399: $n = 31$, 9.8%; between \$400–\$499: $n = 10$, 3.2%; over \$500: $n = 25$, 7.9%).

Survey Instrument

Research Question 1 (RQ1)

To understand how COVID-19 has changed consumer shopping behavior, participants were asked to measure the frequency of shopping with two product categories (i.e., essential and nonessential products) and four retail channels (i.e., physical/online and national/small retail stores) at two points in time (i.e., before and during the pandemic). With the product-retail channel-time combination in mind, researchers developed 16 questions pertaining to shopping frequency both before and during the COVID-19 pandemic for essential and nonessential shopping across physical national retail stores, online national chain stores, physical small retail stores, and online small retail stores. Examples of essentials (e.g., food, hygiene products) and nonessentials (e.g., clothing, footwear, toys) were listed. Additionally, examples of national chains (e.g., Walmart, Macy’s) and small businesses (e.g., independent/family-owned) were listed. Frequency options included *less than once a month* (1), *about once a month* (2), *several times a month* (3), *weekly* (4), and *several times a week* (5).

Research Question 2 (RQ2)

This study sought to understand how COVID-19 has changed consumer behavior in terms of co-shopping and monthly expenditures for various product categories. To assess consumers’ level of co-shopping, respondents were asked, using a semantic differential scale, how they liked to shop both before and during COVID-19 (1 = *always by myself* and 7 = *always with someone (friend, group, etc.)*), for a total of two questions. To measure changes in monthly expenditures for

various product categories, respondents estimated the average monthly expenditure spent on each product category listed before (during) COVID-19. The ten product and service categories included clothing/apparel, footwear, accessories (e.g., wallets, watches), electronics (e.g., games, earphones), services (e.g., gym membership, hair and beauty services), household supplies (e.g., cleaners), media and entertainment (e.g., streaming, gaming), and personal care products (e.g., cosmetics, skin care products), travel and tourism (e.g., hotel, air travel), and food and beverage (e.g., dining out). Monthly expense options included \$0 (1), *under \$50* (2), *between \$50–\$149* (3), *between \$150–\$299* (4), *between \$300–\$499* (5), and *over \$500* (6). Questions corresponding to the above ten product/service categories were asked for both before and during the pandemic, resulting in a total of 20 questions. All questions to address research question 2 were developed by researchers of this study.

Research Question 3 (RQ3)

Respondents answered questions to capture how their emotions and individual characteristics (resilience and optimism as independent variables) during the pandemic influenced their current decision-making in terms of changes in shopping frequency, monthly expenses, and co-shopping. Emotions were measured using eight items (positive emotions: relaxed, comfortable, reassured; negative emotions: tense, nervous, anxious, fearful, stressed) from Maheswaran and Meyers-Levy (1990) on a 5-point scale (1 = *not at all*; 5 = *extremely*; e.g., “Currently to what extent do you experience relaxed?”). Higher scores reflect higher levels of emotional state. Past research identified varying dimensionality of resilience (i.e., active and passive resilience; Burnard & Bhamra, 2019). Resilience was measured using a 7-point Likert-type scale (1 = *strongly disagree*; 7 = *strongly agree*), where higher scores reflect higher levels of resilience. Optimism was assessed using Taute et al.’s (2010) six-item scale (e.g., “I never give up when faced with a challenge”). Optimism was also measured using a 7-point Likert-type scale (1 = *strongly disagree*; 7 = *strongly agree*), where higher scores reflect higher levels of optimism. Last, respondents answered demographic questions (i.e., age, gender, household income, education).

Data Analysis

This study addressed three research questions to understand how consumers changed their behavior at the onset of the COVID-19 pandemic. RQ1 concerns whether COVID-19 changed consumer shopping frequency across product categories and retail channels. A paired *t*-test was applied to compare shopping frequency scores at two different points in time— before and during the pandemic. This pair was set as a categorial variable, and shopping frequency was a continuous variable. A comparison was performed for each combination of product and retail channel, resulting in a total of 16 *t*-tests.

RQ2 examines whether consumer shopping behaviors have changed in terms of co-shopping and average monthly shopping expenditure as a result of COVID-19. As with RQ1, a paired *t*-test was applied where the measurements of each shopping behavior were compared between two

time points – before and during the pandemic. Consumers' co-shopping and monthly shopping expenses were measured as continuous variables and used to represent shopping behaviors for two *t*-tests.

RQ3 asks how consumers' emotions during COVID-19 and individual dispositional traits (resilience and optimism) are related to their current decision-making with respect to changes in shopping frequency, monthly expenses, and co-shopping. Data analyses consisted of three steps. First, an exploratory factor analysis (EFA) was performed to derive underlying constructs of emotions, resilience, and optimism individually. This analysis was necessary because the literature documented inconsistent dimensionality of emotions, and the measures of emotions, resilience, and optimism were tested in general contexts, not in the context of this study, which is the COVID-19 pandemic. Following this, a confirmatory factor analysis (CFA) was performed to assess the measurement model of the constructs identified in the EFA, thereby confirming the construct validity of each independent variable. Last, three separate hierarchical multiple regression analyses were performed for each dependent variable. All independent variables were entered into the regression analysis simultaneously, and demographics (age, gender, education, income) were entered as covariates. For operationalization, each independent variable was computed by taking the mean value of its measurement scores. In contrast, each dependent variable, changes in shopping frequency, monthly expenditures, or co-shopping, was created by taking the difference between the during- and pre-pandemic scores. For example, the change in shopping frequency variable was created by subtracting the score of before-pandemic shopping frequency from that of during-pandemic shopping frequency. The higher the score of change in shopping frequency, the higher the frequency of shopping during the pandemic than before the pandemic. As a result, independent and dependent variables were continuous variables, and so were all covariate variables except for gender, which was a categorical variable, with males as the reference group. It is also noteworthy that whereas regression analyses were performed with the original dataset, EFA and CFA were administered using separate data sets to avoid capitalization on chance. That is, the original dataset was randomly divided into two estimation and validation datasets, which were used for EFA ($n = 148$) and CFA ($n = 163$), respectively. There were no differences in respondents' demographics between the two groups. CFA was tested with IBM AMOS 27.0, and all other tests were run using IBM SPSS Statistics 27.0.

Results

Research Question 1

Overall, paired sample *t*-tests revealed that for essential (e.g., food, hygiene products) and nonessential (e.g., clothing, footwear, toys) items, there was a significant difference in the frequency of shopping in brick-and-mortar retailers, both national chains and small stores (see Table 1). Specifically, for essential products, there was a significant increase in frequency of shopping in brick-and-mortar stores across national chains (before $M = 3.00$, during $M = 4.22$, %

change = +47.30%, $t = 8.265, p < .001$) but a significant decline in frequency of shopping in brick-and-mortar stores across small businesses (before $M = 2.62$, during $M = 2.12$, % change = -19.08%, $t = 7.180, p < .001$). This suggests that consumers were frequenting brick-and-mortar national chain stores, rather than small businesses, for essential products during the pandemic.

However, for nonessential products, there was a significant decrease in shopping frequency across brick-and-mortar national chains (before $M = 2.50$, during $M = 1.97$, % change = -21.20%, $t = 7.575, p < .001$) and small businesses (before $M = 2.28$, during $M = 1.85$, % change = 18.86%, $t = 8.265, p < .001$). Thus, brick-and-mortar shopping frequency decreased during the pandemic for nonessential products, regardless of whether stores are national chains or small businesses. Interestingly, there was no significant change in online shopping frequency, regardless of product category (essential or nonessential) or whether the retailer was a national chain or a small business. For essential products (national chain: before $M = 2.11$, during $M = 2.19$, % change = +3.79%, $t = -1.074, p\text{-value} = .284$; small business: before $M = 2.06$, during $M = 1.97$, % change = -4.37%, $t = 1.382, p\text{-value} = .168$) and nonessential products (national chain: before $M = 2.06$, during $M = 1.97$, % change = -4.37%, $t = -1.333, p\text{-value} = .183$; small business: before $M = 1.97$, during $M = 1.88$, % change = -4.57%, $t = 1.497, p\text{-value} = .136$), no significant differences existed. Thus, the frequency of consumer online shopping behavior remained the same for participants.

Table 1. Research Question 1: Change in Shopping Frequency by Product Category and Retail Channel

Product Category	Retail Channel		Shopping Frequency Mean	Change (%)	t-value	p-value
	Brick-and-Mortar/Online	National Chain/Small Business				
Essential Products	Brick-and-Mortar	National Chain	Before (3.00) During (4.42)	+47.30%	8.265	< .001
		Small Business	Before (2.62) During (2.12)	-19.08%	7.180	< .001
	Online	National Chain	Before (2.11) During (2.19)	+3.79%	-1.074	.284
		Small Business	Before (2.06) During (1.97)	-4.37%	1.382	.168
Nonessential Products	Brick-and-Mortar	National Chain	Before (2.50) During (1.97)	-21.20%	7.575	< .001
		Small Business	Before (2.28) During (1.85)	-18.86%	6.583	< .001
	Online	National Chain	Before (2.06) During (1.97)	-4.37%	1.333	.183
		Small Business	Before (1.97) During (1.88)	-4.57%	1.497	.136

Note. A higher mean indicates greater shopping frequency.

Research Question 2

Co-shopping

Regarding changes in consumers' co-shopping behaviors (i.e., whether consumers shop by themselves or with others) due to COVID-19, *t*-tests revealed a significant change (before $M = 3.89$, during $M = 2.96$, % change = -23.91%, $t = 7.919$, $p < .001$) (see Table 2). Thus, the likelihood of co-shopping has declined by 23.91%, indicating that consumers are shopping more by themselves during the pandemic than before.

Table 2. Research Question 2: Change in Co-shopping Behavior

Co-shopping Behavior Mean	% Change	<i>t</i> -value	<i>p</i> -value
Before (3.89)			
During (2.96)	-23.91	7.919	< .001

Note. A higher mean indicates greater co-shopping behaviors.

Monthly Expenditures

Furthermore, monthly expenditures also significantly decreased due to the pandemic across all product categories assessed (see Table 3). The largest decrease happened for clothing/apparel (before $M = 2.87$, during $M = 1.60$, % change = -44.25%, $t = 22.232$, $p < .001$), followed by travel and tourism (before $M = 2.55$, during $M = 1.48$, % change = -41.96%, $t = 12.415$, $p < .001$), and footwear (before $M = 2.45$, during $M = 1.52$, % change = -37.96%, $t = 17.579$, $p < .001$). Media and entertainment (% change = -29.24%, $t = 12.650$, $p < .001$) and food and beverage (% change = -27.32%, $t = 18.676$, $p < .001$) experienced the smallest decrease.

Table 3. Research Question 2: Change in Monthly Expenditures by Product Category

Product Category	Before	During	% Change	<i>t</i>	<i>p</i> -value
Clothing/Apparel	2.87	1.60	-44.25%	22.232	< .001
Footwear	2.45	1.52	-37.96%	17.579	< .001
Accessories	2.07	1.38	-33.33%	12.755	< .001
Electronics	2.37	1.57	-33.76%	11.180	< .001
Services	2.37	1.48	-37.55%	13.941	< .001
Household Supplies	2.72	1.92	-29.41%	14.687	< .001
Media and Entertainment	2.36	1.67	-29.24%	12.650	< .001
Personal Care	2.63	1.76	-33.08%	16.598	< .001
Travel and Tourism	2.55	1.48	-41.96%	12.415	< .001
Food and Beverage	3.88	2.82	-27.32%	18.676	< .001

Note. A higher mean indicates greater monthly expenditures.

Research Question 3

Initially, EFA revealed that optimism is unidimensional, whereas resilience and emotions are bi-dimensional (see Table 4). Resilience emerged in active (3 items) and passive (3 items) forms,

explaining 70.06% of the total variance in the original measurement. The active resilience dimension demonstrates an individual's ability to be proactive in adjusting to disturbances (e.g., "I tend to bounce back quickly after hard times"), whereas passive resilience demonstrates an individual's resistance against stressful occurrences (e.g., "It is hard for me to snap back when something bad happens"). The two-dimensionality of resilience aligns with Burnard and Bhamra's (2019) bidimensional model describing resilience in terms of active and passive resilience. Three items emerging into passive resilience were reverse-coded for better interpretations. Emotions emerged in both negative (5 items; e.g., "tense") and positive (3 items; e.g., "relaxed") forms, together explaining 74.46% of the total variance in the original measurement. All scales showed high internal consistency (Cronbach's alphas > 0.84).

CFA was also used for evaluating the measurement model with five constructs (i.e., optimism, active resilience, passive resilience, negative emotions, and positive emotions). Acceptable model fit was achieved: $\chi^2 = 298.26$, $df = 113$, $\chi^2/df = 2.64$, Standardized RMR = .054, IFI = 0.95, TLI = 0.94, CFI = 0.95, RMSEA = 0.07, 90% CI [0.06, 0.08] (Fornell & Larcker, 1981). Therefore, the measurement model fits the data. Additionally, internal reliability, convergent validity, and discriminant validity were tested. All factor loadings were significant, and the average variance extracted (AVE) in indicators by their corresponding construct exceeded 0.50; thus, convergent validity was confirmed. All constructs have internal consistency since composite reliability was greater than 0.86. Discriminant validity was also confirmed; AVE estimates of each construct appeared greater than the squared multiple correlation estimates between all possible pairs of constructs (see Table 5). Therefore, further analyses and discussions were made based on the five independent variables.

Table 4. Exploratory Factor Analysis and Confirmatory Factor Analysis

Factor/Items	Std. Factor Loading	
	EFA	CFA
Optimism (<i>Var.</i> = 62.93%, α = 0.91, <i>CR</i> = 0.91)		
I keep going in the face of adversity	0.93	0.84
I keep trying in the face of obstacles	0.83	0.83
I never give up when faced with a challenge	0.81	0.81
I have the will to win	0.78	0.79
I continue to try even when it seems hopeless	0.74	0.75
I don't let anxiety keep me from accomplishing my goals	0.68	0.75
Passive resilience (<i>Var.</i> = 50.69%, α = 0.88, <i>CR</i> = 0.88, reverse coded)		
I tend to take a long time to get over setbacks in my life	0.90	0.74
It is hard for me to snap back when something bad happens	0.85	0.90
I have a hard time making it through stressful times	0.76	0.89
Active resilience (<i>Var.</i> = 19.37%, α = 0.86, <i>CR</i> = 0.86)		
I tend to bounce back quickly after hard times	0.87	0.84
It does not take me long to recover from a stressful event	0.83	0.84
I usually come through difficult times with little trouble	0.79	0.80

Factor/Items	Std. Factor Loading	
	EFA	CFA
Negative emotion (Var. = 52.41%, α = 0.94, CR = 0.94)		
Tense	0.90	0.90
Nervous	0.90	0.89
Anxious	0.89	0.90
Fearful	0.85	0.82
Stressed	0.82	0.86
Positive emotion (Var. = 22.05%, α = 0.87, CR = 0.88)		
Relaxed	0.91	0.71
Comfortable	0.85	0.92
Reassured	0.73	0.87

Note. Var. = variance explained, α = Cronbach's alpha, CR = composite reliability

Table 5. Convergent and Discriminant Validity

	Mean (SD)	Optimism	Passive Resilience	Active Resilience	Negative Emotion	Positive Emotion
Optimism	5.31 (1.05)	0.63	0.05	0.36	0.01	0.09
Passive Resilience	4.22 (1.53)		0.72	0.23	0.37	0.04
Active Resilience	4.46 (1.37)			0.68	0.08	0.23
Negative Emotion	2.80 (1.15)				0.76	0.11
Positive Emotion	2.62 (1.02)					0.70

Note. The numbers in the diagonal are the average variance extracted by each construct. The numbers above the diagonal show the squared correlation coefficients between the constructs.

Three hierarchical multiple regression analyses were run to determine regression coefficients of predictors of interest after controlling for covariates (see Table 6). A regression model included five independent variables and a dependent variable of the change in shopping frequency, monthly expenditures, and co-shopping separately. Covariates were placed in the first step, followed by the independent variables added in the second step.

Shopping Frequency

The first step of the model, where demographic covariates were entered, accounted for 0.7% of the variance in change in shopping frequency due to COVID-19, but their prediction was insignificant (adjusted $R^2 = .007$, $F = 1.52$, $p = .197$). The full model in the second step, where independent variables were added, significantly explained 7% of the variance (adjusted $R^2 = .070$, $F = 3.62$, $p < .001$, *Sig F change* $< .001$). Results suggest that lower positive emotions ($B = -0.15$, $t = -2.662$, $p = .008$), lower passive resilience ($B = -0.09$, $t = -2.280$, $p = .023$), higher active resilience ($B = 0.15$, $t = 3.065$, $p = .002$), and lower optimism ($B = -0.17$, $t = -2.882$, $p =$

.004) influence shopping frequency (i.e., an increase in shopping frequency during the pandemic compared to before). However, negative emotions do not influence changes in shopping frequency ($B = 0.01, t = .209, p = .834$).

Co-shopping

The regression model in the first step was insignificant (adjusted $R^2 = -.009, F = 0.267, p = .899$), indicating that the predictive power of covariates toward change in co-shopping is negligible. The full model in the second step was significant, accounting for a 2.8% variance of change in co-shopping (adjusted $R^2 = .028, F = 1.991, p = .040, Sig F change = 0.006$). The lower passive resilience ($B = -0.24, t = -2.436, p = .015$) and optimism ($B = -0.37, t = -2.680, p = .015$) consumers tend to hold, the more likely they are to shop with someone else. Active resilience ($B = 0.19, t = 1.655, p = .099$), negative emotions ($B = -0.18, t = -1.352, p = .177$), and positive emotions ($B = -0.23, t = -1.765, p = .079$) are not related to changes in co-shopping behavior.

Monthly Expenditures

In terms of change in monthly expenditures, the regression model with covariates in the first step significantly accounted for 3% of the variance (adjusted $R^2 = .027, F = 3.19, p = .014$), and the full model in the second step predicted 4% of the variance ($R^2 = 0.042, F = 2.53, p = .008$). Next, we turned to each independent variable to see if it predicted changes in monthly expenses after controlling for covariates, especially income ($B = -0.03, t = -2.104, p = .036$). Two variables, optimism ($B = -0.10, t = -2.334, p = .020$) and active resilience ($B = 0.09, t = 2.389, p = .017$), were shown to be significantly related to change in monthly expenses in that higher optimism decreases change in monthly expenditure, while higher active resilience increases monthly expenditure during the pandemic in comparison with before the pandemic.

Table 6. Research Question 3: Multiple Regression Analyses

Predictor	Shopping Frequency			Monthly Expenditure			Co-shopping		
	B	S.E.	p-value	B	S.E.	p-value	B	S.E.	p-value
<i>Independent variables</i>									
Optimism	-0.17	0.06	0.004**	-0.10	0.04	0.020*	-0.37	0.14	0.008**
Passive resilience	-0.09	0.04	0.023*	-0.06	0.03	0.065	-0.24	0.10	0.015*
Active resilience	0.15	0.05	0.002**	0.09	0.04	0.017*	0.19	0.12	0.099
Negative emotion	0.01	0.05	0.834	-0.01	0.04	0.908	-0.18	0.13	0.177
Positive emotion	-0.15	0.06	0.008**	0.00	0.04	0.913	-0.23	0.13	0.079
<i>Covariates</i>									
Age	0.00	0.00	0.759	0.00	0.00	0.120	0.01	0.01	0.190
Gender (reference: male)	-0.18	0.11	0.104	-0.08	0.08	0.296	-0.32	0.26	0.902
Income	-0.03	0.02	0.146	-0.03	0.01	0.036*	-0.01	0.04	0.789
Education	-0.01	0.04	0.801	-0.04	0.03	0.092	-0.03	0.09	0.746

Note. B = Unstandardized coefficients; * $p < 0.05$, ** $p < 0.01$

Discussion and Implications

The purpose of this study was to examine consumer behavior at the start of the COVID-19 pandemic one month after its onset in the United States. This study investigated three research questions to understand shopping behaviors during the pandemic.

The first research question asked whether COVID-19 has changed consumer shopping behaviors in terms of product categories and retail channels. Consumers in this study reported an increase in purchasing essential products and a decrease in purchasing nonessential products. This overall finding mirrors findings from the marketing research literature (Bachman et al., 2020; Coibion et al., 2020). Specific results provide further clarity on consumer behavior during these trying times. Results indicate that, for essential products, there was a significant increase in the frequency of shopping in brick-and-mortar stores across national chains but a significant decline in the frequency of shopping in brick-and-mortar stores across small businesses. Furthermore, for nonessential products, there is a significant decrease in shopping frequency across brick-and-mortar national chains and small businesses. Thus, brick-and-mortar shopping frequency for nonessential products has decreased during the pandemic, regardless of whether stores are national chains or small businesses. While these findings do represent a point-in-time glimpse of purchasing at the start of the pandemic, later studies have indicated that consumers have changed their consumption patterns as a result of the pandemic (Mitterling et al., 2020); thus, this research should be interpreted in light of the data collection timepoint.

Beyond identifying changes in consumer purchasing for product categories, the first research question of this study also examines the extent to which consumers frequented national chains and small businesses. Findings from this study show that, unfortunately, small businesses may suffer the most due to COVID-19. Data indicate that consumers first visited national chain stores rather than small businesses for essential products (e.g., food, hygiene products). In fact, results indicate that, for essential products, the frequency of shopping at national chain brick-and-mortar stores increased but decreased for small businesses. While this information is useful, it is important to note that, in some states, small businesses were mandated to close, whereas national chain stores could remain open. This mandate may have impacted findings and is worthy of additional insight in future studies. Additionally, supply chain issues were rampant throughout the pandemic, and consumers may have relied on national chain stores to fulfill their needs, given their buying power to obtain limited stock. However, small businesses may not have had the same options to obtain difficult-to-find products. For nonessential products (e.g., clothing, footwear, toys), there was an overall decrease in the frequency of shopping across retail channels, indicating that consumers may be simply going without nonessential products. This finding aligns with household data indicating that consumers have difficulty paying for usual household expenses (e.g., food, mortgage payments, medical expenses; Garner et al., 2020). This finding is consistent with recent literature indicating spending reductions in nonessential categories, including clothing and travel (Coibion et al., 2020; Garner et al., 2020). The most

concerning finding is the toll that COVID-19 has on small businesses. Considering that small businesses create entrepreneurial opportunities for upward financial mobility, this channel and its corresponding owners may be most fragile as a result of COVID-19. It may have been challenging for small businesses to open during government-imposed shutdowns (Garner et al., 2020), and national chain stores may have a greater pool of financial resources (Josephson et al., 2017), which allow these retailers to address the need for social distancing and increase consumer comfort. Contrary to consumer data (Garner et al., 2020; NRF, 2020), participants in this study noted no changes in online shopping. Given the timing of this study (one month into the pandemic), it is possible that consumers later altered their shopping behavior by increasing online shopping prevalence. Some family stress literature points to a time of processing before one reacts or adapts to a stressor (Patterson, 2002). Applying this understanding in the current context may help to explain why there was no change in shopping channels. Perhaps changes in shopping channels happened later after households had processed the initial stressor. This explanation would be in keeping with longitudinal consumer data regarding increased online shopping (Nielsen, 2020).

The second research question of this study examined the extent to which consumers may have changed their shopping behaviors in terms of monthly expenditures for various product categories. Findings demonstrated a decrease in expenditures across all product categories examined. The largest decreases were for clothing/apparel, travel and tourism, and food and beverage. These findings are consistent with those of other studies, showing a marked decline in expenditures for apparel and services, such as travel, tourism, and food and beverage (Federal Reserve Bank of St. Louis, 2021). Based on consumer studies from later in the pandemic (Mitterling et al., 2020), it appears that the initial decreases in spending in these categories have held constant. The likelihood that consumers return to pre-pandemic expenditures in these categories is worthy of examination, which is critical to help revitalize these large industries.

Last, the third research question of this study investigated whether consumers' emotions during COVID-19 and individual characteristics (resilience and optimism) are related to their current decision-making in terms of shopping frequency, change in monthly expenses, and co-shopping. In line with previous research (e.g., Choi & Lin, 2009; Folkman, 2013; Sneath et al., 2009), findings from this study highlight that consumers' individual psychological characteristics and emotional experiences during times of distress play a role in shopping behavior. Data indicates that lower positive emotions, lower passive resilience (i.e., resistance against stressful occurrences), and higher active resilience (i.e., finding challenges to overcome stressful occurrences) are significantly associated with a positive increase in shopping frequency. Furthermore, results indicate that lower levels of passive resilience and optimism are related to increases in co-shopping. As for emotional experiences, not negative but positive emotions are shown to be critical in driving positive changes in consumer shopping frequency. That is, positive emotions can increase shopping frequency. Positive emotions can trigger motivation, where feeling good (i.e., positive emotions) can move consumers towards thinking about

products that solve problems for themselves and others. Further, individual characteristics, specifically active and passive resilience and optimism, are found to be responsible for driving positive changes in shopping frequency and co-shopping behaviors. While these are new findings in the literature, recent research on consumer behavior during the COVID-19 pandemic helps shed light on the results of this study. Guthrie et al. (2021) argue that in times of environmentally imposed constraints (i.e., the COVID-19 pandemic), consumers tend to react in various ways based on their prescribed emotions in order to regain control of any lost freedoms. This means that in times of stress, consumers may self-select to overcome issues quickly and swiftly (i.e., active resilience) and with a positive outlook (i.e., optimism) or may tend to take longer to recover (i.e., passive resilience); all of which will influence consumer behavior as a coping mechanism by adopting new behaviors and exerting control. Following the coping phase that includes purchase behavior changes, consumers adopt their consumption habits to a new normal (Guthrie et al., 2021).

Limitations and Future Studies

As with all research, this study is not without limitations. While the purpose of this study was to examine consumer behavior at the start of the COVID-19 pandemic, the snapshot in time makes it difficult to extrapolate the findings beyond this initial time period. The extent to which shopping behavior changed as the pandemic progressed cannot be captured by the data collected, inviting further longitudinal investigation of the phenomenon. Similarly, given the supply chain disruptions in obtaining products at the onset of the pandemic (Chen et al., 2021), this may have impacted how consumers responded to purchase behavior questions. Additionally, despite the researchers' efforts to obtain data representative of the overall population by capturing quotas through Qualtrics (i.e., gender and income) of the general US population, the small sample size limits the generalization of findings to U.S. consumer shopping behavior in general. Future research may replicate this study with a larger, nationally representative sample and include additional quotas, including race. It is also possible that consumers' race and/or place of residence (i.e., urban, suburban, rural) may have an impact on shopping choices and availability of retail stores (e.g., small businesses, national chain stores). It would be interesting to discover a deeper analysis of consumers' characteristics and consumers' location as it relates to the research questions proposed in this study. Last, this study examined not causal relationships but correlations among research variables—if and how consumer psychological traits and emotions during the pandemic are associated with shopping behaviors. Future research can offer a more in-depth explication of a conceptual model in which causal relationships among antecedents, mediators, and consequences are proposed along with potential moderators with further exploration of consumer behaviors during and post-COVID-19 pandemic.

Implications

This study has implications for future research and practice. The results indicate that middle-class, white households at the start of the pandemic were in a holding pattern, waiting to see what COVID-19 would bring. The reasons for this behavior are unknown and beyond the scope of the study.

Consumers in this study reported no changes in online shopping one month into the pandemic. However, additional studies clearly show an increase in consumer online shopping throughout the pandemic (e.g., Jensen et al., 2021; Tyrväinen & Karjaluoto, 2022). The extent to which this behavior was a reaction to the initial shock of the pandemic should be examined to understand better consumers' responses to this economic stressor and their coping strategies. The role of family emergency funds, employment status, economic concerns, or health and safety concerns and their impacts on consumer behavior at the start of the pandemic are worthy of additional investigation. Finally, this study provides insights into consumer behavior one month into the COVID-19 pandemic. Other research can be compared against these findings to more fully understand the long-range impacts of the pandemic on consumer behavior and family finances.

Findings from this study can help inform Extension professionals working with family finances. The findings can be used in training Extension professionals to understand better the impact of external shocks on the household and family finances. These findings also help to demonstrate the impact of the larger macro environment on the family system and individual consumption behavior. Findings point to the importance for families to prepare for unexpected events and disasters. While these events are unexpected, they can be seen as somewhat cyclical in the economy; thus, Extension educators can help families actively prepare for such downturns in the economy and other economic disasters (Setiadi & Frederika, 2022). Education on developing a household emergency plan can be offered. Strategies for establishing emergency savings can be shared. Lists of community resources available in times of financial distress can also be compiled and distributed. For Extension professionals working in personal finance, these findings also reiterate the importance of realizing that current financial trends and the larger macro environment impact families and family finances. For example, during COVID-19, financially fragile families were considerably impacted by the pandemic and the economic challenges that ensued. As Extension educators, it is important that this understanding inform and guide the education that is delivered. For example, in light of these trends, education on triaging debt, planning for emergencies, and strategies for generating additional household income are warranted. Additionally, as society moves past the pandemic, Extension educators can use lessons from the pandemic as recent examples of the importance of being financially prepared through budgeting, savings, and positive financial management strategies. This study and subsequent consumer research are important to inform the development of educational programs designed to help families navigate crisis or distress.

Conclusion

COVID-19 has brought widespread changes to consumer spending (e.g., a shift in shopping channels) and purchasing behavior (e.g., frequency of shopping). This study captures shifts in consumer behavior, thus contributing to the research literature. In summary, shopping for essential products increased in frequency for brick-and-mortar national chains but declined in brick-and-mortar stores across small businesses (RQ1). Findings also revealed that consumers were now shopping more by themselves than prior to the pandemic and have decreased their overall spending across various product categories, including clothing, footwear, accessories, electronics, services, household supplies, media and entertainment, personal care, travel and tourism, and food and beverage (RQ2). Last, results indicate that lower levels of positive emotions, passive resilience, and optimism, as well as higher levels of active resilience, influence higher levels of shopping frequency. Additionally, lower levels of passive resilience and optimism are associated with increases in co-shopping behaviors (RQ3). Findings from this study serve as a springboard for additional consumer research during COVID-19 and a stream of research useful in informing the practice of consumer education.

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Profiles of Youth Citizenship: A Cluster Analysis of Ethical Factors, Demographics, and Problem-Solving Disposition

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Youth have the capacity to drive positive change in their communities through active and engaged citizenship (AEC). Teen leadership programs provide youth with opportunities to develop the skills necessary to participate as partners in community problem-solving efforts. Situated in relational developmental systems metatheory, this study examined how cluster membership based upon demographic characteristics, ethical factors, and problem-solving disposition impacted AEC. The findings indicated significant differences between clusters for AEC, civic duty, and civic skills. These differences were predominately observed through membership in long-term or short-term leadership programs, gender, enrollment in honors/AP courses, ethical views, and problem-solving disposition. Youth leadership practitioners should consider avenues for infusing problem-solving and character development in gender inclusive program curricula to increase the likelihood for contributing.

Keywords: citizenship, ethical factors, problem solving, leadership

Introduction

From an interactional lens, a community is a dynamic, changing environment built on the actions of its members rather than a stagnant, geographically bound area (Barnett & Brennan, 2006). From this perspective, individuals, including youth, influence their communities, whether intentionally or unintentionally (Lerner et al., 2005). However, community development initiatives rarely build on the strengths of youth or allow youth participation to contribute to community viability. Even so, youth have the capacity to develop healthier communities with longevity (Checkoway & Gutierrez, 2006); society, their community, and the individual are all positively impacted when youth are actively engaged (Zaff et al., 2010). Increasing youth capacity for active and engaged citizenship (AEC) benefits youth participants, their communities, and greater society.

Good citizenship is difficult to define and measure, but active civic participation, moral views, and political activities can provide evidence of individual citizenship (Taylor & Marri, 2012). Civic participation can be divided into three domains: voting behavior, helping in the community, and making one's voice heard (Haste & Hogan, 2006). Partaking in all three domains is beneficial for both the individual and their community. When considering youth's civic participation and citizenship, individuals often view these concepts in two distinct ways (Bell, 2005). The first way involves youth's need to develop skills to become future citizens. The second includes examining youth's views and insights on their current roles as citizens with recent research supporting youth's role as active community members who drive change (Harris, 2015; Mortensen et al., 2014). Mortensen et al. (2014) argued that youth have the awareness and desire needed to create meaningful change within their communities, while Harris (2015) supports youth's role in collaborative community problem solving. Both studies provide support for the capabilities of youth in making meaningful contributions, but they must possess the skills and motives necessary to be successful in these endeavors.

4-H is one of the longest-running youth organizations in the United States that aims to assist youth in developing these skills for positive contributions to their communities (National 4-H Council, 2017). To do so, 4-H employs the positive youth development (PYD) framework. According to PYD, youth can contribute when they are "thriving" (Larson, 2000). Youth thrive when they have competence, confidence, connection, character, and caring (Zarrett & Lerner, 2008), which reduces negative, risky behaviors (Shek & Sun, 2015). These negative behaviors are reduced because flourishing youth often engage in contributions to their families, communities, self, and overall society (Lerner et al., 2003). With this in mind, youth engaged in programs and settings that promote PYD develop the necessary skills to become contributing citizens.

There are several elements required to practice PYD and contribution: positive relationship with caring adults, a safe and inclusive environment, engagement in learning, opportunity for mastery, opportunity to see oneself as an active participant in the future, opportunity for self-determination, and opportunity to value and practice service for others (4-H National Headquarters, 2011). Leadership is often related to contribution and citizenship within 4-H programs, with leadership efforts including club-based, county-based, and statewide leadership-training programs and positions. However, youth leadership initiatives are not all created alike and often have varying outcomes. This phenomenon is a result of the development and implementation of programs occurring prior to a solid basis of research and theory, with broad views of what constitutes youth leadership as a prominent issue in the field (Conner & Strobel, 2007; Klau, 2006). With little research on what specific leadership-based initiatives result in increased AEC, this study sought to gain insight into profiles of AEC in youth participating in 4-H teen leadership programming.

Purpose & Objectives

To analyze how 4-H leadership programs impact the development of active and engaged citizens, one must consider the bidirectional relationship between individuals and context. Relational developmental systems (RDS) metatheory posits that adaptive developmental regulations are mutually influential relations between person and context and impact the development of active and engaged citizens (Zaff et al., 2010). AEC provides a model for examining behavioral, cognitive, and socioemotional constructs associated with youth citizenship development (Zaff et al., 2010). Lerner et al. (2014) emphasize how ecological assets, strengths of adolescents, PYD, and risk/problem behaviors all impact AEC. Problem-solving disposition is not specifically examined through this model. Positive problem-solving disposition may provide insight into youth's preparedness to engage in collaborative community problem solving based on the relationship between perceptions of competence and self-determination. When youth are able to accomplish tasks within their realm of ability, they experience heightened enjoyment, competence, and self-determination (Weiss, 2011). Therefore, to establish a model for developing active and engaged citizens prepared to act as change agents within their community, we must explore youth profiles of citizenship to understand the makeup of young active and engaged citizens.

The purpose of this study was to use person-centered analysis to develop youth profiles of citizenship. We assessed statistical significance between clusters and AEC. Are there youth profiles of AEC based on ethical views, demographics, and problem-solving dispositions for youth participating in a 4-H teen leadership program? To that end, this study was conducted to

1. Describe AEC, ethical views, demographic characteristics, and problem-solving disposition;
2. Identify clusters of participants based on ethical views, demographic characteristics, and problem-solving disposition; and
3. Examine relationships between AEC and clusters based on ethical views, demographic variables, and problem-solving disposition.

Theoretical Framework

From a relational developmental systems (RDS) viewpoint, youth are regarded from a strength-based perspective as resources to be developed (Geldhof et al., 2013). Examining trajectories toward AEC enables a greater understanding of the mutually influential, person-context relations involved within RDS (Zaff et al., 2011). Therefore, the theoretical foundation for this study is centered on RDS metatheory and the role of sociocultural theory and the theory of planned behavior.

Relational Developmental Systems

Within developmental science, understanding how humans thrive through mutually influential relations between individual contributions, positive community engagement, and community organizations is a focal area of work (Lerner et al., 2014). RDS metatheory provides a basis for examining these phenomena from “a life-span approach to the scientific study of systematic intraindividual changes—from conception to the end of life—of an organism’s behavior, and of the systems and processes involved in those changes and that behavior” (Overton, 2015, p. 47). Within RDS, a reciprocal bi-directional or circular relationship exists between the individual and their context, which incorporates both inter- and intra-individual change (Overton, 2013). Plasticity is a hallmark of this metatheory and encompasses the capacity for development to be systematic and continuous rather than random (Lerner & Overton, 2008). The organism is inherently active, self-creating, self-organizing, and self-regulating in nature within a plastic, nonlinear, complex adaptive system (Overton, 2015). The organism’s actions function coactively with the physical and sociocultural environment it inhabits.

Within systematically integrated human development, when the bi-directional relations are mutually beneficial, a foundation for adaption throughout the lifespan arises through levels of organization (Lerner et al., 2014). Adaption within RDS is how the person responds to changing contexts (Overton, 2013). RDS examines developmental processes as non-ergodic and does not assume homogeneity across samples or stationarity across time (Lerner et al., 2014). With this approach, individual strengths are aligned with environmental resources for positive growth, and youth development may be optimized (Geldhof et al., 2013), resulting in applied empirical work for positive human development and social justice (Lerner & Overton, 2008). Furthering expansive holistic yields of inclusive inter- and intra-individual patterns for responding to “what” questions within programmatic research (Lerner et al., 2014), such as what context, for what youth, at what developmental period, results in what features of community problem-solving?

Traditional developmental science was derived from the principles of the Cartesian-split mechanism paradigm, which argued that mind and body were separate in existence (Overton, 2013). With this system, unidirectional linearity is applied through explanations of cause-effect sequences (Overton & Reese, 1973). Within a relationism worldview and an RDS paradigm, Cartesian-split metatheory is omitted through an epistemology, which rejects a “nothing but” splitting view and promotes inclusivity through holism. With holism, complexity is organized in a system of parts that are unable to be context-free (Overton, 2013). Therefore, with inquiry, it is essential to consider the following principles: identity of opposites, opposites of identity, and synthesis of wholes (Overton, 2013).

Further, RDS integrates six necessary defining features: (1) organization of processes, (2) embodiment, (3) order and sequence, (4) direction, (5) epigenesis and emergence, and (6) relative permanence and irreversibility (Overton, 2015). In RDS, an individual organizes and

regulates itself through coactions with biological, sociocultural, and physical environmental subsystems (Overton, 2015). Embodiment involves one's body as a lived experience, which interacts with a world of sociocultural and physical objects. Order and sequence are contingent in nature but based on a universal sequence within the complex living system (Overton, 2015). Directionality suggests orientation toward an end state, which implies unidirectionality. However, there are multiple action paths through a normative sequence (Overton, 2015). The system is situated within a specific context through epigenesis, with emerging system novelty for an increase in complexity. Finally, transformational change within the system is relatively permanent and irreversible (Overton, 2015).

RDS metatheory transposes the independence of each individual's developmental trajectory from any other human. All human beings embody actions, which are characteristics of their complex adaptive system. Human actions are viewed as intentional activities, with intentionality either being conscious or self-conscious, not requiring a level of knowing (Overton, 2013). Therefore, all embodied actions are a product of the person, biology, and culture. Actions are impacted by adaptive developmental regulations, which are best described as experiences or structures in a youth's relationship between themselves and their context (Geldhof et al., 2013). Adaptive developmental regulations may emerge and/or advance in an individual and their environment to increase the likelihood of positive development, such as family structure, social groups, and community. In the model for AEC of youth, "adaptive developmental regulations lead to positive youth development and, within the context of the broader ecology of human development, in turn, lead to positive civic engagement and reduced risk and problem behaviors" (Lerner et al., 2014, p. 73). This developmental trajectory presents an example of a predicted developmental process, which incorporates adaptive developmental regulations to enhance the probability of contribution. Within RDS, probabilities can be assessed through normative sequences with multiple action paths and respect to biological, sociocultural, and physical environmental subsystems.

Sociocultural Theory

At the basis of RDS metatheory are the mutually influential relationships between biology, person, and culture (Overton, 2015). Further, Overton (2013) posits:

In the area of sociocultural development, there appears to be a clear trend away from positions that identify individual development and culture as separate and distinct, if interacting, entities, and towards the position that recognizes their coconstruction, codetermination and codevelopment. (p. 23)

RDS concepts are tools for social justice established as theory-predicted and evidence-based policies and programs, which drive positive change and development for all youth (Lerner & Overton, 2008). Sociocultural theory provides a basis for understanding the impact that culture and environment have on human development.

Sociocultural theory is derived from social cognitive theory, which simplistically represents the social learning system as one acquires patterns of actions and behaviors through experiences and observations (Bandura, 1971). Social cognitive theory is centered around the concept of behavior as dynamic and reliant on personal and environmental factors, which simultaneously influence one another (Holtzapple et al., 2011). Within social cognitive theory, self-regulation and self-influence are determined by the self-monitoring of effects, judgment of contextual circumstances, and affective self-reaction (Bandura, 1991). At the core of social cognitive theory, all individuals essentially partake in symbolizing, forethought, vicarious learning, self-regulation, and self-reflection (Stajkovic & Luthans, 2003). Personal agency is developed through intentional actions, also called predicted or future actions (Bandura, 2001).

Vygotsky's (1978) sociocultural theory posits that individuals derive meaning from their experiences through social mediation, which is situated within culture and history. Social interaction through one's developmental history influences symbolism and culture (Mahn, 1999). Three central elements of sociocultural theory are social sources of individual development, semiotic mediation in development, and genetic analysis (John-Steiner & Mahn, 1996), meaning, as one grows, learning occurs based on genetics, symbols, and social interactions (Mercer & Howe, 2012). This results in the development of one's cultural associations.

One's culture is collective, emotional, historical, symbolic, dynamic, and fuzzy. Cultures are collective because they are not created by an individual alone but rather require a shared perspective. Cultures become emotional when anxieties are managed by one's rationale within their background (Alfred, 2002). Practical and technical sides of human interaction are accentuated through the symbolism of culture (Alfred, 2002). Views on culture are embedded in historical premises. Therefore, individuals are unable to disassociate from their histories. These historical perspectives are invasive but not static, and they lead to the dynamic view of culture. Finally, cultures are viewed as fuzzy because "cultures are not monolithic, single sets of ideas, but are instead pluralistic and incorporate contradictions, ambiguities, paradoxes, and just plain confusion" (Alfred, 2002, p. 6). Therefore, partaking in reflection processes enables individuals to understand how they interpret who they are in association to others.

As active and engaged citizens, personal culture and history of social experiences have an impact on developmental trajectories. Youth are not homogeneous citizens; they all have different lived experiences of citizenship (Bell, 2005). Parental and community views of civic participation and one's self-efficacy relating to participation in problem-solving opportunities impact youth in different ways but should be considered. For example, Taylor and Marri (2012) found that identity, family, movement, school curricula, and community engagement all impacted immigrant youth's conceptualization of citizenship. These factors varied in their impact on developmental pathways toward engaged citizens (Taylor & Marri, 2012). Additionally, Banks (2017) proposed the concept of "failed citizenship," which can occur because of an individual feeling structurally excluded or not aligned with social values and norms in their community.

Failed citizenship can lead to a focus on one's primary needs rather than shared goals in their community. This is important to consider when envisioning an optimized developmental process to contribute to active and engaged young citizens.

Theory of Planned Behavior

Derived from Bandura's (1971) social cognitive theory, the theory of planned behavior (TPB) provides a basis for understanding how individuals decide to engage in specific behaviors (Fishbein & Ajzen, 2010). TPB involves consideration for how background factors impact beliefs, which ultimately drive the formation of one's attitudes, perceived norms, and perceived behavioral control. These all ultimately impact intention, which leads to behavior (Fishbein & Ajzen, 2010).

Behavioral, normative, and control beliefs are the three types of beliefs involved with TPB. Behavioral beliefs are based on one's predictions of the consequences or benefits they may reap from performing the behavior. Behavioral beliefs impact one's attitude toward personally performing the behavior based on their concerns for positive or negative consequences (Fishbein & Ajzen, 2010). Normative beliefs are based on one's assessment of whether others approve or disapprove of the behavior. Normative beliefs produce perceived norms, which are social pressures and conceived social responses from partaking in the behavior (Fishbein & Ajzen, 2010). Control beliefs are formed around environmental and personal factors aiding or impeding one's ability to carry out the behavior (Fishbein & Ajzen, 2010). Control beliefs result in one's behavioral control and sense of self-efficacy (Fishbein & Ajzen, 2010).

Personal attitudes, perceived norms, and perceived behavioral control guide intentions and behavior (Fishbein & Ajzen, 2010). Behavioral intention, within TPB, is one's readiness to perform the behavior (Fishbein & Ajzen, 2010). Behavioral intentions are the best predictors of behavior, but actual control based on skills, abilities, and environmental factors must also be considered. The greater the attitudes, perceived norms, and perceived behavioral control, the higher the intentions are and the greater the likelihood they will partake in the behavior. However, background factors also contribute to beliefs and overall behavioral outcomes. Fishbein and Ajzen (2010) postulate:

A multitude of variables could potentially influence the beliefs people hold: age, gender, ethnicity, socioeconomic status, education, nationality, religious affiliation, personality, mood, emotion, general attitudes and values, intelligence, group membership, past experiences, exposure to values, intelligence, group membership, past experiences, exposure to information, social support, and coping skills. (p. 24)

These background factors are acknowledged but difficult to attribute without consideration to other theories. RDS metatheory and sociocultural theory provide a basis for consideration and examination.

Consistent with RDS metatheory, TPB provides a framework to understand how humans engage in actions regarding background factors. Fishbein and Ajzen (2010) agree that all individuals have different explanations and paths for how their background factors impact their intentions and behaviors. However, TPB suggests background factors are difficult to attribute to responses and must be complemented with others to examine their impact on TPB (Fishbein & Azjen, 2010). Connecting TPB with sociocultural theory under RDS metatheory provides a basis for examining normative sequences within youth behavioral development. The framework creates a basis for examining the impact of background factors and adaptive developmental regulations on developmental trajectories for active and engaged young citizens.

Conceptual Framework

Demographics, ethical views, and problem-solving disposition from RDS metatheory can be utilized to develop youth profiles for AEC. AEC is often operationalized as “someone who has a sense of civic duty, feeling of social connection to their community, confidence in their abilities to effect change, as well as someone who engages in civic behaviors” (Zaff et al., 2010, p. 737). In AEC, civic action, civic skills, social connection, and duty serve as constructs. This perspective views active and engaged citizens as those who are more than just “dutiful” citizens who partake in activities such as voting, obeying laws, paying taxes, and upholding community standards (Mihailidis & Thevenin, 2013). Rather, active and engaged citizens meaningfully contribute to their communities.

However, according to PYD, for a youth to be an active and engaged citizen or contributing member, they must be thriving (Larson, 2000). Thriving youth possess the five “Cs” of competence, confidence, connection, character, and caring (Lerner et al., 2003). Youth development programs that utilize PYD as a foundation promote youth’s capacity for contributing to their communities. The conceptual framework for this study draws upon PYD as a foundation for developing thriving youth with the capacity for AEC.

Demographics Variables

Because youth are a heterogenous group with a variety of personal and contextual experiences, they all contribute and view their contributions toward their communities differently (Bell, 2005; Mihailidis & Thevenin, 2013). To examine these personal and contextual experiences, one must examine youth profiles utilizing demographics such as activity participation, gender, race, and ethnicity. Certain demographic characteristics are considered protective factors. Protective factors are inputs that encourage prosocial behaviors and reduce the risk of youth partaking in antisocial behaviors (Biggar et al., 2016; Burton & Marshall, 2005). Individual, family, or community-based factors act as protective factors. However, these protective factors are contextually historical, social, and cultural (Crockett & Crouter, 1995). Therefore, examining demographics provides an avenue for developing profiles.

Involvement in extracurricular activities and youth organizations often serves as protective factors for a range of deviant behaviors and increases a sense of psychological well-being (Agans et al., 2014; Catalano et al., 2004; Feldman & Matjasko, 2005; Kahne et al., 2001). Zaff et al.'s (2010) model of AEC views the connection to community as a large contributor to one's affinity toward citizenship participation, deeming community activity participation an important factor when examining youth profiles based on environmental and contextual impacts.

Ethical Views

Character strengths or ethical views have the capacity to impact a person's view of their ability to develop into active and engaged citizens (Hilliard et al., 2014). Character strengths from this point of view involve one's attitudes, beliefs, and values, which affect the view of their role within the community. Character strengths are derived from four distinct virtues: moral, civic, intellectual, and performance (Baehr, 2017; Shields, 2011). Individuals with moral virtues demonstrate compassion, kindness, and empathy for others through a drive to help their neighbors (Roberts & Wood, 2007). Civic virtues move past an individual aiding another in need and include a desire to impact society overall. Civic virtues often include tolerance, civility, and inclusion (Baehr, 2017). When a person desires to gain knowledge and truth related to civic endeavors, they have intellectual virtues such as curiosity and intellectual courage (Baehr, 2017). Finally, performance virtues can double as a moral, civic, or intellectual virtue as well as a virtue in and of itself (Baehr, 2017). Performance virtues are not motivated by the need of another individual or society as a whole but by a need to work on complex and challenging problems (Baehr, 2017). Virtues are known to impact citizenship, but little is known about how these virtues or ethical views interact with one another or with an individual's environment and context in order to impact AEC.

Problem-solving Disposition

With an increasing number of wicked problems, it is essential to ensure teams are diverse to effectively provide viable solutions. Grint (2005) describes wicked problems as complex issues with no right or wrong answer but with various alternatives. Therefore, communities must ensure that all members are equally represented and engaged while providing various solutions to wicked problems. Youth are not often included in the problem-solving process but have the capacity to play a significant role in collaborative problem-solving teams (Harris, 2015). Brennan (2008) postulated that "youth bring new ideas, resources, enthusiasm, and serve as the basis for long-term sustainable community development efforts" (p. 56). By not including youth in the problem-solving process, communities are excluding valuable contributors.

However, it is essential to consider youth's preparedness and willingness to engage as equals in the problem-solving process. Teen leadership programs often consider problem-solving skills a priority for development (Brungardt, 1996). Problem-solving skills involve the ability to think creatively in order to create multiple solutions for social and cognitive problems (Zolkoski &

Bullock, 2012). These skills are essential and can be developed over time. For youth to fully participate as equal partners, they must also possess a positive disposition toward problem solving.

Problem-solving disposition is related to an individual's intention to engage in the behavior. In TPB, positive perceived norms, attitude toward the behavior, and perceived behavioral control influence intention to engage in a behavior (Fishbein & Ajzen, 2010). Intention—readiness and attitudes towards the behavior—is the best predictor of an individual's likelihood to engage in the behavior. Individuals with a higher problem-solving disposition or views, attitudes, and beliefs of their competencies to participate as problem solvers are more likely to participate in the problem-solving process.

Problem-solving disposition is related to performance virtues based on the desire to solve complex and challenging problems (Baehr, 2017). Examining problem-solving disposition could provide greater insight into how youth engage with their communities by understanding their attitudes, views, and beliefs on their problem-solving abilities. Since problem solving is a part of everyday life (Kirton, 2011) and youth are continually developing their own identities, their views on their own role and capacity for problem solving could provide a great deal of insight into an individual's likelihood to participate as an active and engaged citizen. Further, examining problem-solving disposition in combination with demographic characteristics and ethical views to develop youth profiles could provide a great deal of insight into youth development and their engagement in citizenship activities.

Methods

This study examined how ethical views, demographics, and problem-solving disposition impact developmental trajectories for AEC through a person-centered approach. A person-centered approach can take multiple forms and is not an all-inclusive statistical approach. However, it does provide further consideration for intraindividual change and the diverse pathways of development. “The person-centered approach is grounded in the systems perspective of holistic organization of interactive views and is particularly suited for studying the complex organization of multiple characteristics within the individual” (Lau & Roeser, 2008, p. 497). A person-centered approach examines how clusters of variables impact behavioral responses (Bates, 2000). Person-centered approaches view the population as a heterogeneous group influenced by different variables to a diverse extent at various points in time (Laursen & Hoff, 2006).

Research Design

The research design for this study was a non-experimental, ex post facto survey design (Ary et al., 2018). We chose the ex post facto survey design because participants had already engaged in leadership development opportunities, and the design allowed for surveying participants in a realistic setting. All respondents were participants in a 4-H teen leadership program or training in

the state of Virginia. There were variations in the treatment received based on length of time and program/training facilitator. Youth were enrolled in a year-round teen leadership club or a short-term leadership program. While an ex post facto design can serve as a limitation and reduce the demographic makeup of participants, a person-centered analysis helped to mitigate some of the sampling challenges. The primary focus of this research was to determine youth profiles of AEC utilizing a cluster analysis. Cluster analysis aims “to reduce noise in the data by reducing ‘within-group’ variability and maximizing ‘between-group’ variability” (Kusurkar et al., 2021, p. 247). A cluster analysis can be used with all kinds of sample sizes based on the number of cluster variables in relation to the sample size. This design allows for the identification of patterns based on the sample to be further explored through additional statistical analysis.

Sample

All youth, ages 13-19, participating in teen leadership programs run by Virginia Cooperative Extension (VCE) served as the population for this study. In Virginia, 4-H leadership programs vary, with some counties supporting year-round teen leadership clubs and others instituting short-term trainings. At the state level, opportunities include positions in the state 4-H cabinet with year-round trainings and short-term initiatives, such as state congress and the 4-H Day at the capital.

We directly administered the instruments face-to-face on scheduled dates and times at club meetings and weekend-long trainings. The VCE 4-H state extension specialist for 4-H youth development identified 14 counties with strong, year-round teen leadership programs. We contacted each county extension agent to recruit participants and to schedule a time for data collection. Out of the 14 counties, we collected data from 11 counties. From the 11 counties, there were 275 potential participants, with 199 completing the survey for a response rate of 72.36%. We also contacted 14 additional extension agents to recruit counties with upcoming camp-counselor trainings, which incorporated teen leadership training. From the 14 additional counties, we scheduled collection dates with nine counties. From the nine counties, there were 95 potential participants, with 60 responding for a response rate of 63.16%. From both groups, there was an overall response rate of 70%. The county agents disseminated Institutional Review Board (IRB) guardian consent, youth assent forms, and recruitment materials to youth participants a week prior to data collection. Participants without guardian consent were often willing to participate but unable to do so based on ethical considerations and IRB requirements to obtain consent from guardians, which reduced response rates. The survey took approximately 30 minutes for each youth to complete. Obtaining guardian consent and county agents serving as gatekeepers for data collection were limitations in this study.

Long-term Teen Leadership Program Demographics

Youth from long-term teen leadership programs were primarily female ($n = 133$, 66.8%) and enrolled in honors/AP courses ($n = 138$, 69.3%). From the participants, 82.4% were white ($n = 164$), 10.1% black ($n = 20$), 2.5% multiracial ($n = 5$), 2% Asian ($n = 4$), 1% Native American ($n = 2$), and 2% declined to state their race. The mean age of participants was 15.42 ($SD = 1.35$).

Short-term Teen Leadership Program Demographics

Participants from short-term teen leadership programs were predominately female ($n = 42$, 71.7%). Of the youth, 76.7% were white ($n = 46$), 15% black ($n = 9$), 6.7% multiracial ($n = 4$), and 1.7% Asian ($n = 1$). The mean age of participants was 14.78 ($SD = 1.26$), and 65% were enrolled in honors/AP courses ($n = 39$).

Instrumentation

To measure Active and Engaged Citizenship (AEC), we utilized a previously established instrument by Bobek et al. (2009) for usage with 6th-12th graders. The AEC scale examines behaviors and attitudes toward citizenship, including emotional, cognitive, and behavioral components of citizenship (Bobek et al., 2009). We adapted the 32-item AEC scale to incorporate social media as a means for outreach and advocacy by adding the words “social media” as a means for expressing your opinion publicly to questions 13 and 16. The instrument was not revalidated following these additions, which is a limitation in this study. Participants responded to 28 items on a 5-point Likert scale and 3 questions regarding amount of participation on a 6-point Likert scale (from 1 = *Never* to 6 = *Every day*). Scores on the scale could range from 32 to 163. The AEC scale has four constructs: civic duty ($\alpha = .741$), civic skills ($\alpha = .812$), neighborhood connection ($\alpha = .766$), and civic participation ($\alpha = .609$). The reliability for civic participation in this study was questionable, but a previous study by Bobek et al. (2009) reported an acceptable Cronbach alpha ($\alpha = .73$). The overall AEC instrument yielded a Cronbach alpha of .834.

To examine ethical views, the researcher utilized the Report Card on the Ethics of American Youth (Josephson Institute of Ethics, 2012). The Josephson Institute of Ethics (2017) developed this instrument and collected data from over 20,000 students across the nation every two years since 1998. This questionnaire asks for opinions on nine ethical and unethical statements on a 4-point Likert scale (1 = *Strongly disagree*, 2 = *Disagree*, 3 = *Agree*, 4 = *Strongly agree*, and 0 = *No opinion*). Participants also answered 14 items on the importance of material and character values on a 4-point Likert scale (1 = *Unimportant*, 2 = *Moderately important*, 3 = *Very important*, 4 = *Essential*, and 0 = *No opinion*) and 14 items on partaking in unethical behaviors in the last year on a 3-point Likert scale (1 = *Two or more times*, 2 = *Only once*, and 3 = *Never*). Scores had a potential range of 37 to 134. Dr. Rick Hesse validated the instrument to have an error margin of plus or minus less than one percent (Josephson Institute of Ethics, 2012).

We applied Dillman's Tailored Design Method (DTDM) to create demographic questions in order to examine additional demographics, including age, race, enrollment in honors/AP courses, and questions regarding activity participation (Dillman et al., 2014). Activity involvement included eight items regarding their participation in different activities on a 6-point Likert scale (from 1 = *Never* to 6 = *Every day*), and they were given six points for working eight or more hours a week. Scores on the activity scale could range from 9 to 54.

To collect data on problem-solving disposition, we adapted the EMI, Critical Thinking Disposition Assessment (Irani et al., 2007). Irani et al. (2007) developed the EMI to examine critical thinking disposition among college-aged students and adults. In the adaptation process, the reading level was confirmed to be under a 6th-grade reading level. We employed a pilot study to select questions related to problem-solving disposition. Following the pilot study, we selected 11 items to represent problem-solving disposition. We altered a few items to increase item discrimination. The 11-item problem-solving disposition scale yielded a Cronbach's alpha of .871.

Data Analysis

We used descriptive statistics, frequencies (f), percentages (P), means (M), and standard deviations (SD) to describe demographic characteristics, ethical views, problem-solving disposition, and the AEC scale responses. We employed a two-step cluster analysis to determine the existence of clusters or subgroups of participants and mean variables by cluster regarding their responses to demographic questions, ethical views, and problem-solving disposition. The cluster analysis utilized eight clustering variables, which was appropriate based on recommendations for a sample size of at least 2^m (m = number of clustering variables; Sarstedt & Mooi, 2011). A two-step cluster analysis was appropriate based on the variables being both categorical and continuous (Şchiopu, 2010). In the first step, an algorithm similar to k-means algorithm is conducted and followed by a modified hierarchical agglomerative clustering procedure to form homogeneous clusters (Sarstedt & Mooi, 2011). We then applied a one-way analysis of variance (ANOVA) to compare clusters on the AEC scale and subscales to report F statistics for significant differences between clusters. An alpha level of 0.05 was set a priori.

Results

We conducted a two-step cluster analysis to determine profiles of youth participants based on gender, race, age, enrollment in honors/AP courses, ethical views, problem-solving disposition, activity involvement, and whether the individual participated in a long-term or short-term 4-H teen leadership club. The results generated five clusters (Table 1).

Table 1. Descriptive Statistics of Variables from Two-step Cluster Analysis by Cluster (n = 259)

Variable	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
	(n = 82)	(n = 55)	(n = 45)	(n = 40)	(n = 37)
	f (%)	f (%)	f (%)	f (%)	f (%)
Treatment					
Long-term	82 (100.0)	0 (0.0)	45 (100.0)	35 (87.5)	37 (100.0)
Short-term	0 (0.0)	55 (100.0)	0 (0.0)	5 (12.5)	0 (0.0)
Gender					
Male	0 (0.0)	17 (30.9)	16 (35.6)	13 (32.5)	37 (100.0)
Female	82 (100.0)	38 (69.1)	29 (64.4)	27 (67.5)	0 (0.0)
Race/Ethnicity					
White	82 (100.0)	46 (83.6)	45 (100.0)	0 (0.0)	37 (100.0)
Asian	0 (0.0)	0 (0.0)	0 (0.0)	5 (12.5)	0 (0.0)
Black	0 (0.0)	9 (16.4)	0 (0.0)	20 (50.0)	0 (0.0)
Native Amer	0 (0.0)	0 (0.0)	0 (0.0)	2 (5.0)	0 (0.0)
Multiracial	0 (0.0)	0 (0.0)	0 (0.0)	9 (22.5)	0 (0.0)
PNTS	0 (0.0)	0 (0.0)	0 (0.0)	4 (10.0)	0 (0.0)
Honors/AP Course					
Yes	82 (100.0)	20 (36.4)	0 (0.0)	23 (57.5)	37 (100.0)
No	0 (0.0)	35 (63.6)	45 (100.0)	17 (42.5)	0 (0.0)
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Age	15.6 (1.2)	14.8 (1.3)	15.1 (1.5)	14.9 (2.6)	15.4 (1.5)
Ethical Views	119.3(17.1)	109.3(12.5)	108.0(21.9)	116.1(12.9)	117.1(14.6)
PS Disposition	43.7 (7.1)	43.9 (6.2)	42.0 (9.6)	43.3 (5.8)	43.9 (6.6)
Activities	23.0 (6.8)	22.5 (6.4)	20.7 (6.5)	21.3 (6.5)	21.9 (6.7)

Note. PNTS = Prefer not to state, PS = Problem solving, Activities = Activity Involvement

Cluster one (n = 82) consisted of white females from long-term leadership programs who take honors/AP courses. Cluster one had the highest ethical views, slightly higher age means, and were involved in more activities when compared with the other clusters. Cluster two (n = 55) was the youngest group and included a mixture of genders and individuals enrolled in honors/AP courses from short-term leadership programs. This cluster was predominately white (n = 43, 83.6%), with 16.4% being black (n = 9). Cluster two had one of the higher problem-solving dispositions but lower ethical views. Cluster three (n = 45) contained white youth from long-term teen leadership programs not enrolled in honors/AP courses. This cluster had the lowest levels of ethical views, problem-solving disposition, and activity involvement. Cluster four (n = 40) consisted of a mixture of races, including black (n = 20, 50%), multiracial (n = 9, 22.5%), Asian (n = 5, 12.5%), Native American (n = 2, 5%), and those who preferred not to state (n = 4, 10%). This cluster had a mixture of genders and those taking honors/AP courses, and the majority were

from long-term ($n = 35$, 87.5%) teen leadership programs. Cluster four had higher ethical views when compared with clusters two and three. Cluster five included white males from long-term leadership programs who take honors/AP courses and have higher ethical views and problem-solving disposition.

Table 2. Means and Standard Deviations for AEC and Subscales ($n = 259$)

Variable	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
	($n = 82$)	($n = 55$)	($n = 45$)	($n = 40$)	($n = 37$)
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Total AEC	111.9 (9.3)	105.9 (12.4)	107.0 (12.5)	106.6 (12.9)	105.0 (11.6)
Civic Duty	51.8 (7.8)	46.0 (4.8)	46.4 (12.4)	51.7 (5.8)	50.1 (5.9)
Civic Skills	21.3 (4.9)	19.7 (4.7)	17.7 (5.8)	19.2 (5.4)	21.1 (4.3)
Connection	20.1 (5.5)	20.1 (4.6)	19.5 (5.1)	19.1 (4.6)	20.2 (5.3)
Participation	22.1 (4.8)	21.7 (4.1)	20.5 (4.4)	22.5 (4.1)	21.4 (4.6)

Note. Connection = Neighborhood Connection, Participation = Civic Participation

We then conducted a one-way ANOVA to compare the effect of cluster membership on total AEC and subscales (Table 3). There was a significant effect of cluster membership on total AEC at the $p < .01$ level for the five clusters [$F(4, 254) = 3.76, p = .005, \eta^2 = 0.05$]. Post hoc comparisons using the Tukey HSD test indicated that the mean score for cluster one ($M = 111.9, SD = 9.3$) was significantly different from the other clusters (Table 2). There was a significant effect of cluster membership on civic duty [$F(4, 254) = 7.08, p = .000, \eta^2 = 0.1$]. Post hoc comparisons indicated that the mean scores for cluster one ($M = 51.8, SD = 7.8$) and cluster four ($M = 51.7, SD = 5.8$) were significantly different from those of cluster two ($M = 46.0, SD = 4.8$) and cluster three ($M = 46.4, SD = 12.4$). However, cluster five ($M = 50.1, SD = 5.9$) did not significantly differ from other clusters. There was also a significant effect of cluster membership for civic skills [$F(4, 254) = 4.41, p = .002, \eta^2 = 0.06$]. Post hoc comparisons test indicated that the mean score for cluster three ($M = 17.7, SD = 5.8$) significantly differed from cluster one ($M = 21.3, SD = 4.9$) and cluster five ($M = 21.1, SD = 4.3$).

Table 3. One-Way Analysis of Variance (ANOVA) of Clusters by AEC (AEC) and Subscales ($n = 259$)

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
<i>Total AEC</i>					
Between Groups	4	1951.51	487.88	3.76	.005**
Within Groups	254	32991.18	129.89		
Total	258	35942.69			
<i>Civic Duty</i>					
Between Groups	4	1727.89	431.97	7.08	.000***
Within Groups	254	15492.52	60.99		
Total	258	17220.42			
<i>Civic Skills</i>					

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between Groups	4	450.91	112.73	4.41	.002**
Within Groups	254	6494.96	25.57		
Total	258	6945.86			
<i>Neighborhood Connection</i>					
Between Groups	4	40.96	10.24	.40	.809
Within Groups	254	6510.90	25.63		
Total	258	6551.86			
<i>Civic Participation</i>					
Between Groups	4	98.84	24.71	1.24	.295
Within Groups	254	5066.83	19.95		
Total	258	5165.67			

Note. * $p < .05$, ** $p < .01$, *** $p < .001$, 2-Tailed.

Discussion

In community development efforts, youth are rarely regarded as community resources (Jones, 2009); however, youth's mere presence influences society (Lerner et al., 2005). When equipped with skills and positive attitudes toward citizenship, youth are capable of meaningfully contributing to their communities, which benefits both the individual and the community (Christens & Dolan, 2011). By examining the impact of different variables on youth's AEC, insights can be provided to build youth development and youth leadership programs aimed at preparing youth for community engagement. In this study, there were differences in overall AEC scores and two subscales—civic duty and civic skills—between different clusters of youth in Virginia 4-H teen leadership programs.

Youth in cluster one yielded significantly higher scores for overall AEC when compared with all other groups. This group was comprised of white females from long-term teen leadership programs, who took honors/AP courses and had the highest activity involvement and levels of ethical views. Cluster one and cluster four were revealed to have significantly higher levels of perceived civic duty when compared to clusters two and three. Youth in cluster two were all participants in short-term 4-H teen leadership programs. Although cluster two only significantly differed from clusters one and four, this cluster had the lowest mean score for civic duty and was the only cluster not predominately comprised of youth from long-term programs. Although significant differences existed, we acknowledge that practical significance is relatively low.

Cluster three consisted of participants from long-term leadership programs, but no participants were enrolled in honors/AP courses. Additionally, cluster three had the lowest reported levels of ethical views, problem-solving disposition, and activity involvement. Cluster three also yielded the lowest mean for civic skills and significantly differed from other teens in long-term leadership programs in clusters one and five. When compared with clusters one and five, cluster

three varied by not including youth enrolled in honors/AP courses, and youth had lower levels of ethical views and problem-solving disposition.

These results raise several questions for further examination in relation to the benefits of long-term teen leadership programs when compared with similar short-term programs in Virginia 4-H. With mastery (Redmond & Dolan, 2016) and intentional opportunities for engagement in planning and decision-making processes (Kress, 2006) as the focuses of youth leadership, long-term 4-H teen leadership programs should provide youth with increased knowledge on community issues and capacity for engaging as leaders in their communities. However, there was a clear implication for enrollment in honors/AP courses as a factor significantly impacting overall AEC, civic duty, and civic skills. This was particularly apparent for the civic skills construct, where clusters one and five yielded significantly higher scores when compared with cluster three. Recall that all three of these clusters were white youth in long-term leadership programs. Classes for gifted youth often provide avenues for the development of problem-solving skills and the creation of action plans (Terry et al., 2008), which may have implications for competence in problem-solving. If ethical views, problem-solving disposition, and activity involvement all impact AEC, are the leadership programs increasing these constructs, or are academic courses providing the treatment? This calls for further research on the effectiveness of these programs in relation to the academic achievement of participants.

Neighborhood connection and civic participation did not significantly differ among clusters, regardless of treatment or enrollment in honors/AP courses. These findings could be related to all participants' involvement in 4-H. Lerner et al. (2013) revealed that 4-H members were twice as likely to engage with their communities and four times more likely to contribute to society. Although involvement in 4-H should increase all constructs of AEC, civic participation may be similar for all groups based on community-service opportunities often provided through the organization. Additionally, 4-H has developed curricula and training for the development of strong youth-adult partnerships (Zeldin et al., 2013) for both adult volunteers and extension employees. Youth-adult partnerships are known for supporting youth development by increasing self-worth and other positive outcomes (Anderson & Sandmann, 2009). This increased sense of self-worth, along with positive support from adult and peer role models, may also explain similar levels of neighborhood connection through participation in 4-H programs.

Conclusions & Recommendations

Overall, this study provides insight into the development of AEC in youth participating in 4-H teen leadership programs. AEC, civic duty, and civic skills varied for youth participants based on different clusters derived from program treatment, gender, race, honors/AP course enrollment, age, ethical views, problem-solving disposition, and activity involvement— notable findings related to program treatment, gender, and enrollment in honors/AP courses. Levels of ethical views, problem-solving disposition, and activity involvement also varied between clusters of

participants in long-term teen leadership programs and raised questions regarding the impact of long-term treatment in relation to enrollment in honors/AP courses. Further exploring this phenomenon and infusing teen leadership programs with opportunities for problem-solving and character development could heighten AEC for youth participants.

Cluster one was comprised of white females from long-term teen leadership programs who were enrolled in honors/AP courses and had the highest ethical views and activity involvement. This cluster yielded significantly higher scores for overall AEC and differed from cluster five based only on gender. This raises implications for the consideration of gender differentiation in AEC. Often, females are expected to contribute, but males are viewed as those who cause issues in and do not care about their communities (Hall & Coffey, 2007). Additionally, women in the U.S. volunteer more frequently than men (Einolf, 2010). This used to be attributed to the amount of time and availability connected to work. However, little research has been done that indicates this trend is changing as more women work outside of the home. Therefore, this significant difference may be impacted by more prevalent societal norms, and avenues for overcoming this gender differentiation should be considered in the development of inclusive citizenship curriculum.

Cluster two, which was the only cluster comprised of only short-term program participants, had the lowest levels of civic duty and significantly differed from clusters one and four. This provides support for the role long-term 4-H teen leadership programs may have on a youth's orientation toward citizenship and community involvement. With mastery (Redmond & Dolan, 2016) and intentional opportunities for planning and decision-making processes (Kress, 2006) as aims of youth leadership, long-term programs should provide youth with increased knowledge and competence for engaging as leaders and community problem solvers. However, there was also clear inference for the impact of enrollment in honors/AP courses as a factor significantly impacting overall AEC, civic duty, and civic skills. Youth programming should focus on increasing competency and providing more opportunities for decision-making and problem-solving at the community level.

Cluster three had the lowest reported levels of ethical views, problem-solving disposition, and activity involvement and was comprised of participants in long-term leadership programs who were not enrolled in honors/AP courses. Cluster three yielded the lowest mean for civic skills and significantly differed from clusters one and five, which were of a similar demographic makeup with the exception of enrollment in honors/AP courses. Additionally, cluster three reported significantly lower levels of civic duty when compared with clusters one and four. Based on this finding, it is important to consider exploring the relationship between academic achievement and participation in long-term leadership programs, problem-solving disposition, ethical views, and AEC. Because gifted courses often include opportunities for the development of problem-solving skills and the creation of action plans (Terry et al., 2008), there are

implications for a youth's views, attitudes, and beliefs on problem solving based on their overall feeling of competence.

There were several limitations in this study. The first overarching limitation was the ex post facto design of the study and sampling frame. The extension agents were the gatekeepers for access to youth, and signed parental consent was required for participation. This reduced the sampling frame and impacted the response rate. Although recorded and analyzed, the researcher had little control over the demographic backgrounds and make-up of the subgroups within districts, which may have impacted overall results and generalizability. The person-centered analysis helped to mitigate some of these sampling challenges, but additional research with a wider frame is recommended to increase the generalizability of findings. Another limitation related to the AEC instrument not being revalidated following the addition of social media to the list of ways to advocate in your community. Increasing the sample size to revalidate this instrument is recommended for future research.

Based on the findings, there are several recommendations for practice and research moving forward. The first recommendation, which is related to practice, is to consider methods for increasing character education and problem-solving opportunities associated with community issues and development to increase AEC in all youth participants. Findings indicated that participation in a long-term 4-H teen leadership program alone did not indicate higher levels of AEC when compared with the cluster of youth who participate in short-term programs. Further, participants of short-term programs had the lowest scores on the civic duty subscale. This indicates a need for short-term 4-H teen leadership programs—such as camp-counselor trainings—to make connections between the purpose of the training and contributions to society. As proposed by Sherif (2019), ethics is a central component to youth leadership and should be incorporated in leadership education curricula to maximize leadership development and potential.

It is also recommended for Extension professionals and other youth-leadership practitioners consider the role gender may play in the development of AEC. Hall and Coffey (2007) discussed gender differentiation in citizenship, saying “much of the current negative and anxious commentary about young people and the ‘don’t care’ culture is implicitly, and sometimes explicitly, directed at young men in particular” (p. 294). They note that women are expected to contribute, but males are often viewed as noncontributors. Based on this notion, sociocultural development of views toward citizenship may differ based upon gender, which would explain the variations between similar clusters differing predominately on gender alone, especially the differing levels of AEC. It is recommended that teen leadership professionals ensure programs promote gender inclusion in citizenship-focused curricula and think intentionally about the engagement of males as contributors to their communities.

With citizenship as a priority in 4-H (National 4-H Headquarters, 2011), professional development is needed for Extension agents to fully understand the inner workings of these clusters and how program improvements and adjustments may aid in increased levels of AEC. These clusters allow us to examine how indicators combine to impact independent variables. Therefore, social science researchers should also consider how results may differ from traditional variable-centered analyses and consider a variety of statistical methods to ensure participants are treated as heterogeneous in nature. It is essential to keep in mind how individual development is a result of the bidirectional relationship between an individual and their context over time.

Program goals of 4-H indicate high priorities for the development of self and abilities to be meaningful contributors to their communities (4-H National Headquarters, 2011). Therefore, it is recommended that future research and replication include a wider range of teens not participating in 4-H or teen leadership programs in order to derive comparison from the impact of the 4-H program on AEC, problem-solving disposition, and ethical views. Further, the relationship between enrollment in honors/AP courses and ethical views and/or problem-solving disposition should be further explored.

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Impact of Prolonged Professional Development on Teachers' Confidence in Using Inquiry-Based Learning in the Classroom

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Professional development (PD) programs for science and agriculture teachers designed around the inquiry-based learning (IBL) teaching strategy could help to improve science proficiency amongst our high school students. PD that continues over a longer period of time is more effective than short-term workshops. The purpose of this study was to explore the impact of a prolonged PD program on teachers' confidence in using IBL strategies for teaching animal sciences content. The following research questions guided this study: RQ1: What were participants' perceptions of a prolonged PD program? and RQ2: How did the prolonged PD program influence the participants' confidence in using IBL? For this project, the teachers completed three online modules focused on best practices for using IBL in the classroom and then participated in a five-day in-person PD program that was offered in Tennessee and Nebraska during June and July of 2022. Basic qualitative methodology was used, and four focus groups were conducted. The following themes emerged: perceptions of the PD and confidence in using IBL. Allowing teachers to work through the IBL activities as students appeared to increase their confidence in using IBL to teach animal science concepts in the future.

Keywords: inquiry-based learning, professional development, animal science

Introduction

The Partnership for 21st Century Skills (2008) indicated more than 50% of U.S. high school students lacked science proficiency, and this has not improved. Out of 1.8 million high school graduates who completed the ACT test in 2019, only 36% met the benchmark for collegiate science readiness (ACT, 2019). In Nebraska and Tennessee, which require all graduates to

complete the ACT, only 33% and 27%, respectively, met college readiness benchmarks for science (ACT, 2019). Other testing further verifies inadequate science preparation; for 2021-2022, the Nebraska Student-Centered Assessment System determined that 52% of 11th-grade students lacked science proficiency (Nebraska Department of Education, 2022).

According to Conner et al. (2021), professional development programs for science and agriculture teachers designed around the inquiry-based learning teaching strategy could help to improve science proficiency amongst our high school students. IBL also allows individuals to practice and develop their critical thinking skills and their problem-solving abilities (Savery, 2006). More specifically, PD that continues over a longer period of time is supported by the current knowledge of how teachers learn, and prolonged PD is more effective than short-term workshops (National Research Council [NRC], 2000). “In order to teach in a manner consistent with new theories of learning, extensive learning opportunities for teachers are required” (NRC, 2000, p. 203). Prolonged PD programs have the opportunity to make meaningful impacts on teachers’ ability to utilize new teaching strategies in the classroom. Therefore, the purpose of the study was to explore the impact of prolonged PD on teachers’ confidence in using IBL teaching strategies.

Conceptual Framework

Guskey’s (2002) model of teacher change provided the framework for this research and guided the development of PD for this project. This model suggests that teachers will not truly change beliefs and attitudes related to a new teaching strategy until they see changes in the students themselves—a workshop alone is not sufficient to change teacher attitudes (Guskey, 2002). In order for teachers to fully commit to using a new teaching strategy, they need to be able to see how it will work in the classroom first (Guskey, 2002). Prolonged PD programs allow teachers to learn, implement, and evaluate how new teaching strategies impact students’ learning outcomes, which would likely lead to greater changes in beliefs and attitudes compared to a stand-alone workshop (Guskey, 2002). Kreifels et al. (2021) found that a 12-month PD program successfully prepared agricultural teachers to integrate IBL into the classroom and positively influenced teachers’ perceptions of IBL.

Additional best practices for PD programs include the use of active learning for participants that would allow them to engage with training content in a meaningful way as opposed to simply listening to instruction or speakers (Desimone & Garet, 2015). Having teachers participate in lessons as the students and engage in IBL is one way to implement active learning during PD programs (Colclasure et al., 2022). This approach has also been found to be successful at increasing teachers’ confidence and intent to integrate IBL activities in the classroom (Colclasure et al., 2022).

While prior research has demonstrated the utility of a prolonged PD program, data were collected after the conclusion of a 12-month PD (Kriefels et al., 2021). Prolonged PD programs

consist of multiple meetings and opportunities for development, so there is a need to understand teachers' confidence in using IBL in the classroom after they are trained on using the teaching materials but before they begin integrating it into the classroom. Understanding what approaches lead to increased confidence for teachers before they move forward to classroom instruction will aid in the development of future prolonged PD programs.

Purpose and Objectives

The purpose of this study was to explore the impact of a prolonged PD program on teachers' confidence in using IBL strategies for teaching animal sciences content. The following research questions guided this study:

RQ1: What were participants' perceptions of a prolonged PD program?

RQ2: How did the prolonged PD program influence the participants' confidence in using IBL?

Methods

This current study is part of a larger research project. Agriscience and science teachers from Tennessee (TN) and Nebraska (NE) participated in a year-long PD program that started in the summer of 2022. For this project, the teachers completed three online modules focused on best practices for using IBL in the classroom and then participated in a five-day in-person PD program that was offered in Tennessee and Nebraska during June and July of 2022. During the PD, teachers played the role of high school students and were actively engaged in six different IBL activities. The IBL activities were designed to showcase animal science concepts and scientific principles that are commercially applicable and used in agriculture. The six animal science concepts included animal health, breeding and genetics, management, meat science, nutrition, and/or reproductive physiology. Additionally, each IBL activity demonstrated a basic scientific concept related to biology, chemistry, or physics. Participants were provided with the resources to implement the IBL activities in the classroom and were expected to teach these activities during the following school year.

Basic qualitative methodology was used to fulfill the purpose of this study (Merriam, 1998). After the conclusion of each in-person PD program during June and July of 2022, participants were broken into two focus groups per state (four focus groups in total). A semi-structured moderator's guide was used to ask participants questions about their motivation to participate in the program, their experience in the program, and their thoughts related to IBL. At the point of data collection, participants had completed the training portion of the prolonged PD but had yet to begin implementation in the classroom.

There were six to nine participants in each focus group, with a total of 30 participants combined. Twenty-one of the participants taught agriscience ($n = 21$), six taught biology ($n = 6$), and three

taught chemistry ($n = 3$). Participants in the program had been teaching for a range of one to 28 years ($M = 9.75$, $SD = 8.45$). Focus groups were used for this research to allow participants to express their opinions and thoughts in a social setting (Morgan, 1998). Each focus group lasted approximately 60 minutes and was recorded and transcribed for accuracy. After the focus groups were transcribed, the lead coder used Glaser's (1965) constant comparative method of analysis to identify emergent themes related to the teachers' perceptions of the PD.

To help address potential bias or assumptions of the coder that may threaten the validity of the study, a researcher subjectivity statement has been included (Merriam, 1998). The primary coder was a master's student studying agricultural and extension education at the University of Nebraska-Lincoln and has a bachelor's degree from the University of Tennessee, Knoxville, in agricultural education. In order to address the reliability of the analysis, the primary coder and a secondary coder independently analyzed one of the focus group transcripts. After analysis, the coders met to discuss their codes and, upon agreement, developed a code book to help direct analysis (Creswell, 2013). Peer debriefing was used during data analysis to help increase the validity of the study (Holloway, 1997). The peer debriefer was involved in the project but not present for the focus groups—she served as a devil's advocate during the coding process to challenge assumptions and provide alternative views for the lead coder. Additionally, an audit trail was created to track how codes were identified, defined, and condensed to increase the findings' dependability (Lincoln & Guba, 1985).

Findings

Participants' Perceptions of the PD

Participants' appreciation of participating in active learning during professional development emerged during the focus groups. One common theme was how PD provided immersive experiences for the participants. When asked to provide feedback on the professional development program, many of the participants described how beneficial it was to experience the activities from the student's perspective. Participant 2 (NE) stated, "I really like the sequencing [of the PD] and [how] it's replicated [to] what we might see in our actual classroom." When discussing how surprisingly immersive the PD program was compared to others, Participant 6 (NE) explained, "You are the students, you are actually going to put yourselves in these situations and do the [activities] ... so that way you understand your student's perspective when they are doing [the activity]." Participant 5 (NE) had a similar view stating, "My favorite part was actually getting to be the student and doing [the activities]." Additionally, Participant 9 (NE) added, "I love the fact that we got to try activities out as a student."

Participants also discussed how, by experiencing the activities as a student, they were able to identify areas of weakness that may occur in their own classrooms. Participant 6 (TN) explained,

I think the facilitators did a really great job of throwing us into the same situation that we would throw our students into. Some of us even turned into some of our lower level performing students ... [when faced with challenges] my brain just locked up [and] I cannot process through this right now. I really liked that they let us struggle for a little bit and then if we still needed help, they gave us the next little bit of information instead of just giving anybody the answer.

Other participants brought up the value and importance of learning by doing. Participant 7 (NE) stated, "Reading the lesson plan versus going through the lessons and doing them, you learn more if you're thinking about those [inquiry] questions and creating things, asking questions, exploring, and researching, etc." Overall, the participants enjoyed the structure of the PD program and getting to engage in the IBL activities themselves.

Participants' Confidence in Using IBL

As conversations progressed, many participants discussed how the immersive experience affected their confidence in teaching inquiry-based learning curriculum materials. Most participants' confidence increased after participating in the professional development program, especially first-year teachers. Participant 6 (NE) said, "[Inquiry-based learning] was my weak area. And as a first-year teacher, this certainly improves my ability to teach that not only in the animal science context but also with the science focus as well." Similarly, Participant 4 (NE) expressed,

These are the lessons that we were doing throughout the week. Getting to do them is really helpful. Being taught them before you have to teach the lesson gives me a lot of confidence going into my first year of teaching.

Participants with more teaching experience also conveyed their increased confidence in teaching with inquiry-based learning. Participant 2 (TN) shared, "Being able to participate in [the professional development], both as a student and a teacher at the same time, I think that's really where that confidence comes in terms of being comfortable with the material in particular."

Participant 14 (TN) had a similar opinion stating,

It did improve my confidence ... just being here and the way the PD was presented put me in the student's seat, and I wasn't necessarily in that teacher hat mode. I was a student, so I was like this is what I need to be doing with my student. It gave me that confidence that I need.

Furthermore, some participants agreed that their confidence slightly increased, as Participant 8 (NE) shared, "This [professional development] certainly increased my confidence to be able to

for sure teach the lessons that we went through, and [I'm] somewhat confident in the ability to write and create inquiry lessons.”

However, a few participants indicated their confidence was not heavily influenced by the professional development. When discussing the participants' confidence levels with animal science and inquiry-based learning concepts, some participants admitted they were already confident prior to the professional development. Participant 12 (NE) stated, “I would say that this PD didn't necessarily increase my ability, as again, [inquiry-based learning has been] a part of [our] practice for several years.” Although some participants already possessed confidence, Participant 5 (TN) shared, “But now [after the professional development], I feel more highly qualified.”

As the discussion moved to reflect on the overall impact of the in-person professional development, Participant 8 (TN) said,

This is the first professional development that I have ever been to where they took us through the entire lesson, let us do the lesson ourselves and then gave us the materials to take it back to our kids. That is one of the biggest things that has made this the best professional development that I have gone to, because I'm able to take what I learned, and what I implemented, home and I can do it seamlessly.

By the end of the in-person PD program, the participants reported they were confident in using IBL in their classes in the future.

Conclusion and Discussion

The purpose of this study was to explore the impacts of a prolonged PD on teachers' confidence in teaching with IBL strategies in the classroom. Specifically, this study explored teachers' confidence after completion of the in-person PD meeting of a year-long program but prior to teachers implementing IBL in the classroom. Many of the participants commented on how they enjoyed the immersive aspect of the PD. Instead of passively learning about IBL strategies and receiving lesson materials, participants were asked to play the role of the student as they engaged in the IBL activities themselves. This immersive role-playing approach to PD appeared to influence the participants' satisfaction with the workshop, which reflects best practices for incorporating active learning into PD programs (Desimone & Garet, 2015). Many of the participants commented about how playing the role of the student allowed them not only to understand better how to implement IBL teaching strategies but also how students would likely be engaging with the content. While Guskey's (2002) model of teacher change proposes that teachers need to see their students engage with new teaching strategies before changing beliefs and attitudes, the findings from this study indicate that using active learning strategies that immerse teachers in the role of the student during the PD program may yield similar results. This

role-playing would allow teachers to see how IBL could be implemented and allow them to experience it themselves before implementing it in the classroom.

Allowing teachers to work through the IBL activities as students did appear to increase their confidence in using IBL to teach animal science concepts in the future, which was in line with past research (Colclasure et al., 2022). Some of the teachers pointed out that this teaching strategy was a weakness of theirs, but getting to spend an entire week learning the content and engaging in IBL helped to increase their confidence. Even teachers who started the workshop with some understanding of IBL walked away feeling like they had increased their expertise in executing the strategy. As teachers integrate IBL into their classes and see the impacts on student learning outcomes, the teachers' confidence and appreciation for using IBL is expected to increase further (Guskey, 2002; Kreifels et al., 2021). Overall, using the active learning strategies during the in-person PD meeting did appear to positively influence teachers' confidence in using IBL during the next stage of the prolonged PD program.

Recommendations

Due to the qualitative nature of this study, the findings are not generalizable. However, they do provide meaningful insight into the development of teacher PD programs. The findings from this study indicate there are benefits in allowing teachers to experience lessons both as a student and a teacher during a prolonged PD program. When developing PD programs, agricultural teacher educators should think beyond the length of the program to consider how the content will be delivered to teachers as well, thus ensuring active learning strategies are utilized. Allowing teachers to participate in the developed lesson plans and engage with the teaching materials as students would allow them to understand better how to facilitate the lesson while seeing it from the perspective of the student. This strategy helps to increase confidence and could also serve to help teachers begin to move through Guskey's (2002) model of teacher change before implementing IBL in their classes.

Given the data in this study were collected at the completion of the in-person PD, it would be important to collect data at the end of the one-year program to understand how the PD influenced teachers' actual ability to integrate IBL into their curricula. While the findings are specific to IBL with animal science concepts, there could be value in replicating a similar IBL professional development in other areas of agriculture, such as plant science, agricultural business, or agricultural mechanics. Additionally, as some participants already possessed confidence before the professional development, further research could be explored on whether being traditionally or alternatively certified influences teachers' self-efficacy and confidence in teaching IBL. This study should be conducted in other states to gain a broader insight into the impacts immersive professional development has on high school science and agricultural teachers across the country.

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Cooperative Extension Programming for Early Care and Education Professionals During the First Year of the COVID-19 Pandemic: Evidence from a National Survey of Extension Systems

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Cooperative Extension Systems (CESs) provide programming to early care and education (ECE) professionals. The COVID-19 pandemic significantly impacted the needs of ECE professionals. The purpose of this study was to document how CESs helped ECE professionals respond to the pandemic during its first year and how Extension programming was altered in response to the pandemic. Between March and June 2020, representatives from all 87 CESs in the 50 U.S. states; Washington, DC; and six U.S. territories were invited to complete an online survey that included six questions about the pandemic. We received responses from 43 CESs (49% response rate). The analytic sample (n=30) included only CESs that offer programming for ECE professionals. Most CESs (73%) offered programming to help ECE professionals respond to the pandemic, and informal needs assessment methods were used to make programming decisions. A variety of media were used to disseminate information, including email, Extension websites, social media, print media, video conferencing, and phone calls. In response to the pandemic, most CES (80%) moved in-person programming online. Moving forward, Extension professionals should incorporate systematic needs assessment and evaluation efforts to ensure programming meets the needs of those we aim to serve.

Keywords: early care and education, early childhood education and care, Cooperative Extension programming, COVID-19 pandemic, young children

Cooperative Extension Systems (CESs) across the country provide a wide array of programs, trainings, and other resources for early care and education (ECE) professionals caring for young children. ECE professionals, defined here as center directors or teachers and home-based providers, work in a variety of settings, including Pre-K classrooms, Head Start centers, private child care centers, and family child care homes. Cooperative Extension programming for ECE

professionals includes the continuing education and professional development necessary to maintain state licensure; technical assistance or informal consultation; direct education for young children; and policy, systems, and environmental interventions that promote health and wellness. The reach of these Extension programs can be considerable. Over the last ten years, over 400,000 people have completed 1.9 million courses through Penn State Extension's Better Kid Care, which provides online asynchronous professional development modules for ECE professionals (Duke, 2021).

Information about programming for ECE professionals is typically collected at the state or county level, so this study was designed to provide a broader national view of how CESs serve the ECE workforce. A National Inventory of Extension Programming for the ECE Workforce was completed in 2021 by an informal working group of nine Cooperative Extension faculty members and one undergraduate research assistant (including the four authors of this paper) from eight CES in eight different states. The group formed in late 2019 after four members met at the National Association for the Education of Young Children annual conference and began a discussion about Cooperative Extension programming for the ECE workforce. Over the next year, the initial four working group members recruited six additional members who worked with ECE professionals through Cooperative Extension. In recognizing a lack of information about how Cooperative Extension supports the ECE workforce, the group decided to focus on conducting a national inventory. The inventory was designed to explore if and how CESs provided programming for ECE professionals and engaged with the ECE state systems. One topic of particular interest was how CES provided programming and other resources for the ECE workforce during the COVID-19 pandemic. The lead author of this article volunteered to take the lead on compiling the national inventory as she had the time and expertise to lead the group in this task.

The COVID-19 pandemic significantly impacted ECE professionals, prompting an increased need for resources and support. Many child care centers and family child care homes closed or reduced their capacity or hours; preschools and Head Start centers moved to online education to comply with stay-at-home orders (Crawford et al., 2021; Tarrant & Nagasawa, 2020). ECE professionals had to develop or adapt safety procedures for their classrooms and facilities and learn to use unfamiliar technology to teach or stay connected with children and their families (Crawford et al., 2021). ECE professionals reported an increased workload in order to follow new safety protocols, prepare online lessons and materials, and teach and meet with students and parents both in person and online (Crawford et al., 2021; Grindal et al., 2021). ECE professionals also reported experiencing heightened levels of emotional distress (Crawford et al., 2021; Tarrant & Nagasawa, 2020) and economic hardship (Center for Translational Neuroscience, 2021; Daro & Gallagher, 2020; Smith et al., 2021).

Cooperative Extension has an extensive history of playing a pivotal role during natural and manmade crises (e.g., Cartwright et al., 2002; Cathey et al., 2007; Inwood et al., 2019; Turner,

2008). The COVID-19 pandemic is no exception. Extension professionals have been providing education on topics related to the pandemic since March 2020 (e.g., CESs are providing vaccine education to rural Americans through a partnership between the United States Department of Agriculture and the Centers for Disease Control and Prevention; National Institute of Food and Agriculture, 2021). However, there is little information about how Cooperative Extension programming has supported ECE professionals during the pandemic.

To address this gap, we (the term “we” is used throughout to refer to the authors, unless otherwise indicated) document how Cooperative Extension helped ECE professionals respond to the COVID-19 pandemic during its first year and how Extension programming was altered in response to the pandemic using data from a national online survey of CESs. In particular, we address three research questions: 1. How did Cooperative Extension help ECE professionals respond to the COVID-19 pandemic? 2. How did Cooperative Extension deliver programming and resources to ECE professionals during the COVID-19 pandemic? and 3. How did the COVID-19 pandemic alter Extension programming for ECE professionals? Extension professionals can use our findings to plan future programming and resource delivery and to foster partnerships with other organizations.

Methods

Data Collection and Sample

Our population of interest was all Cooperative Extension Systems in the U.S. Using two online lists (The Ohio State University, n.d.; United States Department of Agriculture, 2019), the lead author compiled a list of all operational Land Grant Institutions in the U.S. as of February 2021. This list included 111 Land Grant Institutions (57 1862 institutions, 20 1890 institutions, and 34 1994 institutions) in 50 states; Washington, DC; and 6 U.S. territories. Next, the lead author and two research assistants searched online for evidence of a CES at each institution. Fourteen institutions were eliminated – 12 because there was no evidence of a CES at the institution and two because no contact information was available online. Additionally, 16 institutions were condensed into six CESs because in six states, more than one institution made up a single CES (e.g., the Alabama Cooperative Extension System serves the land-grant mission of Auburn University and Alabama A&M University).

One hundred forty-two individuals representing 87 CESs were invited to complete an online survey. Given that our purpose was to learn about programming for ECE professionals, Family and Consumer Sciences Directors were targeted for participation. When a director could not be identified, the Director or Dean of Extension and at least one Extension faculty member whose work appeared to include programming for ECE professionals, young children, or families with young children were invited to participate. Additionally, the working group requested surveys from colleagues who worked for a CES that provided programming for ECE professionals. The data were collected between March and June 2021 by sending an initial email request and a

reminder two weeks later. There was no limit to the number of respondents from each CES, and recipients were encouraged to forward the survey to colleagues.

After removing five incomplete surveys, the data set included respondents ($n = 73$) at 43 CESs in 38 states and 2 territories for a 49% response rate. For 13 of these CESs, all respondents indicated that no one at their CES provided programming for a) 0-5-year-old children in ECE settings, b) ECE professionals who care for 0-5-year-old children, c) trainers who provide programming for ECE professionals who care for 0-5-year-old children (e.g., train-the-trainer sessions), or d) state-level ECE systems. After removing these 13 CESs, the analytic sample included 30 CESs.

Instrument

The data for this paper come from The National Inventory of Extension Programming for the ECE Workforce, a 58-question online Qualtrics survey estimated to take between 30 and 90 minutes to complete. All survey questions were written specifically for this survey by the working group, as we could not find appropriate existing measures. To evaluate the survey questions, response options, and data collection procedure, the working group conducted two rounds of cognitive interviews between September 2020 and February 2021 (Beatty & Willis, 2007; Boateng et al., 2018). The cognitive interview participants were Extension professionals and content experts ($n = 8$) who were strategically selected to include individuals from different parts of the country, from CES organized at the county and regional level, and who were familiar and unfamiliar to our team. Revisions were made to the entire survey after each round of cognitive interviews. Face validity was established by including cognitive interview questions about the suitability of our survey questions for measuring the full range of Extension programming for the ECE workforce and if there were important areas that our survey questions failed to capture. For this paper, we used data from six questions specifically about the COVID-19 pandemic (see Table 1 for survey questions and answer choices).

Table 1. Survey Questions and Answer Choices

Survey Question	Answer Choices
At any time did your CES offer programming, training, or resources ^a in any form specifically designed to help early childhood teachers or providers ^b caring for 0-5-year-old children respond to the COVID-19 pandemic?	<ul style="list-style-type: none"> • Yes • No
Please describe the programming, training, or resources ^a your CES designed to help early childhood teachers or providers ^b caring for 0-5-year-old children respond to the COVID-19 pandemic.	Open response

Survey Question	Answer Choices
<p>How did your CES make decisions about the programming, training, or resources^a it designed to help early childhood teachers or providers^b respond to the COVID-19 pandemic?^c</p>	<ul style="list-style-type: none"> • We made these decisions internally by talking to Cooperative Extension faculty and/or staff • We looked at data collected by another group or agency (e.g., statistics collected and reported by a state agency). • We formally surveyed or interviewed: <ul style="list-style-type: none"> ▪ early childhood teachers or providers ▪ parents or caregivers of 0-5-year-old children ▪ representatives from local or state government agencies ▪ representatives from non-profit organizations that serve early childhood teachers or providers • We informally talked with: <ul style="list-style-type: none"> ▪ early childhood teachers or providers ▪ parents or caregivers of 0-5-year-old children ▪ representatives from local or state government agencies ▪ representatives from non-profit organizations that serve early childhood teachers or providers • Other
<p>During the COVID-19 pandemic, what kinds of programming, training, or resources^a on any topic is your CES providing for early childhood teachers or providers?^{bcd}</p> <ul style="list-style-type: none"> • <i>Include everything that your Cooperative Extension System has done since March 2020, even if you are not currently doing it.</i> 	<ul style="list-style-type: none"> • In-person programs, classes, or meetings • Online programs, classes, or meetings • Extension fact sheets, briefs, or newsletters (either electronic or as hard copies) • Short instructional videos that are not part of a larger class or program • Prepared curriculum for use by early childhood teachers and providers in the classroom (not programming or activities delivered by Cooperative Extension employees) • Other
<p>During the COVID-19 pandemic, how is your CES disseminating information to early childhood teachers or providers?^{bcd}</p> <ul style="list-style-type: none"> • <i>Include everything that your Cooperative Extension System has done since March 2020, even if you are not currently doing it.</i> 	<ul style="list-style-type: none"> • Print Media (i.e., anything that is printed including fact sheets or briefs and articles or advertisements in newspapers or magazines) • Extension website • Social media (Facebook, Instagram, Twitter) posts • Listserv messages • Email • In-person communication • Phone calls • Video conferencing • Other • Snail Mail • Television • Radio
<p>How has the COVID-19 pandemic changed the programming, training, or</p>	<ul style="list-style-type: none"> • We moved programming, training, or resources online that had previously been offered in person.

Survey Question	Answer Choices
<p>resources^a on any topic that your CES offers to early childhood teachers or providers^b who care for 0-5-year-old children?^c</p> <ul style="list-style-type: none"> • <i>Only consider changes that were a direct result of the COVID-19 pandemic.</i> 	<ul style="list-style-type: none"> • We stopped offering or paused programming, training or resources. • We have added programming, training or resources since March 2020. • We stopped or paused the development of new programming, training, or resources. • The COVID-19 pandemic has not changed the programming, training, or resources we offer to early childhood teachers or providers who care for 0-5-year-old children. • Other

Notes. Respondents were instructed to consider the COVID-19 pandemic to take place between March 2020 and the present.

^a Programming, training, or resources were defined to also include professional development, services, materials, support, or information.

^b Early childhood teachers or providers were defined as teachers or directors in public pre-K classrooms, Head Start centers, for-profit and non-profit private child care centers, and home-based child care or family day care providers, but not informal teen babysitters.

^c Respondents were instructed to select all answer choices that applied.

^d Respondents were instructed to consider only programming, training, resources, or dissemination methods that were specifically designed for early childhood teachers or providers caring for 0-5-year-old children.

Analysis

For this study, the unit of analysis is the CES. For 15 of the CESs, multiple individuals completed a survey. When there were discrepancies between reports from multiple respondents at one CES, we combined the responses so that all programming and services reported by a respondent were included (e.g., if one respondent indicated that their CES *did not* provide programming to help ECE professionals respond to the pandemic, and another respondent from the same CES indicated that they *did* offer this kind of programming, we recorded that the CES *did* provide this kind of programming). Frequencies and percentages were used to describe our sample and address the research questions. SAS version 9.4 (SAS Institute, Cary, NC) was used to conduct all analyses, and the study was approved by the appropriate Institutional Review Boards.

Results

Our analytic sample included 30 CESs from 28 states that reported offering programming for ECE professionals, ECE state systems, or young children in ECE settings. Twenty-four of the CESs were housed at 1862 institutions, two were at 1862 institutions that partnered with 1994 institutions, two were at 1890 institutions, and one was at a 1994 institution. Our sample includes CESs from across the country: 11 were located in the National Extension Association of Family and Consumer Sciences central region, nine were located in the southern region, 6 in the western

region, and 4 in the eastern region (National Extension Association of Family and Consumer Sciences, n.d.).

How did CESs help ECE professionals respond to the COVID-19 pandemic? About three-quarters of the CESs ($n = 22$) reported offering programming specifically designed to help ECE professionals respond to the pandemic. When asked to describe this programming, respondents from eight CESs reported that they provided resources to help either ECE professionals or the children and families they care for deal with mental health challenges or promote young children's social-emotional development. For example, one respondent reported that their CES provided "webinars/short virtual programs to help ECE teachers understand how the pandemic is affecting young children and how to help reduce children's stress and anxiety." Respondents from five CESs reported providing resources to help ECE professionals promote health and safety and stop the spread of COVID-19 in their ECE facilities (e.g., "information on sanitizing," "asynchronous online courses on Special Considerations for Infection Control" and a "podcast series with (a) medical doctor to answer questions from the field"). These resources covered topics such as mask-wearing, sanitizing, emergency preparedness planning, and safety protocols. Respondents from two CESs reported offering resources to help ECE professionals deliver online education (e.g., "free webinars on providing at-home learning experiences during mandatory closures"), and only one respondent indicated that their CES offered programming to help alleviate economic hardship (e.g., information about how to access government relief resources).

When asked how they made decisions about the programming their CES offered to ECE professionals to help them respond to the pandemic, the two most frequently used methods were informally talking with ECE professionals (91%) and talking to Extension faculty and/or staff (82%). The least frequently used methods involved formally surveying or interviewing different groups (see Table 2).

Table 2. Strategies Used by CESs to Make Decisions about Programming Designed to Help ECE Professionals Respond to the Pandemic ($n = 22$)

	<i>n</i>	%
Informally talked with ECE teachers or providers	20	91
Talked to Cooperative Extension faculty and/or staff	18	82
Informally talked with parents or caregivers of 0-5-year-old children	14	64
Informally talked with representatives from non-profit organizations	14	64
Informally talked with representatives from local or state government	11	50
Looked at data collected by another group or agency	8	36
Formally surveyed or interviewed ECE teachers or providers	5	23
Formally surveyed or interviewed parents or caregivers of 0-5-year-old children	5	23
Formally surveyed or interviewed representatives from local or state government	3	14
Formally surveyed or interviewed representatives from non-profit organizations	2	9

How did CESs deliver programming and resources to ECE professionals during the COVID-19 pandemic? Respondents from almost all of the CESs reported providing online programs, classes, or meetings (90%) and Extension fact sheets, briefs, or newsletters (83%) for ECE professionals. Two-thirds reported providing short instructional videos that were not part of a larger class or program, 47% provided curriculum that ECE professionals could use in their classrooms, and only 20% offered in-person programs, classes, or meetings. When asked how they disseminated information to ECE professionals during the pandemic, all but two of the top six responses included a form of electronic communication, e.g., email or an Extension website (see Table 3).

Table 3. Strategies Used by CES Faculty and Staff to Disseminate Information to ECE Professionals During the COVID Pandemic (n = 30)

	<i>n</i>	%
Email	26	87
Extension website	25	83
Social media posts	24	80
Print media	23	77
Video conferencing	23	77
Phone calls	20	67
Listserv messages	13	43
In-person communication	13	43
Snail mail	10	33
Radio	6	20
Television	5	17

How did the COVID-19 pandemic alter Extension programming for ECE professionals? The most frequent response was that the CES moved programming online that had previously been offered in person (80%). Respondents from 63% of the CES reported adding programming since the start of the pandemic, 50% stopped offering or paused programming, and 33% reported stopping or pausing the development of new programming. Respondents from only 13% of the CESs reported that the pandemic did not change their programming for ECE professionals.

Discussion

We used a national survey of CESs to document the Extension programming provided to help ECE professionals respond to the COVID-19 pandemic during its first year and how the pandemic impacted existing Extension programming. Respondents from almost all of the CESs in our sample reported offering programming designed specifically to help ECE professionals respond to the COVID-19 pandemic. It is not surprising that most CESs offered programming specifically to address the pandemic given that other research has shown the pandemic significantly impacted ECE professionals (Crawford et al., 2021; Swigonski et al., 2021); Cooperative Extension has a longstanding history of responding to local needs and offering

assistance in times of crisis (e.g., Cartwright et al., 2002; Inwood et al., 2019); and the data were collected about a year after the pandemic began, giving CESs ample time to develop and begin delivering programming. The results also suggest that CESs delivered programming to address most of the needs that ECE professionals have reported (e.g., mental health challenges and enacting disease prevention and mitigation efforts; Crawford et al., 2021; Swigonski et al., 2021).

When asked how they made decisions about this programming, most respondents reported that their CES used informal needs assessment methods (e.g., informally talking with Extension faculty or staff or families with young children instead of formally surveying or interviewing these groups). These informal approaches, which can be quickly and inexpensively implemented, were likely chosen because they allowed CESs to efficiently pivot and begin providing support without overburdening ECE professionals or parents of young children, two groups who were significantly impacted by the pandemic (Jalongo, 2021; Patrick et al., 2020; Swigonski et al., 2021). As we move forward, informal methods should be replaced with systematic data collection from representative samples or purposive samples that prioritize the ECE professionals who have been most harshly impacted by the pandemic (e.g., those who have the lowest wages, those who had to continue working in person during the pandemic, and racial and ethnic minorities; Boserup et al., 2020; Schilder & Sandstrom, 2021). Future needs assessments should also consider the impact of the pandemic at multiple levels (e.g., individual families, ECE professionals and facilities, and ECE state systems) and explore how Extension programming and resources can be targeted to address needs at multiple levels. Additionally, ECE professionals can plan for future situations that require major changes to the content or delivery methods for their programming, as the pandemic did. This advance planning should include assessing what worked during the COVID pandemic and what they would have done differently and making changes accordingly, developing plans to collect systematic and rigorous needs assessment data during extraordinary situations, and maintaining a list of other organizations that were able to provide useful data to inform Extension programming during the pandemic so that they can be easily accessed if needed in the future.

Most respondents reported offering online programs and materials to ECE professionals during the pandemic; disseminating information using email, Extension websites, and social media; and moving in-person programming online. Other research suggests this is similar to how Cooperative Extension more broadly provided programming during the pandemic. Using an online survey that was conducted during the summer of 2020 and included Extension professionals from across programmatic areas (including family and consumer sciences, youth development, agriculture, natural resources, and community development), Israel and colleagues (2020) found that between 30% and 50% of respondents reported using online methods (social media, websites, and webinars or online training) to disseminate information about COVID-19. Additionally, Narine and Meier (2020) conducted an online survey of 79% of all individuals with an Extension appointment at Utah State University ($n = 199$) in March 2020 to measure

Extension professionals' initial responses to the COVID pandemic. When comparing before and during the pandemic, they found increases in the number of Extension professionals who reported providing programming online, learning to deliver online classes, and interacting with community members online.

As we prepare for future events that similarly disrupt society, it will be important to fully understand the implications of adaptations made to the delivery mode for programming and the utility of the topics covered. Online programming may offer opportunities to reach new or wider audiences of ECE professionals. However, it is also likely that some ECE professionals (e.g., those living in rural or low-income areas) have trouble accessing online programming (Reddick et al., 2020; Singh et al., 2020). It will also be important to develop recruitment, retention, and evaluation methods that are appropriate for online programming, which may differ from those used for in-person programming. For example, online systems can often capture how participants interact with the program (e.g., the number of minutes spent viewing a website) in ways that are not available for in-person programming but can be useful for program improvement and understanding outcome evaluation findings. CES faculty and staff will also need to think through which of the modifications made in response to the pandemic should be kept or added to in-person programming and which should be phased out so that programmatic efforts continue to meet the needs of the ECE workforce. Finally, capturing lessons learned from the pandemic seems prudent to help with future planning and preparedness.

This study has strengths and limitations that should be acknowledged. The data were collected at the end of the first year of the pandemic. While this allowed respondents to provide information about the entire first year, it also required that they remember back across a tumultuous year, making it likely that some could not recall all of the programming their CES offered. We used cognitive interviews to evaluate the effectiveness of the survey questions, response options, and data collection procedure but did not have the time or resources to rigorously test the reliability or validity of our survey questions. Additionally, we did not collect data before the pandemic and cannot make longitudinal comparisons. In terms of strengths, we requested surveys from all CESs in the country (rather than using a convenience sample); had a relatively high response rate (just under 50%); and received surveys from CESs in all regions of the country and from CESs at 1862, 1890, and 1994 institutions. We likely still missed some CESs that provide programs or services for the ECE workforce, and therefore, the results likely underestimate the programming that Extension offers for ECE professionals.

High-quality early care and education is an essential support that allows parents of young children to maintain paid employment and/or pursue education and promotes young children's early learning, socio-emotional development, health and wellbeing, and overall school readiness (Institute of Medicine and National Research Council, 2015; Morrissey, 2019). During the pandemic, ECE professionals met multiple challenges, and CESs across the country responded by providing mostly online programming and resources on priority topics. As we continue to

adapt to the ongoing pandemic and prepare for future events that similarly disrupt society, findings from the national inventory indicate Extension professionals should continue to tailor local programming efforts to the ever-evolving needs of the ECE workforce. This can be achieved through cultivating formal and informal relationships with stakeholders, planning programming that can be delivered and received through various media, evaluating efforts, and reflecting and acting on lessons learned. Creating or sustaining opportunities to receive ongoing feedback from a diverse network of stakeholders of the ECE workforce will allow for timely identification of and response to new or priority issues. Planning for and implementing more than one mode of delivery is one way to adapt programming and minimize the exclusion of vulnerable groups. Rapid cycle evaluation methods can quickly assess how well a program works and the audiences it works well for, as well as identify opportunities for improvement (Atukpawu-Tipton & Poes, 2020). Lessons learned from the COVID pandemic will allow Cooperative Extension to continue to serve as a trusted resource during times of crisis.

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Author Note

The working group that compiled the National Inventory of Extension Programming for the ECE Workforce has also compiled a database of the CESs that are providing different types of programming for the ECE workforce. We are hopeful that this database can be used to facilitate collaboration across CESs. The database is available on request from the first author.

Time Allocation Changes for Family Life Extension Educators: The Impact of COVID-19

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COVID-19 has caused a shift in Extension educators' daily routines and a transition to virtual programming. This case study analyzed time logs and interview data of Extension educators hired by Utah State University to facilitate fatherhood education programming. Comparison data indicate less time was spent teaching and traveling while more time was spent managing technology and marketing, following restrictions imposed by COVID-19. Educators recommended that aspiring educators should be made aware of expectations for virtual teaching. They also stressed that supervisors should look for these skills and technological competence in future hiring. Implications for best practices for future programming are discussed.

Keywords: family life education, family life educators (FLEs), Extension, time allocation, virtual programming

Introduction

COVID-19 has forced Extension services to adjust and reevaluate normal operations (Jewkes et al., 2020) and how educational services are provided (Arnold & Rennekamp, 2020; Fawcett et al., 2020). The provision of family life education, which focuses on strengthening family relationships (Duncan & Goddard, 2017), has not been exempt from these changes. Family life education is traditionally offered outside of the formal education system in the form of in-person workshops and seminars (Allen, 2013). Due to social distancing regulations, these formats largely became unavailable at the height of the COVID-19 pandemic. This study highlights the transition of the *Healthy Relationships Utah* initiative from in-person to virtual family life education programming, with a particular focus on the adjustments that family life educators (FLEs), initially hired to facilitate fatherhood education programs in face-to-face settings in both community and correctional environments, were required to make to their daily work routines in light of the restrictions imposed by the COVID-19 pandemic.

Healthy Relationships Utah's Transition to Virtual Family Life Education Programming

Utah State University Extension's *Healthy Relationships Utah* initiative facilitates grant-funded family life education, serving more than 70,000 adults and youth since 2012. Prior to restrictions imposed by COVID-19 in March 2020, workshops were offered in-person in high schools, state government offices, jails and prisons, and community agencies across the state. Various contracts and grants support workshops that cover a wide range of topics, including relationship enhancement, parenting, divorce, stepfamily development, and fatherhood education. Once restrictions were imposed, in-person workshops were prohibited per university policy and those of cooperating agencies. As a result, educational services were transitioned to virtual classrooms in April 2020. In virtual classrooms, participants were provided with the same programming, with the only difference being that workshops were facilitated through Zoom technology. Pivotal to this transition were the efforts of the FLEs who facilitated these programs. With the persistence of social distancing policies, learning about the experiences of these FLEs and the adjustments they made could help inform family life education programming moving forward (Higginbotham et al., 2023).

Method

Grant Description

This study focused on the experiences of nine FLEs hired to implement a multi-year fatherhood education grant funded by the U.S. Department of Health and Human Services. The Principal Investigator was an Extension Specialist with 15 years of experience administering family-life programming. Additional university and Extension employees with backgrounds in prevention science and family life education helped administer and supervise the project. Funding supported responsible fatherhood workshops for adult fathers throughout the state. During their first year of employment, FLEs were trained and certified to teach multiple curricula offered through eight hours of instruction in community and correctional settings.

Data and Sample

Activity logs were analyzed for all nine FLEs working on the fatherhood education grant. Activity log data reflected actual time allocations from 2019 and reported time allocations for summer 2020 after the onset of COVID-19. Qualitative data were collected through exit interviews of FLEs at the conclusion of the grant cycle, which ended in September 2020. Of the nine FLEs, five were male and four were female; five had earned a bachelor's degree, three had earned a graduate degree, and one had earned an associate's degree. On average, FLEs were 51 years of age.

Measures and Analysis

For this study, a mixed-methods approach was employed, applying best practices as proposed by Creswell (2013). In June 2019, FLEs logged their weekly activities in increments of quarter hours over ten working days. In September 2020, during their exit interviews, the same FLEs estimated their time allocations for the same activities after workshops transitioned to a virtual format (see Appendix A for exit interview questions). Activity categories included (a) teaching, (b) administrative, (c) professional development, (d) travel, (e) marketing, (f) planning, (g) equipment maintenance, and (h) miscellaneous activities.

During exit interviews, FLEs also responded to questions focusing on (a) how time allocations changed in the context of COVID-19, (b) what they believed aspiring FLEs should be informed of during the interview process regarding time allocation, and (c) what skills or attributes they believed supervisors should look for when hiring future FLEs. Interview data were analyzed through applied thematic analysis of the open-ended exit interview questions (Kiger & Varpio, 2020). Emphasis was placed on the opinions of the FLEs and their views on best practices for the program moving forward. Thematic analysis was considered an appropriate analytical approach, as the major goal of the analysis was to find consistent patterns in participant responses (Braun & Clarke, 2006).

As part of the analysis, two coauthors who were well-versed in qualitative analysis reviewed the interview data separately for major themes. After separate reviews, coauthors then worked together to address any discrepancies in their thematic coding until a consensus was reached and strong interrater reliability was achieved (Gisev et al., 2013). Such methods allowed coauthors to identify the study's major themes (Guest et al., 2012).

Results

Time Allocation Differences

Differences in time allocations were calculated by subtracting 2020 time allocations from 2019 time allocations. Percent change in time allocations reflected how much more (or less) time was allocated in each category in 2020 (see Table 1). Teaching activities accounted for the greatest amount of time for both periods, followed by administrative and professional development activities. With the transition, travel time decreased by nearly 79%, while time spent marketing and planning more than doubled.

Table 1. Family Life Extension Educators Time Allocation Differences: 2019 vs. 2020

Activity	2019*	2020*	Change	% Change
Teaching	33.71	29.33	-4.38	-12.99
Administrative	25.84	18.78	-7.06	-27.32
Professional Development	13.88	16.22	2.34	16.86
Travel	10.71	2.28	-8.43	-78.71
Marketing	6.81	15.33	8.52	125.11
Planning	5.65	12.06	6.41	113.45
Equipment Maintenance	1.97	2.17	0.20	10.15
Miscellaneous	1.43	3.83	2.40	167.83
<i>Totals</i>	<i>100.00</i>	<i>100.00</i>	--	--

Note. *Numbers reflect the percent of time spent during the time period.

Exit Interviews

Change in Time Allocation

FLEs reported multiple examples of time allocation changes resulting from the transition. The most frequently identified themes were related to travel and technology challenges. As one FLE mentioned, “Time allocations changed dramatically with almost zero travel and increased classes, additional curriculum training, and more collaboration with other educators with Zoom meetings and strategy meetings.” FLEs expressing technology challenges commented, “More time spent figuring out Zoom: how it works and how to teach with it,” and “Zooms and practicing Zooms. Prepping to make classes online successful. Teaching through Zoom was more mentally exhausting.”

Informing Aspiring FLEs

When asked what they thought aspiring FLEs should be informed of during the interview process regarding time allocation, FLEs discussed matters related to virtual teaching and the flexibility required of FLEs. While discussing virtual teaching, one FLE stated, “Teaching online is not the same as doing it face-to-face.” When discussing the flexibility FLEs must have, another FLE warned: “Expect plenty of unexpected! Reach out often to peer educators. A willingness to learn from others.”

Skills/Attributes of Future FLEs

FLEs offered a wide range of answers when discussing what skills or attributes they believed supervisors should look for in future hires. Several FLEs discussed the importance of being flexible, offering statements such as, “Flexibility, ability to think on their feet.” Two others discussed the importance of being technologically savvy, with one FLE noting that when bringing on new FLEs, supervisors should place “higher emphasis on technology skills and background.” The same FLE continued by saying,

Zoom, effective use of PowerPoint and other online methods, and networks, etc., require some knowledge. The ability to speak to a camera and to hold an audience while online, with a good voice, is important. The new teaching is different than standing in front of a room.

Discussion

COVID-19 has forced university Extension services to make adjustments to how educational services and workshops are provided. This study highlighted the transition of the *Healthy Relationship Utah* initiative from in-person to virtual family life education programming. A specific emphasis was placed on the adjustments that FLEs hired to facilitate these workshops in person had to make to their daily routines in order to continue to provide quality programming. Through comparisons of activity logs, results indicated that travel time was significantly reduced, as were administrative activities. Another notable finding was the decrease in teaching, which was reduced by 13% after the transition to virtual programming. Conversely, time allocations for marketing and planning, two activities that each accounted for less than 10% of the FLE's time prior to the onset of COVID-19, more than doubled. Rapid transition from in-person to virtual workshops may not be possible for all grants, but the implications of this study suggest it is not impossible. This study's findings may serve as a case study for Extension planners regarding the possible changes that can take place when program delivery is forced to adapt, and alternative formats must be offered to meet programmatic and contractual demands.

Exit interview data reflected the challenges and changes brought on by the transition, especially in terms of the adjustments FLEs were required to make in order to facilitate virtual programming. Perhaps most telling for the implications for future family life education programming were their thoughts on what aspiring FLEs should expect and what supervisors should look for in potential hires. Being technologically savvy and flexible were qualities that FLEs considered crucial for the success of aspiring FLEs, as several FLEs saw virtual classrooms as something that might become a permanent fixture in the provision of family life education. This sentiment was summed up in the exit interview of one FLE who stated,

Now that the use of Zoom, staying and working from home, and other COVID-19 realities have normalized, I think it is much easier to discuss the impact with people in the interview process. If they have kids at home who will be present during classes, there should be a discussion about how that can be a challenge at times. To me, the lack of human contact and inability to go into the jail or prison is a big downside so that reality needs to be hit head on (some will be happy about that fact). On the other hand, AP&P [Adult Probation and Parole] classes may be better online in some respects and not having to buy food is a big plus. Still, teaching online is not the same as doing it face-to-face. It feels different but can still be good. I think there just has to be the real discussion that for now this is where we are—we teach remotely most of the time. When we can go

live we will and you will be able to really dive in. I think given the realities of the moment, people will simply be more responsive to what is. Having said all of that—I had many amazing experiences online and really got to know and feel the people in class. There is still a lot of good there.

This statement, as well as other findings from the analysis of exit interview data, may be helpful to Extension and family life education programs that are considering transitions to more virtual or dual-delivery modalities (i.e., in-person and virtual). In particular, a specific lesson learned is the importance of collaborating amongst team members and sharing best practices of what works in times of crisis or change. Leaning on and learning from other educators and participating in relevant and timely professional development meetings was crucial to adapting to new circumstances. Likewise, it will be important to consider scheduling and technology issues when transitioning to a virtual or dual-delivery model. Access to the audience and program participants will also be an important consideration. Access was a specific challenge for the FLEs in this study, who had to account for the residential status of participants (i.e., community-dwelling versus incarcerated fathers). Certainly, this is an ongoing challenge for Extension services that have historically sought to serve harder-to-reach and isolated populations. The recruitment and hiring of prospective FLEs who can be versatile and adapt to different delivery methods could prove beneficial if and when Extension programs need to quickly pivot in the future due to another health crisis or other shifts in approaches to program delivery. Indeed, the COVID-19 pandemic, although challenging and inconvenient, demonstrated the ability of Extension services to pivot, adapt, and respond quickly by learning and adopting new technology to offer programming in alternative formats. This is an important consideration for programs wishing to explore dual-delivery methods further.

Conclusion

The change in time allocations and the statements offered by the FLEs illustrate the responsibility that Extension services have to respond quickly in times of crisis (Fawcett et al., 2020). Results of this case study provide evidence demonstrating that Extension services are capable of doing just that, as FLEs from the *Healthy Relationships Utah* initiative were able to transition to virtual programming in approximately one month. There is still much that needs to be learned in terms of participant outcomes and best practices for virtual family life education. However, what is becoming increasingly clear is that flexibility will be crucial to the future success of family life education offered through Extension.

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Appendix A: Exit Interview Questions

- 1) *How did your time allocation change in the context of COVID-19?*
- 2) *In terms of time allocation (post COVID-19), what should we tell potential employees during the application/interview process about what they should expect?*
- 3) *In light of how time is allocated, as we hire new employees, are there specific attributes or skills that we should look for?*

Educational Interests and Information-Seeking Behaviors of Utah Residents

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With a limited body of literature examining residents' preferences for Extension topic areas, this brief report examined the educational interests of Utah residents. It explores opportunities for future programming based on residents' preferences for topic areas and their information-seeking behaviors. Data were gathered from Utah residents in May 2021 via an online Qualtrics survey (n = 668). Results showed the topics of highest interest to Utah residents were strengthening family relationships, emergency preparedness, mental health, food storage, and healthy couples' relationships. Residents' information-seeking behaviors were somewhat consistent with their interests; residents searched most frequently for information on mental health, strengthening family relationships, nutrition education, financial planning, and healthy couples' relationships. Extension organizations are encouraged to learn more about residents' interests and participation preferences to recruit and retain participants, given changing societal trends.

Keywords: educational interests, Extension, information-seeking behaviors, programming, Utah topics

Introduction

Extension must continue to meet the changing needs of residents to fulfill the land-grant mission (Place et al., 2019). While community-based needs assessments enable responsive programming (Bayer et al., 2020), a focal discussion in Cooperative Extension is steady participant recruitment (e.g., Tiffany, 2017). Internal data at Utah State University Extension shows a persistent decline in direct contacts (or total annual program participants) between 2012 and 2019. During this period, Utah State University Extension expanded programming to address emerging issues such as the opioid epidemic and rural workforce development.

Extension rapidly shifted to virtual program delivery in 2020 due to COVID-19 (Israel et al., 2020). The shift to virtual learning stirred conversations at the state level on priority topic areas, audience engagement, and program coverage. While Utah State University Extension was able to successfully maintain and increase program participation via online programming during COVID-19 (Narine & Meier, 2020), there are ongoing discussions on the strategies and methods to keep audiences engaged in programming post-COVID. Thus, this study sought to understand residents' interests and preferences for information to ensure successful participant recruitment

and engagement. While there is ample literature on learning style preferences (e.g., Bailey et al., 2017), limited research exists on Extension clientele preferences for educational topics.

Purpose and Objectives

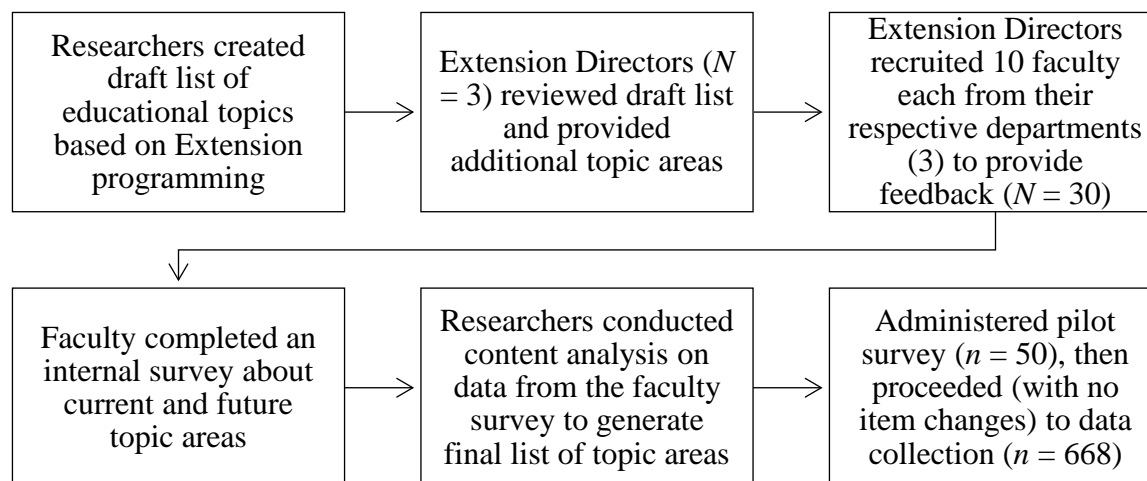
This brief report describes Utah residents' level of interest and information-seeking behaviors for educational topic areas. Objectives were to (a) assess residents' level of interest in educational topic areas by type of residence (urban, suburban, and rural), (b) describe residents' level of interest in topics by age, (c) describe residents' information-seeking behaviors, and (d) describe residents' preferences for participating in educational workshops or courses. Findings can inform the development and implementation of relevant programs that appeal to Utah residents. This study holds implications for Extension's ability to provide relevant programs, maintain participation levels, and attract new audiences given changing societal trends.

Methodology

This study followed a descriptive design (Ary et al., 2014) and relied on primary data from Utah residents. The target population was residents over the age of 18. The sample size was 668 individuals, and data were gathered using a convenience sampling technique. The iterative proportional fitting (or raking) method was used to weight the sample data to reflect target population characteristics. Cohen (2011) described the raking method as a post-stratification procedure for correcting sample weights to reflect known population totals. In this study, sample data were weighted based on age, sex, and county population size using estimated 2019 census data. While the final sample reflects selected population characteristics, it should be noted that a limitation of this study is the use of a convenience sampling strategy. Data collection was facilitated by Qualtrics after the study was deemed exempt by the Utah State University Institutional Review Board. Qualtrics was tasked with recruiting participants from the target population.

A closed-ended questionnaire was used to gather data from the sample. Extension Directors of Utah State University Extension provided feedback at every stage of the questionnaire development process. First, they were asked to review a pre-defined list of topic areas covered by Extension programs in their respective departments. Following this, an internal faculty survey was developed to corroborate and expand upon the existing list of topics. Directors recruited ten faculty each from their respective departments to complete the internal survey ($n = 30$). The open-ended survey asked faculty to (a) list three major Extension programs they implemented over the past five years, (b) list all topics addressed in each major program, (c) list three innovative programs they plan to implement in the next three years, and (d) list the specific topic areas targeted by each innovative program. Content analysis was used to generate a complete list of topic areas based on responses from the faculty survey. Figure 1 summarizes the questionnaire development process.

Figure 1. Questionnaire Development Process



The final residents' survey consisted of a list of 71 topics related to agriculture, home gardening, food preservation, finance, health and wellbeing, and community development. However, this report did not include specialized agricultural topics (e.g., livestock production, precision agriculture) due to the low number of respondents from the agricultural industry. Excluding agricultural topics, this report includes a list of 47 topics applicable to the general adult population of Utah.

Residents were asked to indicate (a) their level of interest in each topic and (b) how often they self-searched for information on the topic. For interest, response anchors were: *Not Interested* = 1, *Hardly Interested* = 2, *Somewhat Interested* = 3, *Interested* = 4, and *Very Interested* = 5. For information-seeking behaviors, response anchors were: *Never* = 1, *Yearly* = 2, *Monthly* = 3, *Weekly* = 4, and *Daily* = 5. Residents were also asked to indicate their preference for participating in educational workshops or courses. Data were analyzed using descriptive statistics.

A standardized Interest Level (IL) score is shown for each topic. All topic areas were ranked from *Very Interested* to *Not Interested*. The standardized IL scores were calculated based on the frequency distribution of responses as follows: $[\% \text{ Not Interested (1)} + \% \text{ Hardly Interested (2)} + \% \text{ Somewhat Interested (3)} + \% \text{ Interested (4)} + \% \text{ Very Interested (5)}] / 100$. The scores are ordered like means; however, since each item is an ordinal variable, a standardized IL was preferred over the mean (Narine et al., 2021). IL scores were interpreted as follows; 0 – .20 = *Not Interested*; .21 – .40 = *Hardly Interested*; .41 – .60 = *Somewhat Interested*; .61 – .80 = *Interested*; .81 – 1.00 = *Very Interested*.

This study used a convenience sample, and caution should be taken when generalizing to the population of Utah. The results of this study are based on a weighted sample according to the 2019 population estimates of American Community Survey (ACS) 1-Year Estimates Data

Profiles. Respondents were asked to self-describe their area of residence. Raw data were weighted by county population size as described in the 2019 U.S. Census.

The sample consisted of mostly non-Extension clientele; 89% of respondents ($n = 594$) have never attended an Extension program or used Extension resources in the past. Therefore, the results of this study are potentially useful for attracting new audiences in Extension.

Findings

Residents' Overall Interest in Topic Areas

Table 1 shows residents' interests in topic areas based on IL scores. The top three topics of interest were strengthening family relationships, emergency preparedness, and mental health. On average, individuals searched for information on these topics monthly. Residents also searched monthly for information on healthy couples' relationships, home gardening, nutrition education, and financial planning.

Table 1. Interest Level and Information-Seeking Behaviors (ISB) for all Topics

Overall Rank	Topic	ISB*	IL#
1	Strengthening family relationships	Monthly	.74
2	Emergency preparedness	Monthly	.71
3	Mental health	Monthly	.70
4	Food storage	Yearly	.69
5	Healthy couples' relationships	Monthly	.67
6	Food safety	Yearly	.66
7	Home gardening	Monthly	.65
8	Nutrition education	Monthly	.64
9	Financial planning	Monthly	.63
10	Food preservation (e.g., canning, freeze-drying)	Yearly	.61
11	Home water conservation	Yearly	.59
11	Financial literacy	Yearly	.59
13	Healthy social media use in families	Yearly	.57
14	Water-efficient landscapes	Yearly	.56
15	Home landscaping	Yearly	.55
16	Nature and outdoor education	Yearly	.52
16	Herbal supplements	Yearly	.52
18	Chronic disease prevention	Yearly	.50
18	Remote working skills (i.e., working from home)	Yearly	.50
20	Remote job opportunities	Yearly	.49
21	Estate planning	Yearly	.48
22	Home buyer education	Yearly	.46
22	Community volunteering	Yearly	.46
24	Career development	Yearly	.44
25	Electric vehicles	Yearly	.43

Overall Rank	Topic	ISB*	IL#
25	Diabetes education	Yearly	.43
27	Composting	Yearly	.42
28	Backyard farming	Yearly	.41
29	Telemedicine	Yearly	.39
30	Cryptocurrencies	Yearly	.36
30	Innovative agricultural ideas and startups	Yearly	.36
32	Sewing and Textiles	Yearly	.35
33	Backyard chickens	Yearly	.35
34	Civil discourse - Engaging in public conversations	Yearly	.34
34	Horticulture	Yearly	.34
34	Substance abuse management	Yearly	.34
34	Community coalitions	Yearly	.34
34	Low chemical landscapes	Yearly	.34
39	Remote co-working spaces	Yearly	.33
40	Computer coding	Yearly	.32
40	Urban farming	Yearly	.32
40	Cut flower production	Yearly	.32
43	Beekeeping	Yearly	.31
44	Urban forestry	Never	.28
44	Blockchain technology	Yearly	.28
46	Specialty farming	Never	.26
47	Divorce education	Yearly	.23

Note. *ISB = Mean response for “How often do you look for information on the topic?”
 #IL = Interest Level scores (Interpretation in Methodology)

Interests in Topic Areas by Residence Type

Table 2 shows the top 10 topic interests based on resident type. Strengthening family relationships, emergency preparedness, and food storage were of the highest interest to rural residents. Strengthening family relationships and emergency preparedness were of the highest interest to suburban residents. Mental health, emergency preparedness, and strengthening family relationships were of the highest interest to urban residents. Results show individuals searched monthly for information on most topics listed in Table 2.

Table 2. Interest Level and Information-Seeking Behavior by Residence Type

Residence*	Topic	ISB	IL
Rural (n = 118)	Strengthening family relationships	Monthly	.76
	Emergency preparedness	Monthly	.74
	Food storage	Monthly	.72
	Home gardening	Monthly	.68
	Food safety	Yearly	.68
	Healthy couples’ relationships	Monthly	.67
	Mental health	Monthly	.66

Residence*	Topic	ISB	IL
	Food preservation (e.g., canning, freeze-drying)	Monthly	.65
	Home water conservation	Yearly	.64
	Nutrition education	Monthly	.63
Suburban (n = 459)	Strengthening family relationships	Monthly	.75
	Emergency preparedness	Monthly	.71
	Mental health	Monthly	.69
	Food storage	Yearly	.68
	Healthy couples' relationships	Monthly	.68
	Home gardening	Monthly	.65
	Food safety	Yearly	.65
	Nutrition education	Monthly	.65
	Financial planning	Monthly	.64
	Food preservation (e.g., canning, freeze-drying)	Yearly	.60
Urban (n = 80)	Mental health	Monthly	.78
	Emergency preparedness	Monthly	.74
	Strengthening family relationships	Monthly	.72
	Food safety	Monthly	.69
	Healthy couples' relationships	Monthly	.66
	Food storage	Monthly	.65
	Nutrition education	Monthly	.65
	Financial planning	Monthly	.62
	Financial literacy	Monthly	.61
Nature and outdoor education	Monthly	.61	

Note. *Residents were asked to describe their current area of residence.

Interests in Topic Areas by Age

Table 3 shows the top 10 topic interests by age group. Mental health and strengthening family relationships were of the highest interest to individuals between the ages of 18–34 and 35–54. Residents over the age of 54 were most interested in emergency preparedness and food storage. While younger residents searched for information on most topics monthly, older residents searched infrequently for information, except for nutrition education. Younger residents also showed higher interest in financial topics compared to middle-aged and older residents, who had a greater interest in home gardening and landscapes.

Table 3. Interest Level and Information-Seeking Behavior by Age Group

Age Group	Topic	ISB	IL
18–34 (n = 225)	Mental health	Monthly	.79
	Strengthening family relationships	Monthly	.79
	Healthy couples' relationships	Monthly	.75
	Emergency preparedness	Monthly	.73
	Food storage	Monthly	.71

Age Group	Topic	ISB	IL
	Financial planning	Monthly	.71
	Nutrition education	Monthly	.68
	Food safety	Monthly	.67
	Financial literacy	Monthly	.66
	Healthy social media use in families	Monthly	.66
35–54 (n = 237)	Strengthening family relationships	Monthly	.80
	Mental health	Monthly	.75
	Emergency preparedness	Monthly	.74
	Healthy couples’ relationships	Monthly	.74
	Food storage	Monthly	.71
	Home gardening	Monthly	.69
	Food safety	Yearly	.68
	Nutrition education	Monthly	.67
	Financial planning	Monthly	.67
	Food preservation (e.g., canning, freeze-drying)	Yearly	.65
>54 (n = 203)	Emergency preparedness	Yearly	.68
	Food storage	Yearly	.63
	Strengthening family relationships	Yearly	.62
	Home gardening	Yearly	.62
	Food safety	Yearly	.62
	Home water conservation	Yearly	.62
	Nutrition education	Monthly	.57
	Water-efficient landscapes	Yearly	.55
	Mental health	Yearly	.53
	Healthy couples’ relationships	Yearly	.51

Interests in Topic Areas by Age and Residence

Table 4 shows the top 10 interests based on a crosstabulation between age and type of residence. Rural and suburban residents between the ages of 18–34 and 35–54 were most interested in strengthening family relationships, while rural and suburban residents 55 years or older were most interested in emergency preparedness. Urban residents between the ages of 18–34 and 35–54 were most interested in mental health, while urban residents older than 54 years were most interested in emergency preparedness.

Table 4. Top Interest by Age Group and Residence Type

Top 10 Items (Overall)	Rural (n = 118)			Suburban (n = 459)			Urban (n = 80)		
	18–34	35–54	>54	18–34	35–54	>54	18–34	35–54	>54
Strengthening family relationships	.84	.85	.60	.79	.80	.64	.81	.75	.57
Emergency preparedness	.79	.74	.70	.69	.74	.68	.80	.75	.62

Top 10 Items (Overall)	Rural (n = 118)			Suburban (n = 459)			Urban (n = 80)		
	18-34	35-54	>54	18-34	35-54	>54	18-34	35-54	>54
Mental health	.77	.71	.53	.78	.74	.53	.85	.86	.54
Food storage	.76	.75	.65	.69	.73	.63	.78	.58	.59
Healthy couples' relationship	.78	.83	.41	.75	.72	.55	.77	.68	.47
Food safety	.65	.74	.63	.65	.67	.63	.82	.65	.57
Home gardening	.72	.73	.60	.63	.70	.63	.59	.59	.56
Nutrition education	.69	.69	.51	.66	.69	.59	.77	.59	.57
Financial planning	.72	.74	.40	.70	.67	.55	.79	.61	.42
Food preservation	.72	.73	.50	.61	.66	.51	.74	.58	.44
<i>n</i>	36	41	41	159	159	141	27	33	20

Note. Bold text indicates the topic of most interest.

Participation Preferences

Table 5 shows residents' participation preferences based on age group and residence. Overall, residents preferred online-only participation or a mix between online and face-to-face programs, with a greater online component. Most rural and suburban residents of all age groups preferred to participate in online courses or workshops only. Urban residents between the ages of 18-34 preferred a hybrid between online and face-to-face learning, with a greater face-to-face component. Older residents (>54 years) were less likely to participate in any educational course.

Table 5. Program Participation Preference by Age and Residence

Participation Preference	Rural (%)			Suburban (%)			Urban (%)		
	18-34	35-54	>54	18-34	35-54	>54	18-34	35-54	>54
Online only	43	39	45	44	43	49	25	30	52
A mix between online and face-to-face, but mostly online	30	39	18	26	35	26	25	42	10
A mix between online and face-to-face, but mostly face-to-face	14	10	13	15	11	14	36	12	10
Face-to-face only	8	10	5	11	6	3	11	6	5
I would not participate in any educational course	5	2	20	4	5	8	4	9	24

With respect to existing Extension clientele (n = 71), 37% stated they preferred online-only participation, 38% preferred a mix between online and face-to-face with a greater online component, 21% preferred a mix with a greater face-to-face component, 3% preferred face-to-face only, and only 1% indicated they would not participate in any educational course.

Conclusions and Implications

Results showed the topics of highest interest to Utah residents were strengthening family relationships, emergency preparedness, mental health, food storage, and healthy couples' relationships. Residents' information-seeking behaviors were somewhat consistent with their interests; residents searched most frequently for information on mental health, strengthening family relationships, nutrition education, and healthy couples' relationships. While findings showed differences in program interests by sociodemographic characteristics, topics such as family relationships, emergency preparedness, and mental health had reliable levels of interest across all audiences. Further, results demonstrated a preference for online programming.

This study can be replicated in other Extension systems, and Extension professionals can use the results to plan appealing programs based on residents' preferences. For example, rural, suburban, and urban residents had a high interest in emergency preparedness, frequently sought information on this topic, and preferred online courses. With this information, Extension professionals can be creative with the use of online tools to create asynchronous short videos or interactive content on emergency preparedness tips. These can be updated (as needed) and made available year-round. Additionally, synchronous short sessions can be held on Zoom for question-and-answer and discussion forums. A designated program website can also include all sources of information related to emergency preparedness, with emergency hotlines in each area.

As another example, residents were highly interested and sought frequent information on strengthening family relationships. Extension professionals can plan a mix between online and face-to-face content since this is a preferred way of communication. Online sessions can include self-paced short video clips with tips to strengthen family relationships. These can be posted on the program's website and social media. Additionally, face-to-face sessions can include more in-depth discussions on best practices for dealing with disagreements and conflict.

Given the broad range of programming at Utah State University Extension, there is a need for faculty to make deliberate efforts to identify target segments, attract new audiences, and retain existing audiences. This necessitates understanding community needs and their relationship to residents' preferences and interests. Extension organizations are encouraged to critically analyze residents' needs, interests, information-seeking behaviors, and participation preferences to tailor relevant programs to recruit and retain participants, given changing societal trends. It must also be noted that the results of this study are subject to two major limitations: a convenience sampling strategy was used to gather data, which limits generalizability, and respondents' interests were not examined by income, race, and ethnicity. Future studies are strongly encouraged to consider the preferences, interests, and, most importantly, needs of underserved audiences to enable programmatic recommendations for underserved and non-traditional audiences.

Extension should consider barriers to program participation for different audiences. For example, some segments may lack transportation to attend face-to-face activities, existing work schedules can affect participation preferences, and access to broadband internet can affect online participation. Therefore, Extension is encouraged to assess and address barriers to inform successful participant recruitment strategies. In addition, with a noted preference for online programming, there is a need for future research on maintaining participant engagement in virtual environments. Extension can create professional development opportunities for agents to facilitate effective interactions and retention of audiences in virtual environments. Understanding what topics clientele are interested in, how often they seek information on that topic, how they prefer to consume information, and barriers to engagement in different settings are important to creating appealing, relevant, and engaging programs that solidify Extension's role as a trusted source of information.

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Barriers to Policy, Systems, and Environment Work: Using Community Engagement as a Tool in SNAP-Ed's Multi-Level Comprehensive Programming

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Implementing policy, system, and environmental (PSE) changes has several well-known challenges that have been documented in Supplemental Nutrition Assistance Program Education's (SNAP-Ed) comprehensive approach to obesity prevention and reduction. The purpose of the current study was to explore the use of community engagement (CE) as a strategy to address the common challenges experienced in implementing a multi-component community-based program. Phone interviews (N = 7) were conducted with SNAP-Ed educators in Utah using semi-structured interviews. Emergent themes were identified as transcripts were coded independently by two researchers until a high level of agreement was achieved. Four themes emerged from the interviews: barriers to PSE progress, educator CE, the perceived value of using a CE approach to PSE work, and future supports that could increase educators' ability to use CE when doing PSE work. While effective at eliciting long-term improvements among priority populations, there are several well-documented challenges associated with developing, implementing, and sustaining PSE projects. CE, defined as the process of involving members of a community in the planning, design, implementation, and improvement of a community-based initiative, may be an effective strategy to overcome many of these challenges and lead to long-term PSE changes and improved health outcomes.

Keywords: community engagement; policy, system, and environment change; community nutrition; multi-level interventions; SNAP-Ed

Background

Many public health challenges, including obesity and chronic disease prevention, are complex and require a multi-component, comprehensive approach to address them. Public health programming is often informed by the social-ecological model (SEM; Langille & Rodgers, 2010; O'Neal & Ewing, 2017). The SEM describes how all sectors of society combine to influence an individual's health choices (Golden & Earp, 2012; United States Department of Agriculture

[USDA], 2019). McLeroy and colleagues (1988) have defined five levels of influence making up the SEM, including interpersonal factors, intrapersonal processes and primary groups, organizational factors, community factors, and public policy (Golden & Earp, 2012). Comprehensive programming to address chronic diseases and other health outcomes targets multiple SEM levels of influence to impact individual outcomes. Community engagement is a tool that can be used by public health professionals to build effective, sustainable, comprehensive programs (O'Mara-Eves et al., 2015).

The Supplemental Nutrition Assistance Program Education (SNAP-Ed) is a federally funded community nutrition program that seeks to improve the dietary and physical activity behaviors of low-income households (USDA, 2019). Low-income and food-insecure populations are more susceptible to chronic diseases due to a combination of influences, including limited access to healthy and affordable foods (Naja-Riese et al., 2019). SNAP-Ed utilizes evidence-based, multi-level comprehensive programming to address some of these factors (USDA, 2019). Multi-level comprehensive programming refers to programs that concurrently target more than one sector of influence on a given behavior. Sectors of influence that may be targeted include, but are not limited to, individual behaviors, policy changes, marketing strategies, and improvements to various environments. For example, SNAP-Ed programs targeting fruit intake may offer workshops on how to increase daily fruit consumption, partner with local agencies to promote produce incentive programs to improve the affordability of fruit in specific communities, and fund a social marketing campaign about the benefits of fruit through billboards, bus ads, and public service announcements. While initial evidence supports the effectiveness of multi-level, comprehensive programs, there are documented challenges associated with this type of programming. This paper explores the use of community engagement as a strategy to address common challenges to implementing a multi-component community-based program.

Comprehensive Program Description & Review of the Literature

One component of multi-level comprehensive programming that has been a recent focus of public health programs, including SNAP-Ed, is intervening at the organizational and community levels to address contributors to lifelong health behaviors (Haynes-Maslow et al., 2018; USDA, 2019). In SNAP-Ed, this has been coined policy, systems, and environments (PSE) work. Changes to PSEs are often complemented by direct education that improves individual-level characteristics like knowledge and skills about healthy living and other public health approaches, including social marketing (USDA, 2019). Multi-level comprehensive programming in the public health sector can elicit long-term behavioral change in individuals (Golden & Earp, 2012).

While PSE work can be part of an effective strategy to create healthier communities, there are many documented barriers, including obtaining community support, difficulty identifying partners, and time limitations (Franck, 2016; Haynes-Maslow et al., 2018). Community engagement (CE), defined as the process of involving members of a community in the planning,

design, implementation, and improvement of a community-based initiative, may be a valuable strategy to help overcome these barriers and support multi-level programming (Swainston & Summerbell, 2008). While there is a shared definition of CE, there are many different models of how to conduct CE. CE practices can vary in their theoretical foundation, structure, scale, duration, and amount and type of stakeholders involved (O'Mara-Eves et al., 2015). Specific models of CE include the socio-ecological model, Active Community Engagement Continuum, Diffusion of Innovations, and community-based participatory research, among others (Cyril et al., 2015). Despite the various models of CE, there are commonalities among CE practices. CE allows public health practitioners to understand the needs and interests of the community from multiple perspectives. It can help build the community's trust while also giving community members and organizations the capacity to deliver and sustain meaningful programs (McCloskey et al., 2011). Successful CE often involves developing strong partnerships or coalitions that include members from multiple sectors of influence. Partnerships allow for collaboration through shared decision-making, leveraged resources, increased influence, and diverse expertise. Collaborative efforts may be more effective at mobilizing change at the community level than individual organizations working alone (Butel et al., 2018).

Studies have shown that public health interventions that have incorporated CE have positive outcomes on health behaviors, specifically among disadvantaged groups (O'Mara-Eves et al., 2015). A meta-analysis of CE interventions showed that CE improved health behaviors, including health outcomes, individual self-efficacy, and perceived social support (O'Mara et al., 2015). A study aimed at improving health equity through prevention, education, training, and research found that engaging the community resulted in a trusted, culturally relevant program widely accepted in the community (Antoine-LaVigne et al., 2018). In addition to improving the outcomes and acceptability of the project, CE is also considered a cost-effective strategy that may enhance the sustainability of public health initiatives (Antoine-LaVigne et al., 2018).

Evidence suggests that CE might address many of the barriers encountered in PSE work. However, to date, there is limited research on CE's role in PSE work, specifically within SNAP-Ed, and the resources needed to help SNAP-Ed educators and others working in the public health sector utilize this tool in their work.

Study Purpose

This project utilized a qualitative method to examine the following research questions:

1. What were the barriers described by SNAP-Ed educators to conducting PSE work? And how did CE emerge as an approach as part of their multi-component programming?
2. How did SNAP-Ed educators describe their preferred future supports related to CE as an approach to accomplishing PSE work?

Method

Phone interviews ($N = 7$) were conducted with SNAP-Ed educators in Utah using a semi-structured interview guide in April 2020. Thirty-nine educators were eligible for the study. A purposive sampling strategy was used to target educators from a combination of rural and urban counties with a range of experience in delivering programming. The data collection for this project was determined to be non-human subjects research by the Utah State University Institutional Review Board (Protocol # 11175).

Data Collection Procedures

To recruit participants, a state-level coordinator for SNAP-Ed compiled a list of potential participants identified because of their level of experience doing PSE work and geographic location. Potential participants were recruited through an email invitation. One interviewer was used to maintain consistency. Contact information of interested participants was shared with the trained interviewer, who was not employed by the SNAP-Ed program. The interviewer contacted interested participants via email to schedule interviews. The interview began with a review of the elements of consent, followed by the questions outlined in the interview guide. Interviews were audio-recorded, uploaded to a password-protected folder, and later transcribed. The research team determined that saturation had been achieved as no new information emerged suggesting additional interviews were warranted.

Interview Protocol

The interview guide contained 15 open-ended questions with probes. For example, questions about SNAP-Ed educators' roles included describing their job to someone else and the most important thing they do in their job. Participants were also asked questions about barriers, facilitators, and resources that could be used to improve their PSE and community engagement efforts. Probes were used to promote additional discussion related to the core questions. The main interview questions, organized by PSE and CE topics, can be found in Table 1.

Table 1. Main Interview Questions Asked About PSE and CE

Topic Area	Question
PSE	<ol style="list-style-type: none"> 1. What do you think your role is in PSE changes? Follow up: Do you have a clear understanding of what counts as PSE? 2. What are or would be the benefits of having a strong PSE program in your county? 3. What challenges or barriers to work on PSE projects consistently throughout the year do you face? 4. What resources or tools could state leadership and/or supervisors provide to nutrition educators to be able to work more effectively on PSE projects every month?
CE	<ol style="list-style-type: none"> 1. How comfortable are you engaging in coalitions, workgroups, and leadership groups related to PSE efforts? 2. What types of skills and supports could the SNAP-Ed state office provide you with to improve your community engagement?

Data Analysis

We used a general inductive data analysis approach (Thomas, 2006). The interview guide and research questions informed the development of the codebook. Two members of the research team coded the same three transcripts independently to develop interrater reliability and the codebook. Next, the coded transcripts were compared for differences in coding. The coders achieved a high level of agreement in coding (approximately 90%). The codebook included agreed-upon codes, as well as the definition and an example quote for each code. The final codebook was defined, and the remaining transcripts were divided evenly between the two coders. The coded data were then organized into data tables, organized by code, and were synthesized by two members of the research team by examining consistent descriptions within codes and outlier descriptions by participants.

Results

Interviews with SNAP-Ed educators ($N = 7$) were conducted to understand the facilitators and barriers to doing PSE work as part of a multi-component program and the potential role of CE in PSE work. All recruited participants agreed to participate in the study. The participants were all female SNAP-Ed educators who worked through Utah State University Extension County offices. Fifty-seven percent of participants worked in rural counties, and 43% worked in urban counties. The time employed with SNAP-Ed ranged from less than one year to over 19 years, with an average of 4.5 years.

Participants defined their primary role as providing nutrition education to low-income individuals and families to improve their knowledge and skills to lead healthy lives. Participants also described what they believed their role in PSE work was as part of a multi-component program. Overall, participants defined their primary role in PSE as supporting organizations in making changes to make the healthy choice easier for community members. For example, one participant said, “Our role is just to help organizations know how to make the [PSE] changes themselves ... and make it so that the healthier choice is the easier choice for the people coming in.” Participants described building partnerships with pantries to be able to create a sustained effort that was not reliant on the SNAP-Ed educators. In a few cases, participants described seeking opportunities to initiate PSE work.

From the interviews, four themes emerged that were directly informed by the research questions and interview guide. The themes described below included barriers to progress, educator CE, the perceived value of using a CE approach to PSE work, and future supports that could increase educators' ability to use CE when doing PSE work. It is important to note that while participants were asked explicitly about PSE work, CE often emerged in their responses as a tool they used (e.g., engaging with other organizations) or an area for growth.

Barriers to Progress: The Intersection of PSE Work and CE

Participants expressed some challenges when implementing PSE work and using CE as part of a multi-component program. The barriers described fell under three main areas: (1) the challenging nature of PSE work, (2) difficulty with collaborations and partnerships, and (3) special circumstances because of rurality.

The first barrier mentioned by participants was the inherent challenges in the structure of PSE and CE work. Participants noted that PSE could be overwhelming, projects can be challenging to maintain, and it can be complicated to start a PSE project when others already exist. For example, one participant explained,

I think for people who really like or need structure then PSE can be a little more difficult because it's not like a class you teach ... with PSE work, it's a little more scattered and sometimes kind of fly by the seat of your pants.

Participants also talked about how existing programming made it difficult to initiate new PSE work.

The second barrier to PSE work was establishing and maintaining relationships in the form of collaborations and partnerships, which is a type of CE work. Specifically, participants emphasized concerns about PSE interventions that appeared to question the historical work of a potential partner, especially with schools. One participant explained,

When we were asked to go into the school cafeteria and talk to them about how to rearrange [things] ... to make it more accessible to the kids that want fruits and vegetables ... that was a hard one because I had known the lunch ladies for a long time and ... that's really hard because they're kind of 'this is my job and you're telling me I'm not doing it right?'

Participants also described their fear of being rejected, resulting in discomfort in seeking out partnerships. Finally, participants frequently talked about finding partners that were either too busy or already had their projects in place.

The third barrier described by participants was the impact that rurality had on their ability to conduct PSE work. Rurality was often depicted as having either too few or too many potential collaborators. In urban environments, participants talked about many organizations that do similar work, making it a challenge to know where to start. One person described this by saying, "Other counties do so great because they live in smaller towns, so they can easily do more things. It's just hard because there's just so many options and ... they already have an organization [they work with]." Conversely, participants from rural areas described the limited resources, which resulted in fewer opportunities to work on PSE. One participant said, "Being in

a rural county is sometimes a challenge. Not having as many programs to be able to [work with] ... I'm constantly on the lookout trying to say, 'how could this work?'"

Educator CE Approach to PSE Work

Participants explained their approach to PSE and the use of CE in doing PSE work. Participants were comfortable overall taking an active role in workgroups, leadership groups, and coalitions. Within these settings, participants talked about their incorporation of PSE by injecting it into existing conversations. Specifically, one participant said they "talk about the program all the time" as a way to "reach out and make connections." Another participant explained that their approach is to discuss PSE ideas at existing locations where other programming components are already taking place. Participants also talked about how once you have built a reputation in the community, PSE work is easier to do. One participant said,

I've been doing this job for 3 or 4 years. ... But now that my face is out in the community, I'll have businesses and people approach me wanting to do PSE things. ... It's awesome to have people initiate things, and it's not always me having to go out of my way.

Perceived Value of PSE Using CE

When talking about their work, participants had differing ideas when asked to describe the value of doing PSE work using a CE approach. Their responses fell into two areas: benefits to the SNAP-Ed program and benefits to the community. PSE work was discussed as valuable to the multi-component program because it helped program educators understand the needs of their community, make additional community connections to bolster other components of the program (e.g., direct education), and increase program reach. For example, one participant said, "I think it makes the program more successful ... because I obviously can't be in multiple places at once, and so having ... these PSE efforts ... it's prolonging my efforts after I leave the scene." On the other hand, participants also talked about the value PSE work has on the community. Specifically, that PSE work could reach more people than direct education and illustrates that the healthy choice is an easy one.

Educator Identified Supports to Improve PSE Work Using CE

Participants described specific tools and resources that could improve their ability to do PSE work using a CE approach. Specifically, participants discussed how the state SNAP-Ed office could utilize their existing social capital to connect them to local organizations to start forming collaborative relationships. One participant said, "Sometimes [state SNAP-Ed] has more connections than [local county Extension offices] do, so if they could contact a lot of people at once to find out who is interested in a certain program and then get us a list" that would be a

helpful approach. The state SNAP-Ed office was also identified as a potential resource to provide additional on-the-ground support:

I think a more hands-on approach would be nice. If [they] were to come to my area and say, 'OK, well, let's go around your town, and we can kind of see what is available, and I can help you' and say, 'we could do this.'

In addition to providing direct local support from program leaders, some participants talked about how they could use more program educators to do PSE work and engage with community organizations. Participants felt they currently did not have the capacity to do all components well of the comprehensive program. Finally, participants described several concrete skills they could benefit from gaining through professional development opportunities, including training that helped them pitch their programming, connect more effectively with organizations, and help with goal setting related to PSE work.

Discussion

Results from this study found multiple challenges to conducting PSE work and the intersection of using CE as an approach to PSE work among SNAP-Ed educators in Utah. Barriers described included difficulty identifying and maintaining local partners, initiating projects, time, and sustaining PSE efforts. While these barriers are consistent with the findings of previous research (Franck, 2016 & Haynes-Maslow et al., 2018), they expand our understanding of specific barriers to PSE work and how a CE approach can act as a solution to specific barriers. Participants spoke about the importance of forming and maintaining collaborative relationships to progress PSE work but recognized the great difficulty in doing so. To address this barrier, participants suggested leveraging the state SNAP-Ed office's social capital, defined as the ability to use social structure to facilitate action within a network (Coleman, 1988). Using this social capital would allow the state-level agency to help SNAP-Ed program educators identify local resources and develop relationships with their local organizations. However, reliance on the larger organization's social capital alone has resulted in non-persisting relationships (Edwards & McCarthy, 2004). Public health programs using a multi-component program that uses their organization's social capital when appropriate may better progress work in the community; however, it is important for local educators to focus on building relationships and their own social capital.

Identifying PSE work that was valued by other organizations and did not overlap with active projects was another barrier found in this study. A key component of CE that could help overcome this barrier is working with various community members in the early identification of the most pertinent issues to address (O'Mara-Eves et al., 2015). Interestingly, participant responses about working with others to conduct PSE work excluded individual community members and focused only on key stakeholders that held power within an organization. CE literature has shown that community members bring invaluable lived experience and expertise to

help identify the community's most pressing needs (Antoine-LaVigne et al., 2018) that could drive appropriate PSE interventions. Furthermore, residents can act as gatekeepers and resource brokers in helping SNAP-Ed educators identify potential partners with similar goals and missions. Such an approach would also address duplicative efforts, which is a critical consideration in rural communities where organizations may compete for resources (Haynes-Maslow et al., 2018).

Participants in this study also described time and competing job responsibilities as a barrier to PSE work. To overcome this, participants in the current study suggested increasing the capacity of the local SNAP-Ed educators by hiring additional workers. However, due to limited budgets, adding workers may not be a feasible solution. Instead, SNAP-Ed educators could consider how to engage the community to strengthen their work more effectively. For example, CE often results in projects better supported by the community, including partnering agencies (Antoine-LaVigne et al., 2018). The state SNAP-Ed program could provide educators with trainings to strengthen their understanding of CE and build skills to improve their ability to engage in CE (e.g., elevator pitches, strengthen collaborative networks) to support educators in their CE approach. Once a secure network of collaboration is achieved, the capacity to spread the responsibilities of the PSE work amongst more individuals and organizations can occur (Franck, 2016; Haynes-Maslow et al., 2018). It will ultimately reduce the amount of time required by any single individual or entity. Reducing the amount of time SNAP-Ed educators need to maintain the PSE work will free time to focus on other required program areas. In addition to allowing SNAP-Ed educators to fulfill the requirements of their position, it will also increase the likelihood that SNAP-Ed will influence multiple levels of SEM.

Sustaining program efforts and maintaining collaborative projects were final barriers to PSE work found in this and previous studies (Franck, 2016). PSE can be time and cost-intensive and is only effective in helping behavior change if implemented long-term. Research has shown that CE, as part of public health interventions, is associated with long-term benefits to the community (Antoine-LaVigne et al., 2018). However, as PSE work progresses towards achieving programmatic goals, obstacles such as changes in employment/leadership or funding may impact the trajectory of work. While projects supported by multiple sectors are less likely to be adversely affected by these obstacles (O'Mara-Eves et al., 2015), the suggestion by participants to have the state-level office provide on-ground support to overcome such barriers is a possible solution. It may increase the likelihood that a project can be maintained over more extended periods of time, promoting long-term positive community impacts.

While the findings of this study contribute to the literature and have implications for practice, there are several limitations to consider. The first limitation is the small sample size ($N = 7$). While the research team felt the responses reached saturation, a larger sample size would have allowed for a potentially richer understanding of additional resources to address barriers. In addition to reaching saturation, the study met the five criteria to meet "information power,"

which also suggests an adequate sample size (Malterud et al., 2016). Having diverse representation was valued in selecting participants to ensure both urban and rural experiences were represented. While participants did not come from a homogeneous geographic location, shared experiences are often crucial for qualitative methods (Moser & Korstjens, 2018). Finally, response bias is a concern in qualitative research as participants may seek to provide answers that please the interviewer or, in this case, the state-level organization that would see the de-identified results. A trained interviewer with no affiliation to the state-level organization was used to conduct all interviews to minimize response bias.

Implications for Practice

While using community engagement may be a logical strategy to help SNAP-Ed and other public health practitioners overcome common PSE barriers, training is essential. Previous to this study, SNAP-Ed educators received minimal training on how to work with community partners on SNAP-Ed projects. It was limited to professional communication and recruitment strategies. They had not received any training specifically for community engagement and how it can support PSE programming and improve community buy-in and sustainability.

This study found that SNAP-Ed educators felt comfortable taking active roles in local workgroups and identified the need for additional support and resources to engage communities effectively. Providing professional development opportunities for program educators would likely improve confidence and skills to use throughout the entire community engagement and PSE process. Meaningful skills to focus on in training may include conducting community needs assessments, recruiting key community members, community-driven goal setting, and group facilitation, all of which can be grounded in the importance of engaging community members and key stakeholders throughout their work. By emphasizing community member and stakeholder involvement, this can ensure that PSE work meets local needs, is driven by community members, and aligns with the cultural needs of the community. In addition, training that includes staff from local organizations with similar missions may be beneficial in building individual skills and creating networking opportunities. Networking could also help strengthen the reputation of the SNAP-Ed educators and program, opening new doors for PSE collaboration. Each SNAP-Ed implementing agency may have a different capacity for providing such training. It can vary from using the train-the-trainer model with the state-level staff training supervisors or leading SNAP-Ed educators at a regional level who then would train county staff to provide in-person training to all educators locally.

Further research should be conducted to analyze the effectiveness of community engagement in helping identify, develop, and implement PSE work in the public health sector. In addition to assessing the usefulness of the approach in the early stages of community-driven PSE projects, additional research on the long-term sustainability of projects and their impact on individual-level behaviors would be essential. If found to be an effective method to overcome commonly

reported PSE barriers, community engagement may become an integral part of comprehensive public health programs, such as SNAP-Ed, working at multiple levels of SEM.

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