Journal of Human Sciences and Extension

3-3-2020

Full Issue, Volume 8, Number 1

Journal of Human Sciences and Extension

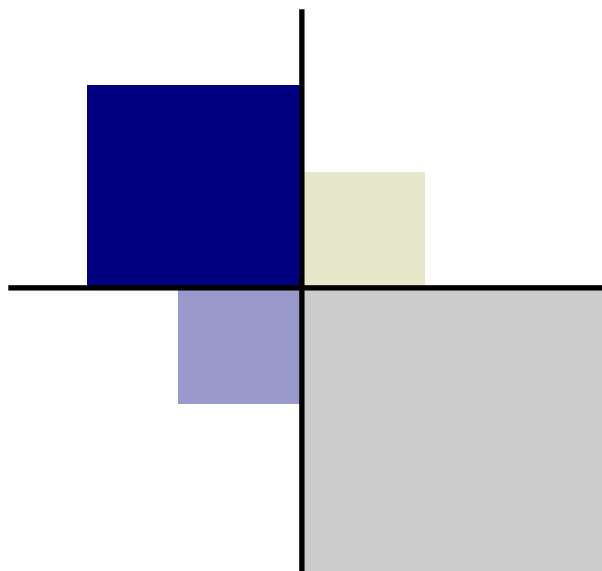Follow this and additional works at: https://scholarsjunction.msstate.edu/jhse

Journal of Human Sciences and Extension

Volume 8, Number 1

February 2020

ISSN 2325-5226

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The Sharpening Stone: A Phenomenological Study of the Impact of a 4-H State-Level Leadership Role on Youth Leadership and Life Skills Development

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4-H is the largest youth organization in the US, with six million participants. 4-H contributes to developing positive leadership and life skills (LLS). The purpose of the research reported here was to discover the essence of LLS development of 4-H youth while serving as an officer for the Georgia State Board of Directors. The population was all 4-H state-level leaders who served from 2016 to 2018 (N = 18, n = 12). A qualitative phenomenological research design was used to describe what and how participants experienced being in a state-level leadership role, resulting in the essence of participants' lived experiences in the context of LLS development. Face-to-face interviews led to textural and structural descriptions of what participants experienced, resulting in the essence of the experience as a sharpening stone. Participants gained LLS in the areas of serving others, building confidence, open-mindedness, self-awareness, motivation, communication skills (speaking, listening, writing), personal agency, transfer of learning, and solidified college and career goals. Peer-influence was the most important factor in shaping participants' choices to belong to 4-H and strive for leadership roles. A peer affiliated with 4-H and serving as a leader deeply inspired youth to run for a state-level leadership role. Adult and peer influence served as the "honing process" to cultivate and sharpen LLS.

Keywords: positive youth development, leadership skill, life skill, 4-H state-level leadership role

Introduction

4-H is the largest youth development organization in the US, with six million participants in nearly every county of the United States (National 4-H Council, 2016). 4-H Council initiated a *Grow True Leaders Campaign* to "empower young people with the life skills to thrive in life today and career tomorrow" (National 4-H Council, 2016, p. 5). A primary goal of 4-H activities is positive youth development (PYD) which refers to "an intentional, prosocial approach that engages youth within their communities, schools, organizations, peer groups, and families in a manner that is productive and constructive" (Positive youth development, n.d., para 1). Leadership and life skills (LLS) are a subset of PYD. Miller (1976) defined LLS as decision-

making, building positive relationships, learning, management, understanding self, group processes, and communication skills.

The National Research Council (2012) advised youth to participate in 21st century skill development (communication, critical thinking, collaboration, and self-management) needed for adult roles. 4-H provides leadership programming to advance participants' knowledge, skills, and attitudes toward mature and responsible citizenship (Boyd, Herring, & Briers, 1992). One such program is the *Georgia State Board of Directors* leadership program, which recruits nine youth per year to serve in a state-level leadership role. Participants represent 4-H at state-level events as ambassadors, role models, and recruiters at major functions for one year.

Youth leadership programs have been evaluated to determine their effectiveness and impact on PYD and LLS using a variety of methods (Arnold, 2018; Lerner & Lerner, 2013; Sage, Vandagriff, & Schmidt, 2018; Tassin, Higgins, & Kotrlik, 2010; Weybright et al., 2016), but few have reported on impacts from participants' unique perspectives as a lived experience using phenomenological methods. Therefore, the need for this study was to document the impact of serving as a state-level leader on participants' knowledge, skills, and attitudes toward responsible citizenship using a phenomenological research design.

Review of Literature

Positive youth development (PYD) has been a goal of 4-H from inception (Arnold, 2018; Boyd et al., 1992; Bruce, Boyd, & Dooley, 2004; Lerner & Lerner, 2013; Moran, 2015; Weybright et al., 2016). Leadership and life skills (LLS) are a subset of PYD and were defined as *cognitive skills* for analyzing and using information including decision making, critical thinking, and planning; *personal skills* for developing personal agency and managing oneself; and *inter-personal skills* for communicating and interacting effectively with others including building positive relationships, group processes, and collaboration (Miller, 1976; National Research Council, 2012).

Within the 4-H context, experts refer to PYD as a developmental process that underpins youth programming philosophy with the goal of fostering healthy psychosocial development of youth (Lerner & Lerner, 2013; Weybright et al., 2016). Important approaches to enhancing LLS and PYD are known as the five Cs of competence, confidence, connection, character, and caring for others, together leading to the outcome of developing strong contributions to self and others. Lerner et al. (2005) implied that youth who embodied the five Cs would be at lower risk for personal, social, and behavioral problems throughout their lives.

Many studies have evaluated the impact of youth leadership programs on participants' LLS development. In general, the longer individuals served in 4-H leadership roles, the stronger their LLS skills became. The type of role held was also a significant factor in LLS development gains, for example, president, vice-president, or secretary roles resulted in measurable changes,

whereas no changes were observed for other officer roles (Tassin et al., 2010). Length of time serving in officer roles was also found to have a positive relationship with LLS (Boyd et al., 1992; Fitzpatrick, Gagne, Jones, Lobley, & Phelps, 2005; Fox, Shroeder, & Lodl, 2003; Harris, Stripling, Stephens, & Loveday, 2016; Tassin et al., 2010; Ward, 1996). In these studies, longer-serving 4-H alumni were more accepting of people who were different, engaged in community service, made healthy choices, and increased their job skills by improving their self-esteem, ability to work in teams, assume responsibility, plan and organize events, keep records, and set goals. 4-H enhanced members' sense of responsibility, ability to handle competition, and ability to meet new people.

Moran (2015) examined a 4-H state-level leadership program and found similar results in that the longer participants were involved with 4-H activities, the greater their LLS development. Bruce et al. (2004) studied former state 4-H council participants for LLS gain. Participants demonstrated gains in self-growth, self-discovery, and relationship building.

Weybright et al. (2016) found teens experienced beneficial outcomes when working in partnership with adults as team teachers to advocate for health. Teens experienced mastery, independence, and generosity after participating in an adult-youth mentoring program. Youth-adult partnerships were found to be very effective in supporting development of the five C's among participants (Lerner et al., 2005).

Conceptual Framework

Hastings, Barrett, Barbuto, and Bell (2011) developed a paradigm model of how youth leaders develop through community engagement to explain how youth developed leadership attributes within the context of community engagement. Youth bring social resources, such as connections and previous experiences, and are influenced by an adult champion with sufficient resources to support development activities. According to the paradigm model (Hastings et al., 2011, p. 22), youth, working with a supportive adult, identify a purpose or function, contribute their views, and generate ideas to solve community problems, for example, serving on a board. This type of engagement within a community project creates social capital that is converted into individual leadership skills such as greater ownership, responsibility, empowerment, confidence, and self-awareness. These skills and attributes contribute to community development by building upon the group's leadership potential, perpetuating new connections, shifting attitudes and assumptions for positive change, including viewing youth as positive influencers in community development.

Within Hastings et al. paradigm model, youth engagement was predicated by a significant adult who invited youth to participate in a community project. The significant adult was someone who valued youth as equal contributors and expressed the notion that all must get involved to help the community improve. According to the paradigm model, intervening conditions for successful youth engagement were an adult champion who facilitated meetings and had an inclusive stance

toward youth involvement, possessed resources to execute projects, and created a supportive group environment for expressing ideas in meetings. Because of these conditions, youth engaged in community development projects that resulted in positive psychosocial gains. The community gained by capitalizing on youth leadership potential and developing new connections with a previously underutilized stakeholder group. Adults gained positive perceptions of youth as valuable and contributing participants of the community.

This theory helps to explain how participants in this study developed leadership skills in the context of community engagement. Youth successfully exerted their influence within the community through participating in real-world activities that lead to transfer of learning (Gagné & Briggs, 1979). Adult mentorship, support, and structure are also critical factors for building positive youth outcomes (Larson, 2006; Weybright et al., 2016).

Purpose and Methods

The purpose of the study was to discover the essence of how youth experienced leadership and life skill development while serving as a 4-H state-level leader using a type of qualitative research design known as phenomenology (van Manen, 2014). The population for the study was all participants in the *Georgia State Board of Directors* leadership program from 2016 to 2018 ($N = 18$). Twelve participants completed the study ($n = 12$).

Phenomenology seeks to understand *what* and *how* participants experience a *central phenomenon* by reflecting on essential themes underpinning their lived experiences (van Manen, 2014). The central phenomenon was serving for one year as a youth leader at the state level. Data were collected through in-depth, one-hour, face-to-face interviews with participants using a minimally structured protocol to allow participants to report their experiences during free-flowing conversation. The protocol consisted of seven main questions and 39 subquestions. Sample questions from the protocol were "Describe your experiences as a 4-H member (year joined, offices held, etc.);" "Describe your experiences as a 4-H state-level leader;" "Describe the leadership training you received as a part of the *Georgia State Board of Directors* leadership program;" and "What were some of the highlights of the program?"

The researcher interpreted the meaning of their lived experiences by reducing the interview transcripts into significant statements (sentences from the original transcripts that hold meaning for understanding the research questions) and combining them into substantial themes. A textural description of *what* participants experienced is followed by a structural description of *how* participants experienced being a state-level leader, leading to the *essence* statement (van Manen, 2014). The essence statement is a concluding statement as to what and how participants experienced the phenomenon of interest, typically framed as a metaphor (van Manen, 2014). This study builds on the Hastings et al. (2011) paradigm model to further identify variables that lead to positive youth development.

Analysis consisted of the researcher reading through the transcripts and coding or highlighting each significant statement within the transcript. The researcher then clustered the 545 significant statements to generate themes to elucidate how participants experienced the phenomenon (horizonalization), concluding in the essence of the lived experience (van Manen, 2014). The themes were supported with participants' quotes to enrich the descriptions while explaining what and how they experienced the *Georgia State Board of Directors* leadership program.

Quality and validity were addressed using a progressive protocol of engaging participants in the research process throughout the study (conceptualizing research questions, negotiating methods, peer-debriefing, and member-checking findings) and negotiating reciprocity in reporting with the participants (Creswell & Poth, 2018; Tracy, 2010). An audit trail (Merriam & Tisdell, 2016) was created by keeping extensive notes of all research activities and copies of all documents generated during the research for future reference.

Tracy's (2010) criteria for quality were addressed in identifying a worthy topic for study, using "sufficient, abundant, appropriate, and complex" (p. 840) theoretical constructs, data, time in field, and analysis processes. Sincerity was achieved through self-reflexivity (considering my personal experiences and biases) about subjective values and transparency with methods and challenges encountered during the study. Credibility was achieved in offering readers thick descriptions and concrete details of participants' experiences and triangulation of results with adult 4-H leaders through member-checking and peer-debriefing sessions. After the interviews were transcribed, they were sent back to participants for verification of accuracy (i.e., member-checking). A first draft of the research report was shared with all participants during a face-to-face group meeting. Members discussed the report and made small edits to enhance clarity and accuracy (i.e., peer-debriefing). Adult 4-H leaders who read the final report confirmed resonance of findings with what they had experienced in working with the population.

Ethical considerations were addressed by obtaining university Institutional Review Board (IRB) approval and following protocols to ensure respect for persons, concern for welfare, and justice for participants. Procedural (IRB approval and strict adherence to the protection of human subjects), situational (being sensitive to context and content of the study), relational (maintaining appropriate boundaries with participants), and exiting (entering and exiting the study site with grace) ethics were practiced throughout the study (Tracy, 2010). Meaningful coherence, or aligning the study objectives with research methods to fit the stated goal, was achieved by aligning the review of literature, paradigm model, and findings to emerge the essence of the phenomenon as experienced by participants (Tracy, 2010).

Pseudonyms were assigned to participants to protect their privacy. A complete report was shared with youth participants and adult leaders for final member checking. No changes were made to the findings, indicating participants were satisfied with the researcher's representation of their

stories. Participants' quotes are provided in the findings to add further validity and richness, with corresponding pseudonyms before or after the quote.

Findings

Demographic Profile of Participants

Of the 18 youth eligible to participate in the study, nine of the 2017-2018 cohort and three of the 2016-2017 cohort sat for interviews ($n = 12$). Their ages were 16-19 years, averaging 17 years. Ten participants identified as White and two as Black. Five were female, and seven were male. Participants spent 4 to 13 years involved with 4-H, averaging 7 years. They held two to six offices with an average of three (i.e., Junior Board, Senior Board, County Board) and participated in one to seven, with an average of three, additional organizations prior to or concurrently with being a state-level 4-H leader, also serving in leadership roles. Ella, Tom, Max, Ike, and Ivy were homeschooled. Ben, Axl, Amy, Liv, Dan, Leo, and Sky attended public schools for the majority of their K-12 education.

Georgia State Board of Directors Training Curriculum

Participants were asked what they experienced in terms of receiving training to prepare for their role as a State Board of Directors member. Participants were elected to office during the annual State 4-H Council meeting by their peers after submitting a packet (candidate information, qualifications, campaign guidelines, state 4-H officer requirements, and required signatures), performing a skit, and giving a speech. The top five candidates who received the most votes were assigned to the roles of president, vice-president, and three state representatives, respectively. Each of the four districts also elected a candidate who was not in the top five to represent them.

After State 4-H Council, the nine newly elected state officers spent four days in training with adult leaders at the university and also attended training sessions quarterly. Adult leaders included the state 4-H leader, three Extension 4-H specialists, and a 4-H board volunteer. The approaches for training included:

- Interacting with faculty, campus and government leaders, and stakeholders;
- Conversations to identify personal strengths, communication styles, and leadership preferences;
- Networking with faculty, campus and government leaders, and stakeholders to better conceptualize 4-H's role across contextual settings;
- Goal setting through facilitated reflection and discussion; and
- Reflection and assimilation of the experiences, conversations, discussions, and networking opportunities to further identify personal leadership and communication styles, and team member role and contributions.

According to participants, SOT consisted of meeting with state agricultural leaders, such as the commissioner of agriculture, governor, university president, dean and associate deans of the agricultural college, among other college representatives and agricultural industry professionals. Miss America was on the meet-and-greet list for this cohort, "big people like that, people all across the nation" (Amy).

All participants attended an etiquette skills dinner session to learn how to interact with people of various ages, formal dining, and public speaking. "One of my favorite lessons is no matter where you come from in life, you can still hold yourself with pride and demonstrate etiquette" (Axl).

All participants completed personality inventories and learned how to use social media to be "respectful of our office" (Tom). The group developed a mission statement and identified shared goals for their term in office. "We made one unified statement and a list of characteristics we wanted to have as a group" (Tom).

All participants learned LLS, such as how to resolve conflict, how to adjust to their leadership style, how to understand their personal strengths and weaknesses, how to give a 30-second elevator speech, and how to develop their personal agency. They participated in many team-building exercises to "inch our way out of our comfort zone. The training has been very centralized on being well rounded. Acknowledging one size does not fit all. Adaptation is something we really work on" (Max). "We learned how to communicate with others, how to not shut down others' opinions because it's not the same as yours, be open-minded, and care about others' feelings - it's not just about you" (Amy).

All participants engaged in events as ambassadors, such as a food bank community service project, agribusiness council fall harvest celebration, 4-H fundraising gala, and a large farm equipment show. They met with previous state-level leaders and FFA state officers to build connections. While participants held different office titles, it is important to note that differentiation of duties was not implemented by adult leaders. All youth were treated equally, given the same training, and expected to perform as ambassadors in similar roles.

What and How Participants Experienced Being a State-Level Leader

All participants reflected on the meaning of their experience and how it helped them to develop LLS and transition into adulthood with a deeper understanding of serving others. Participants engaged in exclusive events because of their position and the duties entrusted to them. They earned the respect of their community, and in turn, were afforded numerous opportunities to interact with elite audiences and attend national and international conferences. The following themes emerged as most significant for understanding the phenomenon.

Competence – 4-H activities led to leadership roles. Ten of the 12 participants had been a 4-H member from fifth grade until the present (i.e., the time of the study). One joined 4-H in middle school and one in high school. All 12 served in several 4-H leadership positions prior to their current role. For example, Ella joined 4-H in the fourth grade. She served as an officer (reporter) in her local 4-H club in fifth grade. Axl assumed his first leadership position in seventh grade as a junior board member representing 39 counties.

All 12 participants started in 4-H by engaging in showing and/or judging competitions (livestock), and within their first two years had completed a District Project Achievement (DPA) activity. DPA consisted of selecting a project in an area of the youth's interest, researching the topic, writing a paper, and presenting their ideas to adult leaders. All 12 participants found early success with DPA, which encouraged further participation in 4-H. Not all participants won everything for which they applied; however, there was enough success to keep them motivated to participate and advance to leadership roles.

Caring – leadership means serving others. Buttressed by early success in 4-H competitions, DPA, and winning local club elections, all 12 participants reflected on their definitions of leadership as being one of service to others, exemplifying the servant-leadership philosophy (Chan & So, 2017; Greenleaf, 1970) or compassion (Lerner et al., 2005). They had matured in their understanding of leadership from their early officer roles, transitioned from being "in the spotlight" to being "behind the curtain" helping others to find success. Ben said leaders were people "who were willing to become a positive catalyst for the team or community, who are willing to help a person in need." Axl said, "leadership is not only about being the person in front; it is about helping your group to succeed. Leadership is being able to lead up front and from behind and being able to add positive morale to your group."

Servant leadership, compassion, and generosity (Weybright et al., 2016) emerged as important components of being a 4-H leader. All 12 participants discussed leading community service projects and being taught that giving back is a core value of 4-H. Their community service work extended into other organizations as they learned the skill of serving and saw how important community service was for building resilient communities. Max said, "leadership means service."

All 12 participants embodied giving back in various ways, from creating charitable programs (Cause for Paws, Axl; 4-H Can Hunger, canned food collection, Liv) to speaking to the State House of Representatives and Senate (Tom). "One of my most memorable opportunities was to address the state house and senate on behalf of 4-H to thank them for their funding and ask them to continue to do so. It was a real honor" (Tom).

Axl provided an exemplary case of giving back in his service activities. Working with his officer team on county council, he started a 4-H Movies in the Park program to provide safe entertainment for city youth. He applied for several grants to raise funds to supply equipment for

the movie venue, as well as was awarded grants for a community beautification project that involved fifth-grade students in making flowering baskets for a Main Street project. Axl started his grant writing efforts at age 10 and was 17 at the time of the interview. During this time, he secured $40,000 in grants for his community service projects.

Liv learned about community service from an established 4-H hunger program and then founded a soup kitchen in her community. She raised donations and provided over 1,090 cans of food to the kitchen. Sky volunteered for a local nursing home. Ben noted that his county had one of the highest poverty rates in the state, so he organized a project called Helping Hands to provide food for students in need.

Confidence to express my authentic self. All 12 participants were asked if their personal characteristics had changed because of the program. Eight participants specifically stated that their 4-H involvement gave them the confidence to express their authentic self. All 12 participants experienced the 4-H environment as welcoming and supportive of experimentation with different ways of being and teaching them about personal leadership styles. Liv said, "I'm more secure in myself. When I go to 4-H events and I'm around all these uplifting people, I go home more secure, more confident in what I'm doing."

All 12 participants found a nurturing environment in which to meet diverse people, becoming more open-minded as a result. All 12 participants reported increasing self-motivation by shifting from extrinsic (external) to intrinsic (internal) motivation. They reported becoming more competitive and engaged in community service activities, and improved their public speaking abilities.

Connection – transitioning into adulthood. All 12 participants reported transitioning into adulthood by gaining self-confidence, learning responsibility for others, improving critical thinking skills, becoming a stronger team player, increasing self-awareness, becoming more ambitious and hardworking, and becoming more trustworthy. Two participants stated they were happier because of being a state-level leader. "I have gained a different happiness; it is genuine happiness from people, joyful with the position I'm in, more than the position, the relationships I have made" (Ivy).

All 12 participants reported a deeper appreciation for their parents as they understood the sacrifices made on their behalf. Participants reported being away from home, realizing the temporary nature of existence, and not taking loved ones for granted. Time with family was reduced due to the demands of their office. Independence grew as participants drove to events and spent nights away from home. Peer relationships became more focused on spending time with positive role models and leaving behind those who did not share their values for self-improvement (Dan).

As a part of transitioning into adult roles, all 12 participants reported that they "saw behind the curtain" (Ella) of being an observer and recipient of 4-H activities to being a creator of events for other youth. Ella, Ben, Axl, Tom, Amy, Leo, and Sky talked about embodying the characteristic of giving back to the next generation of 4-Hers as they came to understand the complexity of executing the program from both adult and youth leader perspectives. As youth participants from fifth grade until election night, participants enjoyed the benefits of receiving the program with little thought as to its creation. Serving as a state-level leader allowed all 12 participants to see the "other side" of 4-H and how much adult facilitation is required to execute events. As a state-level leader, "you do a lot of things with adults. That was really helpful for my maturing process to see the relationships between the university and 4-H and how it all branches together" (Axl).

Character – friendship. The celebrity aspect of being a state-level leader was an impactful experience for Axl, Dan, Leo, and Max in terms of becoming more self-aware. While they were flattered by the attention, they were also cognizant of the responsibility that such attention brings in terms of being a positive role model for others and representing the 4-H organization honorably.

All 12 participants were excited to be a part of an elite group that had access to the highest levels of society in the agriculturally-rich state. They repeatedly mentioned meeting and interacting with state-level leaders while representing 4-H. Interaction with adults led to building self-confidence, personal agency, public speaking skills, and becoming more open-minded among all participants.

Creating new friendships was also a highlight for all participants. "The best part about 4-H is leadership – relationships, meeting people from such different backgrounds" (Max). Amy said friendships were the most important aspect of the program – "It feels like a second family."

Identifying college and career goals. The leadership experience helped all 12 participants to refine their college and career goals. Ella, Tom, Ike, Ivy, and Sky reported being dual-enrolled in college and high school courses. Networking with state agricultural leaders helped participants identify specific career goals according to their interests. The influence of leaders from the university focused five participants' attention toward careers in agriculture. "There are a lot of opportunities at the university that inspired me to go into applied biotechnology, double major in biochemistry, and hopefully obtain a Ph.D. in genetics after my Master's program. I hope to be a post-doc and go back and work for the university as a researcher and a professor" (Axl). The specific and focused career goals reported by Axl were the result of spending time interacting with university faculty and agricultural leaders. All 12 participants were very clear and resolute about their career goals in part due to their exposure to university leaders, county Extension agents, and the various opportunities 4-H provided for career exploration. Participants

had a good foundational understanding of their chosen careers and the college path required for attaining their goals.

Fishbowl. Three participants' most memorable lesson was "being in a fishbowl. In this position, we are seen so we need to be a good example and always act right, stay on the straight and narrow" (Tom). "They tell us we are in a fishbowl, we are there for people to look up to and I feel like that is a huge part of leadership, we are the face of 4-H" (Liv). "We learned how to present ourselves as leaders – as in how to work with a group, how to hold yourself and be in front of an audience because working together is a big part of leadership" (Ivy).

Peer Impact on Decision to Participate in State-Level Leadership

Peers were most influential in inspiring all 12 participants to strive for 4-H offices. They reported that a slightly older peer or sibling encouraged them to apply for the state-level leadership position either directly (friend in the same county or 4-H chapter) or indirectly by serving as a role model at 4-H events. According to Hastings et al. (2011), "being asked to engage" in community service was a causal condition for developing LLS (p. 19).

Max recalled listening to a former state-level leader speak at a 4-H event and being awe-struck by his poise and presentation. Four years later, Max achieved his goal of holding the same office as his role model. He said, "just as iron sharpens iron, so does one man sharpen another."

Influential peers were generally one to two years older than the participants, were the same gender, and were serving as 4-H leaders (county, state-level position) when participants encountered them. The significant person's behavior was inspiring as he or she presented him or herself professionally, was articulate, and demonstrated service leadership qualities. Peers directly encouraged participants to stay involved in 4-H and to strive for additional leadership roles. Ben said, "Axl was my main influencer. He is like family, my brother. I love the way he cares about people, and he presents himself in a professional manner when he goes places. He is very kind, very caring about everyone over himself." Second to peers, Ben, Liv, and Dan were encouraged by their county 4-H Extension agents to apply for state-level leadership roles.

One important duty of the state-level role is to recruit new members and encourage further participation. Participants were well-positioned to become the significant peer that encouraged the next generation of youth. When asked if they would recommend the state-level role to others, all 12 participants emphatically stated they absolutely would.

All 12 participants were well versed in the variety of opportunities afforded to 4-H participants and were eager to share their experiences with others. Reciprocity and generosity were mentioned by Dan, Ben, Liv, and Ike. They had been encouraged and supported in applying for leadership roles; thus, they sought to encourage and support others. "I have tried to get my best friend into the program. We have been working on her portfolio for it" (Ben).

Emerging the Essence

According to participants, the essence of their experience as a state-level leader was that of a *sharpening stone*. Participants reported that spending an average of seven years as a 4-H member had cultivated their personal tendencies toward the values espoused by 4-H. Participants were high achievers before serving as a State Board of Directors member. Participants held an average of three offices in 4-H and participated in three additional organizations as participants and officers prior to becoming a state-level leader.

Adult and peer-influence served as the *honing process* to sharpen participants' values and actions in the direction of the 4-H mission, which is "to assist youth in acquiring knowledge, developing life skills, and forming attitudes that will enable them to become self-directing, productive and contributing participants of society" (4-H, 2018, para. 1).

Discussion and Conclusions

The state-level leadership program, in addition to an average of seven years as a 4-H member, served to *hone* and *sharpen* participants' LLS. All 12 participants received the same training, participated in the same events, and shared responsibilities equally within the program. While participants held different titles (president, vice-president, state representative, and district representative), none mentioned differentiation of duties because of their official titles. The equalitarian expectations of adult 4-H leaders resulted in gains in LLS for all participants rather than just three offices, as reported by Tassin et al. (2010). Weybright et al. (2016) also found that adult leaders who approached youth as partners in a supportive and mutuality respectful environment had successful outcomes.

Participants experienced early success in 4-H that led to advancement within the organization. They defined leadership as serving others and being engaged in community service, thus, developing compassion (one of the five C's; Lerner et al., 2005). 4-H afforded all 12 participants a plethora of opportunities to gain confidence, express their authentic selves, and transition into adulthood with an increased sense of self-awareness, increased responsibility, mastery, and autonomy. They translated their service to others in numerous community service projects, similar to the findings of Boyd et al. (1992) and Fitzpatrick et al. (2005) who reported that 4-H alumni spent seven years in 4-H programs and benefited from the length of exposure to positive youth development activities.

Peer-influence on participants' decision to run for office was more important than adults' influence, including parents. Slightly older peers who were 4-H leaders served as role models and directly encouraged youth to run for office. This finding is consistent with Harris et al. (2016), who reported that a significant other encouraged youth to engage in a 4-H beef skill-a-thon.

While all 12 participants reported that their 4-H experiences had a substantial impact on their LLS development, it is difficult to extract the precise impact of the state-leadership role (which lasted one year) from their lifetime of 4-H experiences, in addition to participating in other organizations and community service. However, their final year in 4-H as a state-level leader served to *sharpen their skills* through practice, reinforcement, and positive affirmation from adult and peer-leaders, leading to the essence of the phenomenon as a *sharpening stone*.

All 12 participants grew their personal agency and became productive and contributing participants of society. Similar to findings of Fitzpatrick et al. (2005), Boyd et al. (1992), Ward (1996), Harris et al. (2016), Moran (2015), and Bruce et al. (2004), the areas of LLS enhanced by 4-H were public speaking (stated overwhelmingly as the primary skill learned and reinforced) and building confidence through public speaking. All 12 participants also reported making important gains in becoming more self-aware, critical thinking skills, problem-solving, planning, managing oneself, communicating (speaking, listening, writing), interacting effectively with others, and building positive relationships with peers and adults.

Transfer of learning from facts and abstraction to application in daily life is a capstone expression of deeper learning (Gagné & Briggs, 1979; Martinez & McGrath, 2014). All participants reported a variety of situations where they transferred learning from 4-H leadership roles to other contexts, such as teen leadership (e.g., working with younger audiences and classroom/discipline management). They also reported increased self-motivation for academic work, engaged in community service work outside of 4-H, used etiquette and social skills, applied communication skills, improved time management and personal organization, used 4-H specific skills for leading other school-based clubs, completed college applications, and encouraged others by being a supportive friend.

Overall, the state-level leadership experience served as a *sharpening stone* to grow all 12 participants' LLS by offering equalitarian structured training, creating a supportive environment for risk-taking, giving participants autonomy, holding high expectations for performance, and providing meaningful feedback.

Implications

The paradigm model for youth leadership development (Hastings et al., 2011) in the context of community engagement was supported in this study. Individual connections and being asked to engage in 4-H leadership roles by a significant person, namely peers, were two salient conditions that encouraged participants to run for office.

Community engagement and service among participants were cited as consequential activities of their experience that led to LLS development. Similar to the findings of Hastings et al. (2011), participants in the research reported here gained responsibility, empowerment, and especially confidence through participating in a state-level leadership role. Transfer of learning and deeper

learning (Martinez & McGrath, 2014) were important variables in the Hastings et al. model, as they were in this study. Participants were aware of their ability to grow and contribute meaningful leadership not only in the context of 4-H but also in their families, schools, and communities.

Adult leaders are advised to include youth leaders in real-world activities to transfer learning and application of leadership theory to practice and to engage youth as partners that share responsibility for planning and executing community development activities.

Future research should focus on the differences between programs that separate roles and duties for youth leaders. For example, Tassin et al. (2010) found no gains in LLS among youth who served as officers but not in the role of president, vice-president, or secretary. Do programs that have equalitarian expectations of all members to perform duties regardless of role or title, such as *Georgia State Board of Directors* leadership program reported here, have better outcomes than those who assign different duties to each participant? Future research should examine the need for specific roles or titles, such as president and vice-president, when the president has the same responsibilities as a state representative at the state-level. What impact does a role or title have on youth's LLS development?

Equally important to examine is adult leaders' expectations of youth leaders holding specific titles. In the research reported here, roles and titles were awarded by the number of votes obtained when elected, a seemingly ambiguous method for assigning roles. Titles were used at public events to introduce leaders; however, they were disregarded during training sessions, as all participants received the same training and engaged in the same activities to cultivate their LLS. These and other questions about the nature of the relationship between adult leaders and youth serve as rich opportunities to more deeply explore the causal variables the lead to positive youth development.

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The Relationship between Satisfaction with Supervisor and Demographic Variables among Extension Program Assistants

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The purpose of this study was to investigate the relationship between satisfaction with supervisor and demographic variables among Ohio State University Extension program assistants. Participants were 149 Extension program assistants who completed the Satisfaction with My Supervisor survey (Scarpello & Vandenberg, 1987) and a demographics survey. Results, based on a five-point Likert scale, showed that participants rated themselves as slightly satisfied with their supervisors (M = 3.88, SD = .94). Participants reported their highest satisfaction with the way their supervisors listen to them, support them in dealing with other managers, and their fairness in appraising job performance. Overall, respondents were dissatisfied with the way their supervisors inform them about work changes, show concern for their career progress, and the frequency with which they were recognized for doing a good job. Satisfaction with supervisor was not related to level of education, marital status, having children under 18 living at home, program area, years of service, gender, or age. Findings suggest that the Ohio State University Extension organization should assess program assistants' satisfaction with their supervisors and offer leadership professional development for the middle-level managers who serve in supervisory roles.

Keywords: Extension, Extension program assistants, Extension organization, satisfaction with supervisor, leadership

Introduction

In the 1970s, Cooperative Extension organizations dramatically increased recruitment of paraprofessionals, with resulting significant benefit to the Extension system (Boyce, 1970; Parsons & Kiesow, 1975). These paraprofessionals are generally called Extension program assistants. Program assistants are usually full- or part-time adults hired to work under the supervision of professionals, often Extension educators (Parsons & Kiesow, 1975). An Extension educator is a university Extension employee who develops and delivers educational programs in different program areas, for example, agriculture and natural resources, 4-H youth development, community development, or family and consumer science, to help improve in rural and urban areas. Extension program assistants are employed by Ohio State University (OSU) Extension to help Extension educators. Extension program assistants are responsible for recruiting individuals for an educational program. They use standardized curriculum materials to

provide informal teaching and standardized evaluation instruments to assess program participants' knowledge, attitudes, and behavior. OSU Extension has 367 full-time Extension educators and program assistants, with almost 50% classified as program assistants.

Previous studies in the Extension field found that satisfaction with supervisor is a key indicator of employee job satisfaction, organizational commitment, and turnover intention (Carter, Pounder, Lawrence, & Wozniak, 1990; Mowday, Koberg, & McArthur, 1984; Strong & Harder, 2009). Almost all studies of Extension employees' satisfaction with work investigated Extension educators as a subject of study; however, no research examines satisfaction with supervisor among Extension program assistants. This study aimed to rectify the oversight in the literature by examining the extent to which OSU Extension program assistants are satisfied with their supervisors and determining if specific demographics of Extension program assistants, such as level of education, children under 18 living at home, program area, years of services, gender, and age, are related to satisfaction with supervisor.

Literature Review

Research in organizational science has demonstrated the importance of the supervisor's role in determining employee attitudes. The supervisor can play an important role in the well-being of an employee because quality of supervision influences the employee's satisfaction with work (Adebayo & Ogunsina, 2011; Katz, 1978). Previous studies found that factors such as informal and formal feedback, job security, degree of ambiguity, work conflicts, satisfaction with work, and turnover intention all relate to satisfaction with supervisor (Adebayo & Ogunsina, 2011; DeConinck & Stilwell, 2004; Hampton, Dubinsky, & Skinner, 1986; Katz, 1978; Scarpello & Vandenberg, 1987; Wheeless, Wheeless, & Howard, 1984). Previous research has also found that supervisor work ethic was positively related to job and supervisor satisfaction (Vitell & Davis, 1990) and was related to employees' intent to leave the firm (Hampton et al., 1986). DeConinck and Stilwell (2004) found that satisfaction with supervisor has a direct effect on employees' withdrawal from full commitment to their work. They suggested that "employees may still have lower organizational commitment because of dissatisfaction with the supervisor, even though the level of pay or the fairness in which it is distributed (distributive justice) is considered acceptable" (p. 230). Wheeless et al. (1984) conducted research on 158 employees who were classified as nonprofessionals, in three administrative units of an eastern university. They investigated the relationship between job satisfaction and employees' satisfaction with their communication with their supervisor. The results of their study suggested that satisfaction with this communication was highly correlated with job satisfaction. When the supervisor was receptive to employee ideas and demonstrated empathy, these factors led to increases in job satisfaction. Thus, effective communication with the supervisor and perceiving the supervisor as being empathic contributed to employee job satisfaction (Wheeless et al., 1984).

Employees' demographic characteristics, such as age, gender, marital status, tenure, and education, have long been studied in connection with a workplace (Wesolowski & Mossholder, 1997). The authors suggest that organizations should get a better understanding of processes related to employees' demographic differences in the workplace. Campione (2014) examined intergenerational dyad relationships between supervisors and subordinates and emphasized that differences in work expectations, communications, and use of technology existed across generations and affected employees' satisfaction with work and supervisors. Organizations should focus on intergenerational communication that can positively affect retention strategy (Campione, 2014). McCaslin and Mwangi (1994) concluded that Extension agents' demographic characteristics do not contribute to their level of overall job satisfaction. Sorensen and McKim (2014) found very little effect of demographic variables on agricultural teachers in Oregon. Benge and Harder (2017) studied dyadic relationships between County Extension directors and Extension agents in Florida, finding that the relationships between employees and supervisors influenced the employees' satisfaction with work and work productivity.

Theoretical Framework

Previous research has confirmed the relationship between employees' satisfaction with their supervisors and leaders' behavior (Phillips, Douthitt, & Hyland, 2001; Yousef, 2000). Phillips et al. (2001) found that leader behavior was a factor in explaining employee satisfaction with the leader. Leadership studies consistently yield evidence that, when supervisors show concern for others and encourage employees to do well in task performance, it leads to satisfaction with supervisor. Such evidence supports contemporary theories of situational and transformational leadership. According to situational leadership theory, task-oriented and relation-oriented leadership behavior promote employees' satisfaction with their leaders, resulting in a transparent work environment in the organization (Hersey & Blanchard, 1979). For example, in an employee training study, supervisors who received training demonstrated task-oriented and relation-oriented leadership behaviors. These behaviors were positively related to good communication and social support between supervisor and employee, decreased uncertainty between supervisor and employee, and increased employee satisfaction with their supervisor (van der Wal, Schonrock-Adema, Schripsema, Jaarsma, & Cohen-Schotanus, 2016).

Transformational leadership style combines human behavior and ethical aspirations of the leader while creating a transformational effect on both (Burns, 1978). Transformational leadership theory is based on constructs such as true trust, acknowledgment, and encouragement on all levels of the supervisor-employee relationship, which affect the level of employees' satisfaction with supervisor (Mujkic, Sehic, Rahimic, & Jusic, 2014). Leaders who practice transformational style inspire their employees to create new paths of behavior through the process of problem-solving. Previous research found a positive relationship between transformational leadership and the behavior of the follower (Fuller, Patterson, Hester, & Stringer, 1996; Judge & Piccolo, 2004). Bycio, Hackett, and Allen (1995) found a positive correlation between the transformational

leadership style and employee satisfaction. The authors indicated that transformational leadership is the strongest factor in employee satisfaction. Many transformational leadership studies confirmed positive correlations between leaders' behavior and employees' satisfaction with their leaders (Judge & Piccolo, 2004; Laohavichien, Fredendall, & Cantrell, 2009; Podsakoff, MacKenzie, & Bommer, 1996). Transformational leaders tend to have more satisfied followers because they motivate and empower their employees. They also pay attention to employees' needs and development. Moreover, transformational leaders help followers grow their potential by providing constructive feedback (Bass & Riggio, 2006; Northhouse, 2020).

Podsakoff et al. (1996) suggested that leaders need to have a better understanding of how to influence subordinates' attitudes, role perceptions, and performance to increase employees' satisfaction with their leaders. Scarpello and Vandenberg (1992) indicated that employees' opinion about their work impacts the level of their satisfaction with work itself and organizational effectiveness. Summarizing, organizational leaders should be capable of changing employees' opinions toward positive work behavior through building trust, providing positive feedback and support, and empowering subordinates. Balabola (2016) suggested that organizational leaders should increase their leadership capacity when working with subordinates through investment in leadership training and development.

Satisfaction with Supervisor

Over the last fifty years, organizational psychologists have developed several instruments to measure satisfaction with supervisor. The research literature indicates that three major surveys have been used extensively to measure employee job satisfaction: 1) Minnesota Satisfaction Questionnaire (Weiss, Dawis, England, & Lofquist, 1967), 2) Spector's (1985) Job Satisfaction Survey, and 3) The Job Descriptive Index (Smith, Kendall, & Hulin, 1969). The Minnesota Satisfaction Questionnaire includes items that measure 20 dimensions of employee satisfaction with job environment. Eight of these items measure a supervisor's technical and human relations skills (Weiss et al., 1967). Spector's (1985) Job Satisfaction Survey measures job satisfaction in relation to nine dimensions. Four items of this survey measure satisfaction with supervisor. The Job Descriptive Index was developed based on the main assumption that a "satisfied worker is a productive worker" (Smith et al., 1969, p. 272). The instrument includes judgment scales for trait-like dimensions, using adjectives such as "stubborn," "lazy," and "bad." Most of the previous research utilizing the instruments mentioned above was limited in terms of measuring supervisor behaviors and employee satisfaction with these behaviors. To focus more on the relationship between satisfaction with supervisor and employee behavior, Scarpello and Vandenberg (1987) viewed satisfaction with supervisor as a possible source of employee attitude toward supervisor's behavior. The authors noted, "If subordinate satisfaction with immediate supervision has important implications for organizational effectiveness, there is a need for a valid and diagnostic instrument capable of measuring a large portion of the content domain of the satisfaction with the supervisor construct" (p. 449).

In 1965, Mann viewed supervision as the ability to reconcile and coordinate the employee's goals and needs with the requirements of the organization (Scarpello & Vandenberg, 1987). Mann's (1965) three interrelated types of supervisory skills: (1) technical, (2) human relations, and (3) administrative served as a conceptual foundation for the 18-item Scarpello and Vandenberg Satisfaction with My Supervisor Scale (SWMSS). However, Scarpello and Vandenberg (1987) did not divide their instrument into three scales; they wrote:

> We used Mann's categorization as the criteria against which to judge the consistency of the scale's items to the definition of supervision and thus to ensure that the SWMSS covers a number of aspects of the supervisory role in a parsimonious way. (p. 450)

Scarpello and Vandenberg's (1987) factor analysis revealed that the 18 items loaded into two factors. As a result, the authors viewed the SWMSS instrument as measuring the one global construct of satisfaction with supervisor (Scarpello & Vandenberg, 1987). Moreover, Scarpello and Vandenberg's (1987) approach was anchored in a concept of employees' opinions toward leader's behavior, demonstration of concern for others, task orientation, and relations orientation. Scarpello and Vandenberg's (1987) 18-item SWMSS instrument is focused specifically to "assess subordinate satisfaction with supervision," rather than with work environment (p. 462).

According to Scarpello and Vandenberg (1987), satisfaction with supervisor indicates the degree of satisfaction with the immediate supervisor and differs from being satisfied with the work environment and the work itself. Moreover, the authors emphasized that "currently available job satisfaction questionnaires are inadequate for measuring the satisfaction with the supervisor construct . . . they intended to assess satisfaction with multiple job facets, only one of which is supervision" (p. 448).

Purpose and Research Objectives

The purpose of this study was to investigate factors that affect satisfaction with supervisor among OSU Extension program assistants. Two research objectives guided this study:

1) Describe program assistants' perceptions in terms of satisfaction with their supervisors.
2) Determine whether program assistants' satisfaction with supervisor differed based on demographic characteristics that included educational level, gender, marital status, having children at home under 18 years old, years of services, program areas, and age.

Method

Participants

The target population for this study was OSU Extension program assistants. The research was approved by the university's Behavioral and Social Sciences Review Board. The Office of Human Resources provided Extension program assistants' email addresses. The researcher invited 182 Extension program assistants with full-time appointments as of October 21st, 2016, to participate in the study. OSU Extension program assistants represent Extension employees in the job classification "Program Assistant," and they work in either a county or a state Extension office. The overall response rate was 84% ($N = 153$). After removing responses with missing data, the final data set included responses from 149 employees. Most participants were female (87.4%) with an average age of 43 years ($SD = 14.13$), married (63%), with a bachelor's degree (55.5%), and had worked at the Extension for approximately six years ($SD = 7.87$). More than 30% of respondents had children under 18 who lived at home. Respondents were not equally distributed across program areas. Agriculture and natural resources accounted for 5.4%, 4-H youth development for 18.9%, and family and consumer sciences for 62.4%. There were no respondents from the community development program area. Approximately 13% of respondents were not affiliated with any program areas. A majority of this last group of employees were program assistants who worked on the state level.

Measures

Satisfaction with supervisor was measured using Scarpello and Vandenberg's (1987) SWMSS instrument because of its potential to link supervisor behavior and actions with employee satisfaction. Scarpello and Vandenberg (1987) reported an internal consistency coefficient of .95. All 18 items of the original instrument were used in this study to assess Extension program assistants' satisfaction with supervisor. Instrument items included: "The way my supervisor listens when I have something important to say," "The way my supervisor sets clear work goals," and "The way my supervisor treats me when I make a mistake." Table 1 displays all 18 items. Responses to each item were collected using a five-point Likert scale: 1 = *very dissatisfied*, 2 = *dissatisfied*, 3 = *neither satisfied nor dissatisfied*, 4 = *satisfied*, and 5 = *very satisfied*. The Cronbach's alpha for the SWMSS instrument in this study was .963. The reliability coefficient describes the internal consistency reliability of a set of items.

Table 1. Reliability Statistics of the SWMSS Instrument

Items	Cronbach's Alpha
The way my supervisor listens when I have something important to say	.959
The way my supervisor sets clear work goals	.960
The way my supervisor treats me when I make a mistake	.959
My supervisor's fairness in appraising my job performance	.960
The way my supervisor is consistent in his or her behavior toward subordinates	.961

Items	Cronbach's Alpha
The way my supervisor helps me to get the job done	.959
The way my supervisor gives me credit for my ideas	.960
The way my supervisor gives me clear instruction	.959
The way my supervisor informs me about work changes ahead of time	.959
The way my supervisor follows through to get problems solved	.959
The way my supervisor understands the problems I might run into doing the job	.960
The way my supervisor shows concern for my career progress	.961
My supervisor's backing me up with other management	.961
The frequency with which I get a pat on the back for doing a good job	.961
The technical competence of my supervisors	.960
The amount of time I get to learn a task before I'm moved to another task	.963
The time I have to do the job right	.963
The way my job responsibilities are clearly defined	.961

Procedure

An online survey was used to collect the data using a tailored design method (Dillman, Smyth, & Christian, 2014). A Qualtrics® platform helped to facilitate the distribution of the welcome message, questionnaire, and four follow-up emails. Data were collected from January 11, 2017, to January 27, 2017. Program assistants self-administered the online questionnaire. Participants' answers were grouped and used as aggregated data for further statistical analysis. To motivate employees to participate in the survey, a chance to win one of eight $25 Visa prepaid cards was offered to responding Extension program assistants. Study participants were informed about the incentive and their eligibility for the drawing in the pre-notification, invitation, and follow-up emails. The electronic platform randomly identified eight email addresses. After the data collection procedure was officially finished, the randomly identified participants received their prepaid Visa card by mail.

Data Analysis

The SPSS® v.24 (2016) software was used for statistical analysis. Independent variables and the dependent variable, satisfaction with supervisor, were treated as interval data. A descriptive statistic was utilized to describe the first research objective. A one-way analysis of variance (ANOVA) was used to determine the existence of statistically significant differences in the means between satisfaction with supervisor and the demographic variables: level of education, children under 18 living at home, program area, years of service, gender, and age. Miller and Smith (1983) suggest comparing early and late respondents to assess nonresponse error, and this analysis was performed for the response data in this study. The first forty respondents were assigned as an early phase respondent group, and the last forty respondents were identified as a late phase respondent group. The early and late phases of responders were determined based on the day and time their questionnaire was submitted. An independent t-test was conducted to

determine if group means for total scores on the measured construct differed for the two groups of respondents (early and late). Results showed no statistically significant difference between early and late respondents on the measures of employee satisfaction with supervisor (Table 2).

Table 2. Independent Samples t-test for Equality of Means on Satisfaction with Supervisor Scale Scores between Early and Late Respondents

| | Respondents | | | | | |
| | Early | | Late | | | |
Scale	*M*	*SD*	*M*	*SD*	*t*	*p*
Satisfaction with Supervisor	3.65	0.99	3.86	1.03	-0.94	0.35

Results

The first research objective was to describe program assistants' feelings and perceptions of satisfaction with supervisors. The results for this objective are shown in Table 3.

Table 3. Mean and Standard Deviation of Program Assistants' Satisfaction with Supervisors

Variables	*f*	M	SD
The way my supervisor listens when I have something important to say	146	4.10	1.094
The way my supervisor sets clear work goals	145	3.86	1.074
The way my supervisor treats me when I make a mistake	146	4.07	1.074
My supervisor's fairness in appraising my job performance	141	3.99	1.171
The way my supervisor is consistent in his or her behavior toward subordinates	138	3.92	1.238
The way my supervisor helps me to get the job done	145	3.90	1.151
The way my supervisor gives me credit for my ideas	143	4.02	1.031
The way my supervisor gives me clear instruction	146	3.78	1.177
The way my supervisor informs me about work changes ahead of time	145	3.75	1.267
The way my supervisor follows through to get problems solved	147	3.87	1.124
The way my supervisor understands the problems I might run into doing the job	146	3.88	1.166
The way my supervisor shows concern for my career progress	138	3.64	1.232
My supervisor's backing me up with other management	127	4.02	1.094
The frequency with which I get a pat on the back for doing a good job	144	3.64	1.232
The technical competence of my supervisors	144	4.03	1.060
The amount of time I get to learn a task before I'm moved to another task	133	3.91	1.003
The time I have to do the job right	146	3.94	.984
The way my job responsibilities are clearly defined	147	3.71	1.080

Higher scores indicate greater satisfaction with supervisor. The mean summative score for satisfaction with supervisor was 3.88 (*SD* = .94, *n* = 149). The distribution of the satisfaction with supervisor scores had a high negative skew (-1.01), showing a long-left tail toward lower

values. The survey items scoring the highest mean values were (a) The way my supervisor listens when I have something important to say ($M = 4.10$; $SD = 1.09$), (b) The way my supervisor treats me when I make a mistake ($M = 4.07$; $SD = 1.07$), and (c) The technical competence of my supervisor ($M = 4.03$; $SD = 1.06$).

Program assistants were very satisfied with (a) The way my supervisor listens when I have something important to say (47.3%), (b) My supervisor's backing me up with other management (42.5%), (c) My supervisor's fairness in appraising my job performance (41.8%), (d) The way my supervisor is consistent in his/her behavior toward subordinates (41.3%), and (e) The technical competence of my supervisor (41.0%). Survey items having the lowest mean values were (a) The way my supervisor shows concern for my career progress ($M = 3.64$; $SD = 1.23$), (b) The frequency with which I get a pat on the back for doing a good job ($M = 3.64$; $SD = 1.23$), and (c) The way my job responsibilities are clearly defined ($M = 3.71$; $SD = 1.08$). Program assistants were very dissatisfied and dissatisfied with (a) The way my supervisor informs me about work changes ahead of time (22.9%), (b) The way my supervisor shows concern for my career progress (19.6%), (c) The frequency with which I get a pat on the back for doing a good job (18.1%), (d) The way my supervisor is consistent in his/her behavior toward subordinates (16.6%), and (e) My supervisor's fairness in appraising my job performance (15.6%).

The second research objective was to determine whether program assistants' satisfaction with supervisor differed based on demographic variables of educational level, gender, marital status, children at home under 18 years old, years of services, program areas, and age. A one-way ANOVA was conducted to determine are there significant differences in means of program assistants' satisfaction with supervisor and their demographic characteristics. The assumption of normality was tested, and examination of the residuals and the boxplot showed a normal distribution shape. According to Levine's test, the homogeneity of variance assumption was satisfied. The ANOVA revealed that there were no significant differences in means of satisfaction with supervisor and program assistants' education level ($F = .122$, $df = 4, 142$, $p = .974$), gender ($F = .002$, $df = 1, 145$, $p = .964$), marital status ($F = .625$, $df = 4, 142$, $p = .645$), children under 18 years old living at home ($F = .137$, $df = 1, 145$, $p = .712$), years of service ($F = .599$, $df = 36, 109$, $p = .960$), program area ($F = 1.395$, $df = 3, 144$, $p = .247$), or age ($F = .848$, $df = 43, 96$, $p = .724$).

Discussion

This study makes a unique contribution to the research in the field of Extension organization development and employee satisfaction with supervisor. Previous studies reported that the role of supervisors in organizations is important because they play a critical role in determining employee attitudes and performance (e.g., Kemelgor, 1982; Scarpello & Vandenberg, 1987). The findings of this study show that Extension program assistants were highly satisfied with the following behaviors: how the supervisor listens to them, reacts to mistakes, gives credit for ideas,

supports employees in dealing with other management, is fair in appraising employees' job performance, as well as with the supervisor's technical competence. These results are consistent with the study by Jernigan and Beggs (2005) that suggested supervisor effectiveness is essential because managers are pivotal in enabling the organization to build a committed workforce. Having a supportive supervisor is positively related to employee attitudes toward work (Michael, 2014). Karatepe and Kilic (2007) emphasized that satisfaction with supervisor is positively related to employees' job satisfaction (p. 248). The findings of the present study confirm that leaders' behaviors are important factors of employees' satisfaction with their leaders (Phillips et al., 2001; Shamir & Lapidot, 2003). Moreover, the result of this study supported contemporary leadership theories and provided additional evidence that, when a supervisor shows concern for others and supports employees, it leads to employees' higher satisfaction with their leader.

Findings from this research show that participants are dissatisfied with how the supervisor informs the employee about work changes ahead of time, shows a lack of concern for an employee's career progress, and rarely gives feedback for doing a good job. Jaworski and Kohli (1991) suggested that output-oriented positive feedback is important for improving employee performance. The authors emphasized the need to realize how particular managerial feedback will be understood, accepted, interpreted, and finally responded by the employee. Kemelgor (1982) suggested that "subordinates are going to be more satisfied in an environment where, through value congruence, the supervisor is seen as providing them with or helping them attain important objectives" (p. 157).

Previous research has found a positive linear relationship between satisfaction with supervisor and organizational tenure and employee age (Norris & Niebuhr, 1984). This study found that Extension program assistants' level of education, children under 18 living at home, program area, years of services, gender, and age all showed no statistically significant relationship to satisfaction with supervisor. The Human Resource Generalist of the OSU Extension suggested that differences in satisfaction with supervisor may, in fact, be related to demographic variables, just not the ones considered here (personal communication, August 17, 2016). This is a matter for further research. It may also be the case that the disproportionate number of participants across the different program areas was a factor influencing the results of this study. For example, the majority (62.6%) of participants in this study worked in the family and consumer science program area, approximately 19% in 4-H youth development, 5.4% in the agricultural and natural resources program area, and there were no participants in the community development program area. In addition, most of the respondents in this study were women (87%), which may be another factor affecting the results.

The average age of study participants was 41.3 years old. Half of the participants (50%) were between the ages of 22 and 40, approximately 41% (40.6%) between 41 and 60, and the remaining 8.7% between 61 and 72. This disproportion among the age groups in the study raises some important research questions. Half of the participants are from the 'millennial generation.'

They are well-educated and technologically savvy and represent a significant shift in the constituency of the Extension organization. Millennials in the workplace are very self-driven (Zemke, Raines, & Filipczak, 2013). Members of this generation want benefits that have an immediate impact on their careers (Weingarten, 2009). Leaders who understand this generational profile can establish more effective management practices with employees. Leaders should institute professional development measures to educate personnel about generationally differing perceptions within the workforce (Eggensperger, 2014).

Limitations of the Study

This study used a census survey design. The overall design limited the scope of the study and limits the generalizability of the obtained results because only employees of a single Extension organization in the state of Ohio participated. A cross-sectional research design was utilized; thus, one cannot determine the stability of individual attitudes over time. As previously mentioned, the disproportion in numbers of participants across program areas and gender may have been factors affecting study outcomes. Other facets of the program assistant-supervisor relationship could have influenced employees' satisfaction with their supervisor. However, the findings of this research contribute to the limited scientific literature related to Extension program assistants and their satisfaction with supervisors. The results of this study and the previous research cited can provide some direction for organizations similar to OSU Extension.

Recommendations for Research and Practice

Several practical recommendations may be of value to similar organizations. First, human resources development practitioners should assess Extension program assistants' satisfaction with their supervisors on an annual basis. The results of the assessment will help to create a positive organizational climate by fostering a culture that gives program assistance a sense of being respected and appreciated. Second, Extension organizations should cultivate a supportive supervisory environment. For example, supervisors can show concern for employee's career progress, provide feedback with respect, inform work changes ahead of time, be consistent in behavior toward subordinates, and show fairness in appraising job performance. Third, Extension administration should offer leadership professional development for middle-level managers. Professional development would increase supervisors' awareness about leadership behaviors' influence and their managerial capacity in working with subordinates, which increases employee satisfaction with supervisors.

It is important to continue pursuing research and scientific discussion related to the relationship between supervisor and subordinate. In a general sense, outcomes of the present study suggest there should be further investigation of the effect of supervisor output and feedback on employee performance. There is also a need to examine how a supervisor's professional development can improve an employee's satisfaction with supervisor. Future research should explore how interpersonal trust among supervisors and subordinates affects employees' career progress.

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Engaging in Conversations about Climate Change with Cattle Producers

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The purpose of this study was to determine whether Cooperative Extension Service agents and United States Department of Agriculture Natural Resources Conservation Service (NRCS) personnel used a dialogic model of communication in their interactions with cattle producers in the Southwest and Mountain West regarding the topic of climate change. Findings indicated that dialogic communication is being used, with a focus on discussing best management practices, avoiding the term "climate change," and focusing on local data and weather events. The study suggests that Extension agents and NRCS personnel recognize the need to adapt their communication strategy and tactics to suit the cognitive needs and beliefs of the cattle producers with whom they converse. Additionally, findings suggest that climate change should be described in terms that are observable to cattle producers, such as weather events (drought or flooding), possibly minimizing the need to name such events as climate change.

Keywords: cattle, climate change, Extension, livestock, communication

Introduction

Animal production, which includes cattle, dairy, swine, and poultry, accounts for nearly half of the $330 billion of agricultural commodities produced annually in the United States (U.S. Census Bureau, 2012), with beef cattle production alone amounting to $61 billion. Agriculture systems in the United States play a significant and complex role in rural and national economic and social systems (Hatfield et al., 2014). Because of the significant role agriculture plays in economics and society, the effects of climate change, such as droughts, flooding, sea-level rise, the potential loss of pollinators, and extreme weather events pose a significant long-term threat to agricultural production (Hatfield et al., 2014).

Moreover, livestock production contributes significantly to the factors that accelerate anthropogenic (human-caused) climate change through such things as greenhouse gas emissions, deforestation, and environmental degradation (Gerber et al., 2013). While the impact of the livestock industry occurs globally, research suggests the need to address mitigation strategies that work in local conditions and consider livestock-dependent livelihoods (Gerber et al., 2013). Ranchers, who keep livestock largely on rangelands in the United States, relying primarily on the income and actual products of meat and milk for their livelihoods, are an example of livestock-dependent producers (Food and Agriculture Organization of the United Nations [FAO], 2011).

Producers play a key role in a society that relies heavily on livestock for food security (FAO, 2011). In the United States, the majority of cattle are produced in Texas, Nebraska, and Kansas (National Cattlemen's Beef Association, 2017), where the effects of climate change are being felt by producers, largely through drought (Melillo, Richmond, & Yohe, 2014).

Climate science information can assist farmers and livestock producers with management decisions that hedge against uncertainty and risk (Wilke & Morton, 2015). Climatologists, Extension agents, and others in public education have been tasked with the challenge of providing science-based information to agricultural producers on contentious scientific topics, including climate change (Smith & Mukhtar, 2015; Wilke & Morton, 2015). Extension plays a vital communication role with producers and private agricultural advisors (Prokopy et al., 2015).

A deficit model of communication has been the traditional format used by Extension professionals and the producers they serve (Leeuwis, 2004), where the presumption is that by simply providing knowledge and information to the public, deficits in their knowledge can be filled (Brossard & Lewenstein, 2010). Previous research indicates that a deficit model of communication is less effective in communicating contentious science issues (Gross, 1994), like climate change.

It has been suggested that utilizing a dialogic model of communication, which engages the public in contentious issues like climate change (National Academies of Sciences, Engineering, and Medicine, 2017), can be effective in involving producers in two-way communication (Leeuwis, 2004). Morris, Megalos, Vuola, Adams, and Monroe (2014) recommended that for Extension educators to engage their audiences effectively, those educators should consider their audience and adapt their messages accordingly. Arbuckle et al. (2014) noted that a dialogic communication model in Extension should connect individuals with differing beliefs, knowledge and skills, linked by a common shared interest.

To build awareness and generate knowledge among Extension professionals who engage and advise livestock and poultry producers about the social, environmental, and economic implications of climate change and its particular concern for agricultural production, the United States Department of Agriculture's National Institute of Food and Agriculture (USDA NIFA) awarded a multi-institutional grant in 2011, titled the *Animal Agriculture in a Changing Climate*

(AACC) project. As part of this project, working groups were formed to identify key climate issues within their respective regions and coordinate educational outreach that targeted Extension needs and stakeholder interests. Several methods were employed to promote awareness and build capacity among Extension professionals, including fact sheets, videos, and face-to-face workshops targeted to specific animal species and production practices.

The *Cattle and Climate Conversations Workshop* was the last activity funded through the overall project and took place in October 2016 in Denver, Colorado, for Extension agents and United States Department of Agriculture's Natural Resources Conservation Service (NRCS) representatives in the Southwest and Mountain West regions of the United States who work extensively with cattle producers. The workshop's purpose was to provide attendees with information on climate change so they can be better equipped to converse with regional cattle producers about climate change. All attendees participated in focus groups held at the end of the day to examine their efforts and tactics related to communicating and educating cattle producers in the region about climate change.

The purpose of this study was to determine if Extension agents and NRCS personnel implement tenants of dialogic communication models in their interactions with cattle producers in the Southwest and Mountain West regarding the topic of climate change. The following research question directed this study: What topics or messages related to climate change do Extension agents and NRCS personnel believe they should use to engage in conversations with cattle producers?

Literature Review

As King, Baker, and Tomlison (2017) and others have demonstrated, it is vital that Extension and other public education organizations employ communication strategies and tactics based on the needs and preferences of their target audiences. Extension has traditionally used a deficit model of communication when relaying complex scientific ideas (Leeuwis, 2004). A deficit model was largely successful in the relaying of profit-based agronomic information and innovation (Ruttan, 1996) but has proven to be much less effective in the communication of complex scientific information (Leeuwis, 2004). Recognizing a significant variance in beliefs and acceptability thresholds of climate change science and information (Arbuckle et al., 2014), a dialogic model of communication has replaced the traditional deficit communication model in Extension (Leeuwis, 2004). Dialogue is a crucial aspect in the communication of contentious scientific topics. Feedback, understanding of context, and appropriate use of terminology are all components of dialogue (Burns, O'Connor, & Stocklmayer, 2003). Previous research found that agricultural producers are most receptive to tailored messages about climate change that fit their existing characteristics and beliefs (Diehl et al., 2016).

Several studies have examined the way the public and, specifically, agricultural producers prefer to discuss climate change. Whitmarsh (2009) noted terminology impacts how audiences

understand and evaluate the issue of climate change. Campbell Hibbs et al. (2014) found agricultural producers in the Central Great Plains made distinctions between climate variability and anthropogenic climate change. In a study of 16 communication and education professors who communicate with agricultural producers about climate change across the United States, participants indicated they believe "in speaking honestly" about climate change with agricultural producers (Rohling, Wandersee, Baker, & Tomlinson, 2016, p. 89).

When discussing climate change, producers are likely to be more receptive to outreach focused on adaptation rather than mitigation (Arbuckle et al., 2013). In a 2015 interview in *Scientific American* (Heikkinen, 2015), Arbuckle recommended that Extension professionals avoid the term "climate change" in their interactions with farmers, focusing instead on adaptive farming practices. Arbuckle explained farmers adapt to challenges quickly and, therefore, are more receptive to adaptive strategies (Heikkinen, 2015). King et al. (2017) examined the barriers and benefits of adopting best management practices in grazing systems in Oklahoma and Kansas. Their findings suggest that while producers experience operational and infrastructure challenges in adopting best management practices for grazing, they see the benefit of those practices through the increased sustainability of their operations (King et al., 2017). King et al. (2017) also suggested that Extension and NRCS personnel are instrumental in the successful communication of best management practices to improve water availability in the Midwest.

Methods

Three one-hour focus groups, comprised of 29 total attendees of the *Cattle and Climate Conversations Workshop*, were conducted simultaneously at the end of the first day of the workshop. A focus group is a group interview, allowing researchers to quickly explore a variety of participant opinions about an issue (Lindlof & Taylor, 2011). Participants were divided into the three groups randomly, by color dots that had been affixed to their name tags prior to the start of the workshop. The participating Extension agents' and NRCS employees' jobs included serving as research scientists, rangeland managers, soil scientists, an air quality engineer, and a plant materials center manager. The largest number of participants was from Texas (14), followed by Oklahoma (3), Colorado (2), and New Mexico (2). Of the 29 participants, 22 identified themselves as Extension agents or specialists, with seven being employed with the NRCS.

The moderator's guide was drafted and vetted through multiple individuals to ensure relevance and clarity of questions. In the three focus groups, the same questions and prompts were utilized. Questions for the moderator's guide focused on four major areas: workshop benefits and existing needs, climate beliefs and perceptions, climate conversations and frame tactics, and climate science and science communication. To examine the use of a dialogic model of communication, participants were asked questions relating to their climate-change conversations,

framing tactics, the effects of climate change their constituents were experiencing, and the process by which they determined if their constituents were prepared to discuss climate change.

Each focus group was moderated by a member of the University of Florida's Institute of Food and Agricultural Sciences' Center for Public Issues Education in Agriculture and Natural Resources (PIE Center). Focus groups were audio-recorded and transcribed to ensure accuracy of the data. Transcripts were analyzed using inductive data analysis to allow themes to emerge (Creswell, 2007). To maintain confidentiality, transcripts were coded and attributed to participants by focus group numbers (example: G1, 4 meant Focus Group 1, Participant 4). These codes were also how participants were identified in the Findings section. Focus Group 1 was comprised of nine participants, Focus Group 2 was comprised of 12 participants, and Focus Group 3 was comprised of eight participants.

Researchers coded the participants' answers according to emergent themes using the constant-comparative method (Glaser, 1992; Strauss, 1987). The quotes from the transcribed focus groups were coded and then organized into themes, based on similarities across questions (Kitzinger, 1995). Emergent themes and representative quotes relevant to this study are presented in the Findings section. Researchers created an audit trail detailing the theme formation, increasing confirmability and dependability (MacQueen, McLellan, Kay, & Milstein, 1998). Findings are limited to how the discussions were interpreted, a common limitation in qualitative research (Pauly, 1991).

Findings

Several themes related to the implementation of dialogic communication models in interactions with cattle producers emerged from the focus group sessions: stressing best management practices, avoiding charged terms, discussing tangible weather events, focusing on local effects, and focusing conversations on the current effects of climate change.

Stressing Best Management Practices

When participants were asked how they conversed with their constituents about the effects and adaption strategies related to climate change, participants across all groups agreed they typically did not discuss climate change with cattle producers. Instead, participants discussed the economic and conservation benefits of using best management practices. One Extension agent explained that she did not relate any of her conversations to climate change:

> I talk about best management practices. I don't relate that to climate or anything, but I talk about saving money and what's good for the environment, what's good for their operation, what's good for their neighbors, that kind of conversation. (G2, 8)

Another Extension agent shared that adaption conversations about economic and conservation benefits could address multiple concerns for producers, without broaching the topic of climate change:

> You don't have to come out and say, "Hey, if you do this, this is good for climate change." Say, "Hey, this is good for your pocketbook, this is good for your bottom line. Good for your operation, your soil, your range." Then the cherry on top might be mitigating some of that carbon footprint. (G2, 11)

Another agent, when asked about how he accommodated conversations with producers, said, "You start talking about the best management practices that will move them toward a higher plane of production, and it will benefit them economically." (G1, 4). An agent from the third focus group further stressed the importance of presenting best management practices as opposed to responses to climate change:

> I don't get into the term climate change. More or less, we try to present and practice and educate the people on best management practices they need to do anyway. If they do that, they're going to be doing the right thing that they need to do for their production agricultural process. (G3, 1)

An Extension agent in the first focus group stressed that he felt it was possible and preferable to encourage adaption to the effects of climate change without discussing climate change:

> I'm not going to bring up climate change. If we can show them that the productive economic benefit of doing some things that are conducive with helping with climate change, and I hate to even go there. If we can show them the economics of just being a good producer, you can make headway and not even have the conversation of climate change. (G1, 3)

Other Extension agents and NRCS representatives said they focus on the need for land stewardship and conservation, instead of focusing on climate change. One agent said, "Agriculture is, by nature, conservationist anyway. They want to conserve their land and their resources, and they want to do the best management" (G3, 1).

One Extension agent noted the following:

> To me, it's about the land stewardship. I think there's so much common ground on both sides of that fence that, to me, that's the issue. I mean, I'd never start a conversation about climate. Just other than when we talk about cold and keeping the cows out of the cold and calving and stuff like that. The rest of that, to me, I do want to talk about stewardship, and stewardship of the land and of our resources. (G2, 8)

As another Extension agent said:

> As producers, we do so much more with less. Like they were saying a while ago, with all the inputs or the no-till or whatever mitigation we choose, we're way better conservationists than we were in the 30s and 40s, like exponentially better. (G1, 3)

Another Extension agent noted:

> It's about stewardship of the land. It's about sustainability. I think those of us who have been around a while, we shift the way we talk about things, and even with the Millennials that are now coming back to the farm or ranch, we shift again in the way we talk about that to them. I think we're talking about the same things, because it is about their bottom line. It is about the sustainability of that land and being good stewards, and that's something everybody has in common. (G2, 8)

Participants noted if they could help cattle producers conserve land resources, the producers would be mitigating the effects of climate change without knowing it. As an NRCS representative said:

> I guess my viewpoint, from the NRCS point of view, is that we're asked out onto the place. It's not to talk about climate change. We're going to stop erosion; we're going to do something else. Climate change, mitigating climate change, is just an ancillary benefit to other things we do. There's no reason to bring it up. All you're going to do, chances are, is turn somebody off. There's no point in bringing it [climate change] up, from my viewpoint. (G2, 2)

Avoiding Charged Terms

Participants were asked how they specifically talked about climate change. There was almost total agreement that the term "climate change" has a negative connotation, and it would not be their first choice as a term to use in conversations with cattle producers. Participants said they were much more comfortable using "climate variability." One Extension agent explained:

> Climate variability fits me better than climate change. When I hear that, I'm more receptive to it than I am climate change. . . . Climate change is one of those things you hear, and automatically, you want to turn it off because you think it's a bad thing. Climate variability is more suitable. (G3, 3)

Another agent explained cattle producers' perception of the term "climate change" this way: **"**Climate change sounds like it's something permanent. Variability is realistic." (G3, 4).
Another Extension focus group participant explained how terms impacted the course of a conversation:

> As soon as those words [climate change] spill out of someone's mouth, it seems as though the conversation turns pretty, volatile pretty quick. Being able to say something like 'variability,' I think, allows folks to consider digesting it before they shut down. (G3, 8)

Another way that participants described discussing the effects of climate change without naming the topic was through focusing on weather events that were tangible to cattle producers, primarily droughts and floods. One agent said, "From a producer's standpoint in my area, it's [climate change] not even on the radar. Ask me how to deal with drought or flood. Climate change, in the academic sense, isn't on the radar." (G1, 2). Another agent explained that "people may not believe, and I might be one of them, in climate change, but everybody believes in droughts and floods." (G3, 6)

Making Climate Change Local, Rather than Global

Many participants said they felt the effects and science of climate change were often presented on a global level to cattle producers. For cattle producers they worked with, the concept of the global effects of climate change were not relatable or understandable. Participants explained that to reach cattle producers, they framed climate change conversations on the local level. One agent explained:

> All of this is a global concept, but for us to make it, for us to utilize it as a tool for education, it's got to become local. It's got to be realistic and local. It's got to be applicable and local. (G3, 8)

An NRCS employee described his perception of the available material he had access to through Extension and NRCS and the challenges of using that material with his producers:

> There's a lot of stuff out there that I think both NRCS has put together, the Extension community has put together. A lot of that seems to be really national in scope, not so much on the local level. It may or may not be applicable where you're at right now. (G2, 10)

Participants also said because of the broad, global scope of climate change, they felt the cattle producers they worked with regularly might not feel that the mitigation strategies they implement on their ranches and cattle operations would have any effect on reducing or reversing the effects of climate change. As one NRCS employee explained, "The producers I work with say, 'I have a 100-acre farm. What can I do realistically that will make a change?'" (G1, 7).

Focusing on the Here and Now, Not the Future

Another way that participants framed climate change conversations was to focus on the current challenges and concerns producers had for their operations. Many said that addressing future issues, concerns, and the potential effects of climate change was not effective in communicating

with producers. As one Extension agent said, "They [cattle producers] don't get involved in these things unless it affects them directly" (G2, 1).

Another agent noted:

> I deal with the here and now because they have me out there for a reason. I'm looking at that reason to start with, and then to the contingency plans and stuff. If I see a drought, we're going to talk about the drought. If we see a flood, we're going to deal with the flood stuff. As far as the climate change verbiage, no, that's not what I'm going to talk about. Sometimes we got to deal with the here and now so that we can be here in 10 years. (G1, 6)

Discussion and Conclusions

This study sought to identify what topics or messages related to climate change Extension agents and NRCS personnel believe they should use to engage in conversations with cattle producers. The findings of this study indicated Extension agents and NRCS personnel are following a dialogic model of communication to engage cattle producers on adaption and mitigation strategies in reaction to the effects of climate change. Leeuwis (2004) suggested a dialogic model that considers the context of the topic is much more effective at reaching audiences. The findings of this study align with previous research, indicating that Extension agents and NRCS personnel who work with cattle producers do not discuss climate change as a stand-alone topic, based on the perceptions they have of producer preferences for the topic (Arbuckle et al., 2013; Campbell Hibbs et al., 2014; Diehl et al., 2016).

Participants indicated they would prefer discussing the benefits of best management practices that help producers adapt to and mitigate the impacts of climate change. King et al. (2017) found producers were aware of and receptive to messages about the benefits of best management practices in cattle grazing. Additionally, the participants' framing of communication focused on adaptation to the effects of climate change aligned with the findings of Arbuckle et al. (2013), which found that producers prefer to discuss adaption strategies. While Extension agents and NRCS personnel cite the overall benefits best management practices have on the mitigation of climate change, they preferred to communicate how the practices enhance profits and conserve producers' lands.

Participants agreed across all focus groups that "climate change" was too charged and negative to use in conversations with producers. Instead, they indicated they would use a term such as "climate variability." The use of appropriate terminology is cited as an important aspect of dialogue (Burns et al., 2003), with previous research indicating that cattle producers prefer not to use the term "climate change" (Heikkinen, 2015) and that climate change messages should be tailored to fit agricultural producers' existing characteristics and beliefs (Diehl et al., 2016).

Participants also said, "climate change" is less tangible than observable weather events, such as drought and floods, that cattle producers must face on a regular basis. Arbuckle explained, as cited in Heikkinen (2015), that producers are accustomed to the need to constantly adapt their practices when faced with challenges. As such, participants found that communicating adaption strategies to current weather events was better received than the long-term effects of climate change. Participants would prefer to communicate about tangible events, rather than something difficult for their clients to physically see and conceptually grasp.

Participants also indicated the presentation of climate change was a communication barrier. Many explained the climate change information they were presented with, or had access to, focused on the global effects of climate change. Wilke and Morton (2015) found that producers sought out information that would help them hedge against risk and uncertainty in their operations. The perceived preferences for local data support that finding, indicating that local information and data is key to enhancing conversations focused on adaption and mitigation strategies.

While participants stated their constituents felt more connected to local data, they also noted that cattle producers did not feel that best management practices on their ranches would have much impact on global climate change. Therefore, participants said if they communicated about climate change to local cattle ranchers, the conversation needed to focus on how even small or local production practices could potentially mitigate climate change. Participants also indicated the cattle producers they worked with were more concerned with immediate, observable issues, rather than potential future impacts.

Limitations

Limitations to generalize the findings from this study include the geographic regions of the United States that participants represented (Southwest and Mountain West) and the subject matter area participants represented (i.e., Extension educators and NRCS representatives who engage with cattle producers). Because the participants in this study also self-selected to participate in the *Cattle and Climate Conversations Workshop*, rather than being randomly selected to participate from a larger population, the results of this study cannot be generalized beyond this group of participants.

Recommendations

Based on the findings of this study, communication and education professionals working with cattle producers should initiate conversations related to the effects of climate change by focusing on adaptive best management practices that provide economic and conservation benefits. Conversations should also focus on how best management practices conserve producers' lands, rather than how the best management practices mitigate climate change. Participants in this study indicated that the term "climate change" should be avoided when communicating with

cattle producers, due to the term's negative connotation, a finding supported by previous research and professional recommendations (Campbell Hibbs et al., 2014; Diehl et al., 2016; Heikkinen, 2015; Whitmarsh, 2009). It is also recommended that communicators and educators recognize that using the term "climate change" may inhibit dialogic conversation.

Findings from this study indicate that describing climate change in terms that are observable to cattle producers, through examples of droughts and floods and the increased frequency and severity of events, are more acceptable to this audience. Communication and education professionals working with cattle producers should focus on the local effects of climate change and the appropriate adaption strategies to protect against those effects, as opposed to emphasizing global effects of climate change. Similarly, discussions should be initiated on immediate impacts of cattle operations, instead of potential future scenarios. Producers also may be open to discussion of how local production practices could mitigate climate change effects through positive effects on local conservation efforts.

Additional research should be conducted on how contentious and complex topics, like climate change, can be better communicated using concrete or tangible examples with stakeholders. Because this study focused exclusively on Extension agents and NRCS personnel who worked with cattle producers in the Southwest and Mountain West, this study should be replicated with Extension agents and NRCS personnel in other geographic areas or with Extension agents in other subject matter areas who are dealing with contentious issues.

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Acknowledgment

Listening to Stories of Peers with Chronic Illnesses: Extracurricular Career Exploration Activity for High School Students

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Using achievement goal theory and positive youth development frameworks, this exploratory study reports findings of an innovative career exploration experience designed for high school student members of a health science academy (HSA). Students interested in healthcare careers (n = 9) completed two different interaction sessions with adolescents living with complex congenital heart defects or acquired heart disease (n = 9). The adolescents with cardiac conditions shared their medical treatment journey and life experiences with their peers using Beads of Courage, a narrative medicine tool, and a journal that guided their reflection. Post-interaction evaluation indicated that HSA participants ranked interacting with peers with cardiac conditions as the third extremely helpful learning experience out of nine options, next to shadowing in a healthcare setting and attending career informational meetings. This activity helped them reach learning outcomes listed by Health Occupation Students of America, such as increased sensitivity toward patients' stories and motivation toward healthcare career choice. Adolescents with cardiac conditions reported appreciation for the opportunity to teach about their healthcare experiences, and this increased their confidence in speaking about their medical treatment journey to others. The youth development technique of peer listening, advancing high school students' career exploration, and providing a platform to share their experience for adolescents with chronic illness merits further exploration.

Keywords: **y**outh development, health science students, extracurricular learning, adolescents with chronic illnesses, adolescents with complex heart defects

Introduction

High school is a time of career exploration and planning. As high school students move forward with their academic career, an emphasis is placed on creating goals and career plans. Extracurricular activities can be strategically utilized to maximize these career exploration efforts. Student engagement in such activities can be linked to continuing education after high school and furthering academic success (Lawson & Masyn, 2015). Much of the curricular and

extracurricular activities in which students engage are an investment because the skills and knowledge learned through these activities can impact their future careers and lives (Lawson & Masyn, 2015; Swanson, 2002). High school clubs and school organizations offer the opportunity for students to interact with others who share similar interests, receive mentoring and assistance from school faculty, and engage in scholarly activities outside of the classroom (Nwankwo & Okoye, 2015).

This paper reports the investigation of an underexplored career-related activity where high school students interested in healthcare careers learn from interacting with peers living with a chronic illness and listening to their narratives. The rationale for this exploratory study is that high school students may interact with peers with chronic illnesses daily in their classrooms and through other social engagement opportunities, but they may not have the opportunity to learn from their medical treatment journey. Planned interactions with peers who share stories of their unique medical journey allow students interested in a healthcare career the opportunity to better understand the lives and experiences of their peers with chronic illnesses. The experience also creates opportunities for improved listening skills and the development of empathy, which are important for students interested in future healthcare careers. The present research lets students interested in a healthcare career and peers living with a chronic illness interact in a novel structured dyadic manner and reports the findings using outcomes pursued by Health Occupations Students of America (HOSA). To our knowledge, this is the first study that reports this specific type of planned dyadic interaction between these two groups of adolescents, which could have implications for collaboration between high school professionals and psychosocial care providers in pediatric settings toward facilitating positive youth development outcomes.

Theoretical Framework

Achievement goal theory provided a framework for the current study to conceptualize the importance of how an individual understands the learning process, as well as how the context and environment affect learning (Deemer & Ostrowski, 2010). In this theory, the two dichotomous achievement goals of mastery and performance have been identified (Dweck & Leggett, 1988). Our study utilized only the mastery construct, which focuses on learning goals related to task-oriented understanding of concepts. Academic tasks and extracurricular activities can provide meaningful contexts and environments for students to develop competence and continue to improve and master skills. Challenging and novel experiences provide new skills and knowledge, while failures can be conceptualized as opportunities for learning and growth (Deemer & Ostrowski, 2010). Flum and Kaplan (2006) explain that an exploratory orientation describes a situation where school and extracurricular tasks are relevant to students' lives and offer opportunities to build skills and achieve immediate as well as long term goals. This exploratory orientation allows students to process new information, integrate it into their identity, and create meaning from events that are focused on fostering development. Extracurricular activities attended through memberships in high school clubs and organizations provide a

structure for this exploratory orientation and foster student growth and development (Flum & Kaplan, 2006).

Additionally, the positive youth development (PYD) perspective in developmental science (Damon, 2004; Lerner, 2017) suggests that along with individual strengths, there are also resources in the ecology of the youth, within families, schools, neighborhoods, and structured out-of-school activities that can promote positive qualities in adolescents and more desirable outcomes in their later development. The Five Cs model of PYD is recognized as an empirically supported approach to PYD and suggests that when there is an opportunity for alliance between individual strengths and ecological assets that promote healthy development, there is a likelihood for the Five Cs (caring, character, competence, confidence, and connection) to evolve across the course of an individual's development (Årdal, Holsen, Diseth, & Larsen, 2018; Lerner, 2017). Årdal and colleagues (2018) describe the Five Cs as follows: caring (sympathy and empathy for others), character (a moral sense of right and wrong, respect for societal and cultural behaviors, integrity and standards for correct behavior), competence (experienced competence in different life domains, including academic capability, social and interpersonal skills, and cognitive abilities), confidence (an overall positive self- regard, including a positive sense of self), and connection (positive, mutual contributing bonds with people and institutions). In the context of PYD, our study can add to the literature by exploring one learning opportunity that is based on a beneficial relational experience between individuals and their contexts and its feasibility to enhance the Five Cs attributes of adolescents.

Health Occupations Students

HOSA is an extracurricular organization that serves high school and collegiate students who are pursuing careers in the healthcare field (HOSA – Future Health Professionals, 2017). The mission of HOSA is to "enhance the delivery of compassionate, quality healthcare by providing opportunities for knowledge, skill and leadership development of all health science education students, therefore, helping each student to meet the needs of the healthcare community" (HOSA – Future Healthcare Professionals, 2017, p. 1). HOSA provides a list of career-related exploratory activities, including attending professional informational meetings, engaging with doctors and nurses as guest speakers, attending panel discussions, going on field trips to healthcare facilities, shadowing healthcare professionals, and participating in laboratory-based research (HOSA – Future Health Professionals, 2017). These activities are designed to accomplish several outcomes, including setting goals for lifelong planning, being flexible for possible shifts in career goals, managing basic survival skills, leading and using democratic processes, building self-esteem, raising social intelligence levels, taking pride in accomplishments, developing enthusiasm, maintaining motivation, accepting the spirit of competitiveness, communicating more effectively, and helping others without needing recognition (HOSA – Future Health Professionals, 2017). Local HOSA chapters provide opportunities for student members to build leadership and citizenship skills, develop physical

and mental wellbeing, and interact with professionals and other students. These clubs plan activities to help student members become more interested in and familiar with healthcare fields, acquire and practice skills such as critical thinking, experience a wider range of opportunities related to healthcare topics, and fine-tune skills that will be beneficial to future employers (Nwankwo & Okoye, 2015). For example, allowing high school students to participate in laboratory-based research provides them with the opportunity to gain understanding and confidence in scientific topics, increase their interest in scientific careers, and enhance their comprehension of the scientific method. While the benefits are numerous, the opportunities are limited because some researchers are hesitant to include a high school student in their laboratories (Harley, 2013).

Active listening skills allow healthcare professionals to keenly listen to an individual's medical treatment journey, which is important as these skills help them to build rapport and connect with patients, as well as fully understand their medical, treatment, and therapeutic needs (Easton & Atkin, 2011). Charon (2001) states that the effective practice of medicine, nursing, and other human service professions entails narrative competence, which requires authentic engagement and the ability to understand and follow up on the stories of others. Patient narratives allow the medical professionals to listen and imagine the experiences that the patient is sharing; this gives the opportunity for medical professionals to empathize with the viewpoint of the patient (Charon, 2001). This empathy is developed during healthcare education as future healthcare professionals learn how to listen to patients tell their stories. Listening authentically can be a means of generating trust, empowering and affirming the patient, and providing the opportunity for the professional to take on another person's point of view momentarily to better understand the patient's experiences (Haigh & Hardy, 2011).

Adolescents with Chronic Illnesses

Adolescents living with chronic illnesses experience enduring stress associated with extended treatment, recovery, and survivorship; this can contribute to emotional and behavioral problems (Compas, Jaser, Dunn, & Rodriguez, 2012). The impact of illnesses is intensified by stress encountered in other aspects of the adolescent's life. A chronic illness diagnosis can greatly impact an adolescent's development and lead to unique struggles with which the adolescent must cope, including in the school setting. Although they have additional challenges with which to cope, adolescents with chronic illnesses are very similar to their peers in many ways, including the need for guidance and positive influence as they encounter developmental and educational milestones (Suris, Michaud, & Viner, 2004). Thus, it is necessary to understand the ways that adolescents cope with stress to better elucidate processes of adjustment to illness and to develop effective interventions to enhance coping and adjustment (Compas et al., 2012). Medical professionals, school administrators, counselors, and educators can be mindful of these students' challenges and provide therapeutic resources (e.g., journaling, support groups, and specialized coping programs) for opportunities to explore and communicate their unique medical journey.

Adolescents with chronic illnesses exhibit a variety of communication preferences when talking about their diagnosis and treatment. This preference includes the desire for confidentiality and for the listener to be kind, understanding, and participate in the conversation (Klosinski & Farin, 2015; Shearer, Rempel, Norris, & Magill-Evans, 2013). These communication preferences impact the way adolescents with chronic illnesses interact with others, as well as whether and how much they choose to share the story of their medical treatment journey. Adolescents with complex congenital heart defects (CHD) experience frequent medical interventions, physical differences, activity limitations, social exclusion, feelings of isolation in school, and even bullying (Shearer et al., 2013). They also struggle with a variety of psychosocial and emotional issues such as striving for independence or realizing that their life will be different than peers because of their chronic medical condition (Connolly, Rutkowski, Auslender, & Artman, 2002). High school professionals can encourage adolescents with chronic illnesses to participate in narrative medicine opportunities to support the development of their communication skills and encourage positive self-expression, rather than feeling isolated due to their health condition.

Narrative Expression

The opportunity to explore and express their medical treatment journey through narrative medicine provides adolescents with chronic health conditions an outlet to express themselves and to learn coping skills. Narrative expression allows for the revelation of a diagnosis and symptoms, as well as offers the listener the opportunity to better understand the experiences of the individual who is sharing their story (Charon, 2004). As a form of narrative medicine, the Beads of Courage (BOC) program provides children and adolescents with chronic illnesses a unique tool for owning and sharing their medical treatment journey with others. In this program, the individual with a chronic illness is enrolled as a BOC member and receives a specific type of bead for each medical procedure or treatment milestone determined by a bead journal- guide (Beads of Courage, 2015). For example, a BOC member receives a black oval bead for every needle stick, a light green oval bead for radiological procedures, a yellow oval bead for every overnight stay in the hospital, a silver square bead with a heart for a cardiac surgery, or a fish-shaped bead for a transfer to a different medical unit or hospital. Thus, each BOC member creates his or her unique bead strand relevant to his or her unique medical journey and now has a tangible tool to help visualize and narrate his or her story. Additionally, journaling is another effective psychosocial intervention for individuals with chronic illnesses. Reflective journaling about emotional topics can help individuals cope with both psychological and physical healing during their medical treatment journey (Delamare, 2014).

Current Study

In this paper, we report how Health Science Academy (HSA) students interested in a healthcare career and adolescents living with heart disease experienced the process of shared engagement. For the current study, our approach capitalized on the strengths of HSA students' motivation for

learning and matched it with the opportunity to provide adolescents with chronic illnesses an outlet to share their healthcare journeys by using their BOC strands and a reflective journal. This PYD process involved reciprocally influential relations and engagement between both sets of youth to promote their development (Lerner, 2017).

This study's research questions are as follows: (a) Is planned interaction between a health sciences student and a peer with chronic illness deemed helpful for HOSA healthcare career-oriented learning outcomes? (b) What can high school students interested in a healthcare career learn from interacting with peers with a chronic illness such as congenital or acquired heart disease? (c) How do adolescents with heart disease describe the experience of sharing their medical treatment journey with high school peers during a structured dyadic interaction session?

Methods

The institutional review board of East Carolina University approved this study. This community-engaged research consisted of a collaborative partnership between academic researchers and the community working together for mutual benefit (Ross et al., 2010). The partnership entities were a child life department in a children's hospital, the Health Sciences Academy, and the researchers. This study is part of a three-phase study examining how retrospective enrollment in the BOC program could be helpful for adolescents with heart disease as they are learning to integrate their experience of living with their chronic health condition. Only the components pertinent to the current study are reported in this paper. We collected the HSA students' data during the second phase, and we collected the data regarding the dyadic exchange experience of adolescents with heart disease during the third phase of the study. We obtained appropriate parental consent and adolescent assent from each respondent.

Participants

Participants in this study included two separate groups of adolescents. The first group consisted of a convenience sample of nine (2 males, 7 females) high school students between 16-18 years old. To be eligible for the study, high school students had to be leadership members of the regional Health Science Academy (HSA) and be interested in healthcare careers. To recruit participants, the HSA program coordinator informed 19 eligible students about the study by mailing study information to their home. Individuals interested in participating in the study were requested to inform the HSA program coordinator, who then compiled the list and provided the list of confirmed participants to the researchers. The nine participants came from three different high schools within a public school district in eastern North Carolina. These students were sophomores ($n = 1$), juniors ($n = 3$), and seniors ($n = 5$). The students' racial/ethnic backgrounds were African American/Black ($n = 5$), Asian Indian ($n = 1$), and White ($n = 3$). Key participant characteristics are reported in Table 1. All HSA participants reported that they were also members of HOSA, as well as other organizations (e.g., the Red Cross), or were involved with other opportunities such as volunteering or shadowing in a clinical setting.

Table 1. Health Science Academy (HSA) - Participant Demographic Characteristics (n = 9)

Participant ID	Gender	Age in Years	Grade in School	Future Healthcare Career Aspirations
HSA P1	Female	18	12	Geriatric Physician
HSA P2	Female	18	11	Pediatric Clinical Nurse
HSA P3	Female	16	10	Pediatrician
HSA P4	Female	18	12	Specialized Nursing
HSA P5	Male	17	11	Pharmacist
HSA P6	Female	17	12	Pediatric Nurse
HSA P7	Male	17	12	Physical Therapist and Athletic Trainer
HSA P8	Female	17	12	Labor and Delivery Nurse Practitioner
HSA P9	Female	16	11	Pediatric Cardiologist

The second group of participants consisted of a convenience sample of nine (4 males, 5 females) adolescents between 13-18 years old who are living with a congenital heart defect (CHD) or acquired heart disease. Key participant characteristics of these adolescents are reported in Table 2.

Table 2. Adolescents with Heart Disease - Participant Demographic Characteristics (n = 9) and Dyadic Interaction Partners

Pseudonym	Gender	Age in Years	Grade in School	Heart Disease Diagnosis	Dyadic Interaction Partners
AG	Female	17	11	Single ventricle; 100% pacemaker dependent	HSA P7, HSA P9
Ronaldo	Male	13	8	Pulmonary Atresia	HSA P2, HSA P3
Daddy	Male	17	12	Catecholamine-induced ventricular tachycardia, implantable defibrillator	HSA P9, HSA P5
Swag	Male	13	8	Dextrocardia	HSA P4, HSA P1
David Benz	Male	16	10	Tetralogy of Fallot	HSA P1, HSA P3
Diva	Female	14	8	Hypoplastic Left Heart Syndrome, pacemaker	HSA P6, HSA P8
Alexis	Female	13	8	Tetralogy of Fallot	HSA P2, HSA P8
Lucy	Female	18	12	Hypertrophic cardiomyopathy	HSA P7, HSA P4
Dramatic41	Female	13	8	Heart aneurysm	HSA P5, HSA P6

Note: Adolescents with heart disease chose a pseudonym for themselves during the first session which they utilized throughout the research process. These are not their actual names.

To be eligible for the study, these adolescents had to have a diagnosis of a complex CHD or other heart disease acquired during childhood, must have been treated as an inpatient at our study's partnership hospital within the past five years as was verified by their child life specialist, and must have attended a specific camp for children with complex cardiac diagnoses. For the remainder of the paper, we refer to our participants as adolescents with heart disease, which includes both those with complex CHD or heart disease acquired in childhood. The camper list was used to recruit adolescents with heart disease. We mailed study information to the homes of 15 eligible participants, made follow up phone calls to answer further questions, and confirmed interest in study participation. This method resulted in a sample of nine participants. These adolescents were in high school ($n = 4$), and middle school ($n = 5$). Their racial/ethnic backgrounds were African American/Black ($n = 3$) and White ($n = 6$).

Procedures

To provide the context for the current study, we are briefly listing all three phases of the larger study. In the first phase, we retrospectively enrolled adolescents with heart disease as Beads of Courage members, during which they received their beads to signify their unique medical journey milestones. One parent of each adolescent was actively involved in this step.

During the second phase, which was conducted three weeks after phase one, these adolescents with heart disease interacted with HSA students and used their BOC beads strands and a journal to share their medical journey and story of living with heart disease. Participants met in a large conference room located on the researchers' university campus. The HSA participants completed two sessions of dyadic interactions where they were paired with a different adolescent with heart disease for each session (see Table 2). Each session lasted approximately 40 minutes. To encourage candid discussion, these interactive sessions were not audio recorded. Hence, there is no transcript available for these interactive sessions. The HSA participants were instructed to listen to their peers with heart disease and to ask questions of interest about their diagnosis, their medical treatment journey, experiences of living with a heart disease, and the significance of their beads. The adolescents with heart disease were instructed to share their unique medical treatment journey to the extent they felt comfortable. They used their BOC strands and the companion reflection journal developed by the researchers which served as a concrete memory trigger when sharing meaningful events of their medical treatment journey. The journal provided 14 open-ended reflection sections which encouraged self-exploration in conjunction with their BOC. For example, journal topics included prompts related to living with a cardiac diagnosis, hospital and clinic visits, treatments and procedures, and thoughts about using BOC. The first author, a certified child life specialist with extensive work experience with children and adolescents with heart disease, was present during the facilitated dyadic interactions. She was available to provide support if any adolescents with heart disease became distressed when discussing their treatment journey. Per the research protocol, one parent of the adolescent with CHD remained seated behind the adolescent during the interactive sessions. The

parent was available to assist with remembering information about the medical treatment journey or to provide support as needed while the adolescent with heart disease was sharing his or her story.

To evaluate their extracurricular learning experience, the HSA students completed a questionnaire titled, "HSA Student Feedback of Dyadic Peer Interaction Activity," immediately after listening to two different stories of the medical treatment journey and life experiences of adolescents with heart disease. Both sets of participants received a $25 gift card for a general department store for their time and effort in participating in this research study.

In the third phase, using a semi-structured interview tool titled "Experience with Retrospective Enrollment in the Beads of Courage Program," we interviewed the adolescents with heart disease regarding their entire BOC experience. During this interview, two questions specifically pertained to describing their experience of talking with the HSA peers: "What did you feel when telling your peer about your heart condition and medical treatment journey using your beads?" and "Did the beads and the journal help you process your thoughts about your medical treatment journey and do you think it helped when you talked with your peers?" The interviews were audio recorded. The second author repeatedly listened to the interviews and manually transcribed them verbatim. Another research team member listened to the interviews and verified the accuracy of these transcriptions.

Measures

We developed the HSA Student Feedback of Dyadic Peer Interaction Activity questionnaire after carefully reviewing HOSA's handbook. The handbook outlined typical activities provided to student members, proposed learning outcomes that HOSA aims to help student members reach, and information regarding how these activities and outcomes are interconnected (HOSA – Future Healthcare Professionals, 2017). Three subject experts (one HSA coordinator, and two social sciences faculty members who have prior experience working with youth) reviewed the tool to establish content validity. This nine-item questionnaire included four close- and five open-ended questions. The four closed-ended questions included (a) perceived helpfulness of prior participation in HSA initiated activities toward preparing for a healthcare career, (b) perceived helpfulness of their experience with this current research, (c) an indication of which healthcare professionals they have previously interacted with in a one-on-one setting, and (d) a report of which of the nine adapted HOSA outcomes they experienced due to their recent interactions with adolescents with heart disease. Using a standard Likert-type scale (1= extremely helpful, 2 = very helpful, 3 = somewhat helpful, 4 = slightly helpful, 5 = not at all helpful), participants rated their perceived level of helpfulness of participating in the nine typical learning opportunities provided through HOSA, as well as the current experience of listening to medical treatment journey stories of peers with heart disease. We provided HSA students with a list of the typical learning outcomes for HOSA programs and asked them to check all that applied to their current

experience of listening to peers' medical treatment journey and experience living with heart disease. The remaining five open-ended questions asked about healthcare club membership, their feelings about interacting with a peer with heart disease, what they learned because of interacting with a peer with heart disease, their understanding of the BOC program, and any additional feedback about their experience interacting with an adolescent with heart disease.

We also developed the semi-structured interview tool used to interview the adolescents with heart disease. Although for this study, we only used data from two interview questions, we are providing a brief description of the tool. The overarching question for the interview was, "Can you tell me what it was like for you to become a member of the Beads of Courage program?" There were 17 subquestions, which we used as further probes to encourage the adolescents with heart disease to share their experiences of receiving their BOC. Examples of these questions ranged from inquiring about what they learned regarding their unique medical treatment journey by being enrolled in the BOC program, to if they planned to use their beads in the future and, if so, in what ways.

Data Analysis

We analyzed the quantitative and qualitative data. We calculated the frequencies for the numeric items on the survey. Guided by van Manen's (1984) highlighting approach, both researchers independently completed content analysis of the open-ended responses from HSA participants and of the relevant interview responses from the participants with heart disease. We reviewed the data several times to understand participants' responses to discern potential themes. We extracted significant statements from the data, eliminated duplications, and used illustrative quotes to describe the results. By using analytic coding, we identified a recurrence of themes regarding what and how the participants experienced meaning in their interaction. We compared the themes and resolved any discrepancies in the interpretation.

Findings

A commonality in the responses of both sets of adolescents was their acknowledgement that this dyadic interaction opportunity was mutually beneficial. This section describes the learning achieved by HSA students in terms of HOSA based outcomes, as well as insights gained into the life of peers living with heart disease. This section also briefly provides insights from adolescents with heart disease regarding their experience of sharing their medical treatment journey with high school peers.

Learning Achieved by HSA Students during Current Study Participation

Overall HOSA related learning outcomes. Of the nine learning experiences typically provided through HOSA, which were explored in the HSA student questionnaire, shadowing in healthcare settings was perceived as extremely helpful by all nine (100%) of HSA students. Attending

career informational meetings was rated as extremely helpful by seven (77.78%) students. Notably, along with field trips to healthcare facilities, the learning experience of interacting with a peer with heart disease, which was designed for this research, was rated as extremely helpful by six (66.67%) HSA students. Other HOSA activities rated as extremely helpful by HSA students were observing in healthcare settings ($n = 4$, 44.44%); attending panel discussions, listening to guest speakers, or participating in competitive events ($n = 3$, 33.34%); and lab-based experiences or project participation ($n = 2$, 22.22%).

Additionally, like learning from interacting with peers with a chronic illness, HSA students reported prior participation in other comparable interaction-oriented learning opportunities typically offered through HOSA activities with a variety of healthcare professionals. These included nurses ($n = 9$, 100%), doctors ($n = 5$, 55.56%), psychosocial service professionals, such as social workers and chaplains ($n = 3$, 33.34%), and other healthcare professionals, such as physical therapists and occupational therapists ($n = 6$, 66.67%). Participants compared the value of their current learning experience to other HOSA-based interaction-oriented opportunities. For example, HSA P1stated,

> It was a very different experience. I am familiar with interacting with health professionals who explain diseases scientifically; however, hearing a patient describe their personal experience was insightful. Listening to someone my age describing the procedures and hospital visits they had to go through made the disease seem very real, which is something that I did not feel or experience while shadowing at the hospital.

To frame the experience of listening to the medical treatment journey of peers as a meaningful learning experience, the authors adapted HOSA's list of possible outcomes (HOSA – Future Health Professionals, 2017) and explored which of these outcomes were achieved. Of note, all nine HSA participants reported that the experience of interacting with a peer with a chronic illness helped them realize that they have a realistic healthcare career goal. This experience emphasized for them that one needs the ability to communicate effectively and increase their sensitivity to patients' stories and medical treatment journeys. It reaffirmed their belief in the purpose of healthcare services and helped them to understand that everyone is important in his or her own right and deserves to be treated with respect and love. Also, as a result of this experience, eight (88.89%) participants felt a sense of self-esteem, developed enthusiasm, and maintained motivation regarding their healthcare career choice. Several HSA participants ($n = 7$, 77.78%) were reminded to be flexible for possible career plan changes. Notably, of the ten possible outcomes that they could have experienced because of participating in this research, six (66.67%) HSA students reported that they experienced all ten possible outcomes, while three (33.34%) reported experiencing at least eight outcomes. Overall, two thirds ($n = 6$, 66.67%) reported that this experience of interacting with a peer with heart disease was extremely helpful; one third ($n = 3$, 33.34%) reported that the experience was very helpful.

Finally, some participants reported confirmation of future career choices. For example, HSA P6 explained that "this experience made me more firm on my choice to become a pediatric nurse," and HSA P9 stated that her experience "made me more confident in my goal which is to be a pediatric cardiologist."

Learning about peers' life experiences related to living with heart disease. Analysis of open-ended responses of HSA participants regarding first-hand understanding of the life experiences of peers with heart disease as a result of interacting with them revealed four themes: (a) learning about the physical limitations that are a result of complex CHD, (b) understanding the unique aspect of each persons' medical treatment journey, (c) experiencing empathy regarding suffering and resiliency associated with heart disease in adolescents, and (d) gaining new knowledge about heart anatomy or treatment for CHD. Several participants learned that individuals with complex CHD have various levels of physical limitations depending on the type of heart defect. For example, HSA P6 explained, "one may be able to participate in school sports while the other can't. One may miss a large amount of school time while the other doesn't. I was fortunate enough to experience this wide range during my interaction today." HSA P5 stated that "some people with heart defects can play sports but they have to be extra careful on what they do." When discussing suffering and restrictions, HSA P1 articulated, "patients with heart defects must suffer through a lot more than healthy people because of their disorder."

The participants also reported that they learned about the unique nature of each person's treatment journey. HSA P4 articulated how "it's all a journey; each person will have a different unique and special experience." HSA P7 realized the resiliency of his peer with heart disease. He stated, "even through being in the ICU, intubated, on the ventilation, being told they might die, and so on, they can still smile." Insightfully, participant HSA P2 realized that "[the adolescents with heart disease] didn't let their diagnosis stop them and prevent them from living," while HSA P4 stated that "interacting with my peers who have this disease opens up my mind to see how they may have a disease, but it doesn't define them." Several participants reported increased empathy, such as HSA P4 who learned, "how it affected [my peer with heart disease] socially and mentally," and HSA P9 hoped that these adolescents with heart disease would, "get a chance to share their stories with their peers because people deserve to know how strong they are."

Many participants reported new knowledge of heart anatomy and treatment procedures for heart defects. For example, HSA P3 realized that "the peers were born with a certain [heart] defect," which shows her understanding that CHD is typically a congenital birth defect. HSA P7 also explained how he learned that, "they have pacemakers to help their heart continue to beat." HSA P9 described her new understanding of defibrillators and "the amount of pain associated with the shock." She stated that she "never knew that these were necessary for treatment of tachycardia." Responses of two HSA students revealed some inaccurate understanding of heart function and treatment intentions.

BOC as a tool for communicating a complex medical journey. HSA participants reported learning several aspects about the BOC program such as how (a) the beads served as a new type of communication tool and made sharing easier for the adolescents with heart disease, (b) the program provided comfort and encouragement to the BOC members, and (c) each adolescent with heart disease had their own unique medical treatment journey. HSA P7 stated, "each BOC symbolize something that patient has been through," while HSA P4 said, "the program creates a way for these peers to tell a story and have something they can hold on to and share." HSA P9 explained, "I learned what different beads meant . . . the abundance of one color made me see what [medical treatment] the child has been through the most."

The overall value of interacting with a peer with heart disease. Analysis of open-ended responses regarding their overall perceptions and feelings about interacting with a peer with heart disease revealed two themes: (a) insight and affirmation related to the experience and (b) comparison of the experiences of adolescents with heart disease to their own life experiences. First, participants reported gaining new knowledge and understanding because of this experience and summarized their experience as "heartwarming," "insightful," "informative," and "helpful." HSA participants felt that listening directly to the adolescent with heart disease was helpful and allowed for a new level of understanding of their unique medical treatment journeys. HSA participants also realized the resiliency of adolescents with CHD; HSA P6 referred to them as "courageous children." HSA P7 explained that it was "heartwarming" to know that "even through the pain they suffer, they can still smile." HSA participants' comments regarding this extracurricular learning activity revealed that they were grateful for the experience and wanted to listen to more than two peers tell their stories. They hoped other high school students would get a similar experience of listening to peers with chronic illnesses share their stories and noted that this experience reinforced their career goals. For example, HSA P2 stated that "this experience will never be forgotten," and HSA P4 explained that "I want to encourage and help others like my peers. . . . This only furthers my compassion of going to school to be in the health field."

Second, the participants compared the experiences of the adolescents with heart disease to their own life experiences and described the emotions associated with that comparison. HSA P5 explained that it "felt good to interact with people with a different journey in life . . . some of the things they told me made me think about my life and things I need to change." He reinforced again, "there are more things in this world that people should worry about besides themselves." HSA P7 reported that "it was heartwarming to know how fortunate I truly am."

The Perceptions of Adolescents with Heart Disease about this Interaction with HSA Peers

In this section, we report the findings of how adolescents with heart disease described their experience of sharing their unique medical treatment journey with the HSA participants. They were aware that they would interact with high school peers interested in healthcare careers during phase two of the study. They unanimously summarized their interactions with HSA peers

as enjoyable and feeling like their "teachers." The adolescents with heart disease felt that they had the opportunity to share valuable information with the HSA students, which will be helpful for their HSA peers' learning and healthcare career goals. While two adolescents with heart disease reported feeling somewhat nervous initially, they both reported talking freely once they realized that their HSA peer "really liked listening [about their experiences]" and felt that "seeing the beads also helped them realize how much we've been through." One participant with heart disease explained that using the beads "made it a lot easier to tell . . . which bead means what, and what color means what, and it just helped me be able to explain, and I think help them understand more." He also reported that looking through his journal "helped me tell them what my diagnosis was . . . [and] what all my symptoms are." Another adolescent with heart disease said this interaction showed the HSA students that "people have [medical] conditions right beside them . . . it's not just when they come to the hospital." She continued, "I think it really helped them . . . see what other kids go through, like the problems other people have . . . [and] understand us more."

Overall, adolescents with heart disease appreciated the opportunity to share their medical treatment journey with peers interested in healthcare careers because it helped their peers learn something relevant to their future goals. They also appreciated that the HSA students were genuinely interested in talking with them and were sensitive. They also reported liking their peers' responses, such as seeing the different facial expressions or reactions of "shock." All adolescents with heart disease articulated their realization that they could meaningfully share their unique medical treatment journey to sensitize and help peers interested in healthcare careers. They felt a sense of pride in sharing their journey with their HSA peers. For example, a participant with heart disease said, "it was kind of fun to actually have people want to talk to me . . . and it's helping them . . . and I like teaching people that I know is smarter than me."

And another adolescent with heart disease expressed his feelings of pride as articulated below,

> I think when I was talking to one of them . . . he was shaking his head, and you know he was like thinking . . . gathering up all the information I told him and storing it into his mind so that he can use it. And one of the girls her reaction . . . she was kind of like in a little bit of a shock . . . because she couldn't believe, you know, how intelligent and smart I was.

The adolescents with heart disease expressed that talking to peers about their medical treatment journey empowered them and that they were able to practice how to share their story in a way that is beneficial to both the storyteller and the listener.

Discussion

Our study adds to the literature by providing initial support that intentionally structured interactions with peers with chronic illnesses can become a useful career exploration oriented

extracurricular learning activity for high school students who are interested in healthcare careers. Our findings provided further insight regarding the three research questions in understanding (a) if planned interactions between a health sciences student and a peer with chronic illness were considered helpful for HOSA healthcare career-oriented learning outcomes, (b) what high school students interested in a healthcare career learned from interacting with peers with heart disease, and (c) how adolescents with heart disease described the experience of sharing their medical treatment journey with high school peers during a structured dyadic interaction session.

As conceptualized in the achievement goal theory, participation in experiences that engage students in career exploration in a meaningful way can lead to students feeling that they are adept and able to achieve their collegiate and career goals (Deemer & Ostrowski, 2010). In underscoring the connection between research and application, this study supports the PYD perspective on developing youth and promoting positive qualities and outcomes in their development (Lerner, 2017; Theokas & Lerner, 2006). Two-thirds of the HSA participants in our study said that listening to a peer with heart disease's medical treatment journey was a novel activity for them and it provided them with an opportunity to reflect on their career path in a new way. HSA participants reported several benefits including gaining first-hand knowledge, increasing their motivation and drive for their healthcare career goals, and becoming inspired to help others like their peers with heart disease. Participants reported some gains in all nine of the HOSA outcomes through this learning activity (HOSA – Future Health Professionals, 2017).

Through their focused interactions, HSA participants more specifically gained knowledge about CHD and its treatment options, as well as restrictions that can result from living with heart disease. Additionally, they were sensitized to the positive attitudes and resilience of their peers with heart disease. Reflections of HSA participants affirming that listening to peers' stories confirmed their career choices for them or, "made me think about my life and things I need to change," highlighted achievement outcomes such as persistence or choice. We can also speculate that since the participants were HSA students and were already interested in health careers, that interest could be the moderating factor in this mastery goals dynamic. This idea could be examined more specifically in future research. Additionally, after participating in this novel experience, HSA participants showed mastery as demonstrated by their understanding of basic CHD related knowledge, critical thinking (e.g., understanding that all adolescents with heart disease will not have the same level of limitations) or making inferences (e.g., reflecting that heart disease did not define their peers' identity).

Through their narratives, adolescents with heart disease discussed their diagnoses, symptoms, as well as healthcare experiences and events that changed their lives because of their illness, with the students who were interested in healthcare careers. The narratives allowed the HSA students to build empathy by better understanding the life and medical experience of the adolescents with heart disease. Our study suggests that the narratives of the adolescents with heart disease allowed the HSA students to gain a new perspective regarding how some adolescents with this

chronic health condition defined their illness and how the disease affected their identity. They also realized how their peers are living and coping with heart disease. Our findings support Charon's (2004) observations regarding the importance of narrative medicine, considering that the HSA students were able to authentically engage with the adolescents with heart disease and affirm their experiences. Effective medical professionals must develop the skills required to engage in an authentic manner and genuinely listen to and understand other peoples' stories. These skills allow professionals to build rapport as they learn more about their patients' physical and therapeutic needs, as well as affirm their experiences (Charon 2001; Easton & Atkin, 2011; Haigh & Hardy, 2011). Through this research experience, we provided the HSA students an opportunity to practice crucial listening skills that will become necessary for them when they pursue healthcare careers in the future.

Exploratory orientation is a process in which individuals deliberately engage in internal or external action of seeking and processing information in relation to the self (Flum & Kaplan, 2006). Notably, because of participating in this planned relational dyadic interaction, the HSA students were able to compare their own life experiences with those of peers living with a chronic health condition. This activity can be viewed as an outcome of processing information in relation to self and the creation of self-relevant meaning, which in turn may have an integrative effect that could impact their overall development. Flum and Kaplan (2006) state that in the 21st-century job environment, individuals must have the capability to engage in activities in which they can relate their experiences to their own identity and respond flexibly to future career opportunities. The HSA participants appeared to address their realization of the importance of listening to their future patients. They may have participated in this experience while thinking about their career aspirations, but along with more insight into their future career, they also gained perspective on how it felt to be listening to a peer with a chronic illness.

Through the lens of the achievement goal theory, our findings suggest that HSA students had an increased likelihood of considering the task of listening to peers' medical treatment journey as contextually meaningful. This learning activity posed a mastery goal for them and could contribute toward adaptive motivational patterns, concentrating on developing competence and focusing on continued self-improvement (Deemer & Ostrowski, 2010; Dweck & Leggett, 1988). From the Five Cs model of PYD, our findings suggest that through the structured peer dyadic exchanges with peers living with chronic illnesses, high school students can become meaningfully engaged in a healthcare career exploration activity to promote their sense of caring, competence, and connection. On the other hand, the adolescents with chronic illnesses can practice communication skills toward reducing their isolation in school, and thus potentially enhancing their confidence and sense of connection with peers.

Implications for High School Professionals and Psychosocial Healthcare Providers

By providing more guidance and deliberating how the relationship of this type of learning activity (i.e., listening to peers' medical treatment journey and living with a chronic illness) and insights gained from it relates to their future career aspirations, HSA coordinators can more proactively help high school students recognize these meaningful connections. For example, it could be reinforced to the HSA students that to better serve their future patients, they must be able to actively listen to their clients, as well as engage with their stories in a genuine and nonjudgmental way (Easton & Atkin, 2011). It is also critical for them to develop empathy as they learn to see the world from someone else's perspective (Haigh & Hardy, 2011).

Health science organization administrators in high schools can create more organized and intentional opportunities for their student members to interact with peers with chronic illnesses. Collaboration between school-based professionals (e.g., HSA coordinators, school counselors, school nurses), and pediatric psychosocial providers (e.g., child life specialists, social workers) to identify adolescents with chronic health conditions willing to participate in such peer dyadic exchange opportunities could be mutually beneficial for both the HSA students and the adolescent with the chronic condition. In the same token, child life specialists could reach out to HSA coordinators to create similar dyadic exchange experiences for their patients who might benefit from it. Also, if high school administrators, counselors, and educators are aware of narrative medicine tools, it allows these school staff to potentially discuss the benefits of such resources to students with chronic healthcare needs. School staff could partner with psychosocial healthcare providers, such as child life specialists working at local children's hospitals, to help their students access such resources.

Limitations and Research Implications

While the findings of this novel extracurricular learning activity are noteworthy, the small sample recruited through convenience sampling techniques limits generalizability to other populations. A pre-post intervention study design with greater randomized sampling of student dyads could increase the generalizability of this type of extracurricular learning activity. The one-time intervention and its immediate evaluation did not allow for measuring a sustained impact and level of commitment to healthcare career preparation due to this learning activity. Another limitation is that researchers did not bring the HSA participants together with their HSA high school coordinator after their individualized interactions for a group discussion regarding what each participant learned from their peer interactions. This approach would allow for further processing and consideration of career goals in a focused educational environment as well as assist with clarifying any misconceptions the students may have. Including adolescents with different illnesses or disabilities to share their medical journey experiences could provide new information and understanding for HSA students.

Conclusions

To summarize, our innovative approach of pairing HSA students who are motivated to learn about healthcare careers with adolescents who have chronic illnesses and are open to sharing their healthcare journeys appears to benefit both sets of youth. Our findings merit the awareness and efforts of high school professionals to consider planned peer dyadic exchanges between students interested in healthcare careers and adolescents with chronic illnesses as a potential healthcare career exploration activity toward cultivating more sensitive healthcare practitioners. Also, high school professionals and psychosocial healthcare providers can collaboratively facilitate planned dyadic exchanges to allow adolescents with chronic illnesses to practice communication skills toward reducing their isolation in school and empowering them to take ownership of their unique medical treatment journeys.

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Jordan Horn, MS, CCLS was a graduate research assistant at East Carolina University when this study was conducted and is currently working as a certified child life specialist at University of North Carolina Children's Hospital in Chapel Hill, NC.

Acknowledgments

The Value of Jointly Held Conferences:
Benefits and Considerations for Planners and Participants

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University faculty and staff regularly participate in academic conferences as part of their professional responsibilities, yet the literature on their value is scarce, especially when examining conferences held jointly by two associations. Research is needed to help association leaders, planning committees, and attendees make informed decisions about conference organization and participation. This paper highlights the benefits and challenges of a jointly held academic conference for participants, association leaders, and organizational liaisons. In June of 2016, two Cooperative Extension associations, the National Association of Community Development Extension Professionals (NACDEP) and the Association of Natural Resource Extension Professionals (ANREP), jointly held a conference in Burlington, VT. The authors used surveys administered to conference participants, planning committee members, and liaisons at the United States Department of Agriculture National Institute of Food and Agriculture (NIFA) to collect data immediately following the conference and six months later. Using the Community Capitals Framework (CCF) to organize evaluation results, the authors discuss the benefits and challenges of planning, sponsoring, and attending the conference from the perspectives of these different groups. The authors focus on three community capitals: human capital, social capital, and cultural capital. Based on the findings, they offer recommendations for future evaluation of jointly held academic conferences.

Keywords: academic conferences, community capitals framework, conference planning, conference evaluation, Extension, jointly held conferences

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Introduction

Although "professional conferencing is a multibillion-dollar global industry" (Wiessner, Hatcher, Chapman, & Storberg-Walker, 2008, p. 367), the literature on the benefits of conferences is scarce (Chase & Kuehn, 2010), and even less has been written about jointly held conferences. Jointly held conferences are defined here as meetings of two distinct organizations that have expended equal effort and expense in planning and implementing the event (Street, 1991). In the 1980s and 1990s, there were some references to jointly held conferences (Caldwell, 1984; Enns & Jahn, 1996), but most only provide information about the proceedings. These references provide little specific information about planning and implementation procedures, or a description of benefits to participants.

Understanding why individuals choose to attend academic and professional conferences is important in assessing the impacts of jointly held professional conferences. Price (1993) theorized that there are four reasons for attending academic and professional meetings: education, networking, leadership, and professional savvy. The first three reasons include "sharing and receiving information, stimulating creative thinking, and rekindling or establishing contacts" (Wiessner et al., 2008, p. 367). The fourth, professional savvy, is related to learning about and becoming a member of the profession (Price, 1993). According to Price, education was the most important motivation for attendees, and leadership was the least important. Price also concluded that career stage was the best predictor of motivation for attendance. In the early career stage, attendees want to develop skills and a specialty. At conferences, they are looking for support and opportunities to demonstrate creativity in order to receive recognition. Mid-career attendees are more interested in integrating knowledge, updating information, and gaining new skills in areas such as training and coaching. They are also seeking recognition and esteem (Price, 1993).

The challenge of planning and implementing a jointly held conference is to produce results that benefit both organizations as well as their members. Steffen, Abu-Mulaweh, and Devine (2007) acknowledged that "hosting a joint conference between two distinct sections raises logistical and idiosyncratic differences," and that "for a successful conference, suitable for all attendees, each of these differences needs to be overcome or accommodated" (p. 30). In a time of shrinking budgets and an emphasis on outcomes, employers want to be assured that long-term benefits result from attending conferences. Schuttloffel (2010) said that jointly held conferences often occur because it sounds like a good thing to do, rather than because they result in long-term results. She warned that the benefits of conferences often end when the conference concludes. Long-term impacts should be assessed to understand the lasting contributions of the jointly held conference on participants' professional lives.

Case Study: Jointly Held Conference of Two Extension Service Associations

This study drew data from the evaluation of the Association of Natural Resource Extension Professionals (ANREP) and National Association of Community Development Extension Professionals (NACDEP) joint conference, "Building a Path to Resiliency: Uniting Natural Resources and Community Development," held in Burlington, VT, from June 26 to June 29, 2016. This conference served as a case study to assess the benefits of a jointly held conference as they relate to the mission of the Cooperative Extension System, which is to "advance agriculture, the environment, human health and well-being, and communities" (Agriculture Extension Act of 1914). A jointly held conference between two Extension organizations focusing on natural resources and community development moves the Extension mission towards its explicit goal of improving the well-being of individuals and their communities.

Conference Organizational Components

The United States Department of Agriculture (USDA) Cooperative Extension System (CES) organizes around four program areas: agriculture and natural resources, 4-H and youth development, family and consumer sciences, and community development. Two of these areas were represented at the jointly held conference described in this paper: natural resources and community development. The two associations that held this conference were

- *The Association of Natural Resource Extension Professionals*: ANREP is a national association for CES professionals working in environmental education, fisheries, forestry, wood sciences, range, recreation, waste management, water, wildlife, energy, and related disciplines. The association's objectives include (a) facilitating information sharing; (b) promoting educational and training efforts among governmental agencies, private natural resources groups, related industries, and other natural resource professionals; (c) developing, sponsoring, and promoting educational and training programs and activities that advance the practice of natural resource management; and (d) strengthening communication with Extension administration at county, state, and federal levels. ANREP, founded in 1996, has about 400 members.
- *The National Association of Community Development Extension Professionals*: NACDEP, founded in 2003, is dedicated to improving the visibility, coordination, professional status, and resource base of community and economic development Extension programs and professionals. Its purpose is to bring together community and economic development Extension professionals to (a) facilitate information sharing; (b) promote cooperation between states, regions, governmental agencies, private community development groups, related organizations, and professionals; (c) advance sound community development practices; (d) provide support and promote activities and programs at the national level; (e) advance the professional status of Extension community and economic development professionals; (f) strengthen

communication with Extension administrative entities; (g) expanded applied social science research; and (h) promote community and economic development within the land-grant system. NACDEP has approximately 260 members.

Conference Design and Content

The conference was planned and implemented by two committees: the Steering Committee and the Planning Committee. The Steering Committee comprised representatives from both associations, including presidents, presidents-elect, past-presidents, treasurers, host state delegates, and association management staff. The Planning Committee comprised volunteers from the host state, as well as from both associations. The conference contained the following components: an opening reception, concurrent sessions, regional meetings, general sessions, poster sessions, business meetings, award ceremonies, mobile workshops at community and economic development sites near Burlington, VT, and pre- and post-conference workshops.

Framework for Discussing the Benefits of Jointly Held Conferences

The authors employ the Community Capitals Framework (CCF) to structure the discussion of jointly held conference benefits and use it as a conceptual framework to organize evaluation results. The CCF includes seven types of social capital: built, financial, political, natural, cultural, social, and human (Flora & Flora, 2013). An examination of evaluation results using the CCF can help to focus future conference planning, leverage political and financial capital, and identify strengths and opportunities of each organization separately and together. This framework provides a lens to examine the resources and relationships within a community and their contribution to healthy ecosystems, vital economies, and social well-being. An in-depth theoretical discussion, along with the advantages and disadvantages of applying CCF to the community development context, can be found in, for example, Baron, Field, and Schuller (2000); Pigg, Gasteyer, Martin, Keating, and Apaliya (2013); and Theodori, Luloff, Brennan, and Bridger (2016).

The authors began with an assumption that a jointly held conference is an investment into several capitals that strengthen individual professionals and their organizations. They choose the CCF because it is well suited to examine groups linked by common professional or academic interests (Emery, Fey, & Flora, 2006). Used as an organizing strategy, the CCF supports several measures of the benefits of jointly held conferences, particularly collaboration among academics. These include, for example, sharing resources, dividing labor, alleviating academic isolation, maintaining motivation for scholarship, and creating energy through interpersonal relationships (Hord, 1986). An additional measurable benefit is collaborative knowledge construction. For example, in 2005, researchers from North Carolina State University collaborated with the Academy of Human Resource Development International Research Conference to pilot a process where knowledge construction and learning became focal points of the conference (Wiessner et al., 2008).

For this paper, the authors focus on three capitals: (a) *human capitals* which include the skills and abilities of people to access resources and knowledge and to lead others; (b) *social capitals* which are the connections among people and organizations; and (c) *cultural capitals* which relate to the way people know and act within their organizations or conferences. Since the CCF was not used in the construction of the questionnaire, not all of the capitals were given equal weight among the questions that were asked. For example, *financial capitals*, which are the available financial resources that can be invested in the organizations or conferences (modified from Emery et al., 2006), were identified by National Institute of Food and Agriculture (NIFA) liaisons but were not included as benefits in the participant evaluation tools. As the authors analyzed the qualitative information gathered from planners and NIFA liaisons, they realized the value of this framework in interpreting the results, and if the questionnaire were used again, it would include questions related to *financial capitals*.

Purpose and Objectives of the Study

The purpose of this study is to examine the benefits and challenges of a jointly held academic conference for participants, association leaders, and organizational liaisons.

Specific study objectives included (a) assess satisfaction and usefulness, (b) describe change in knowledge and awareness of conference-related topics and issues, (c) examine behavioral change in terms of professional activities, (d) assess factors that influenced decisions to attend, and (e) document observations of planners and liaisons related to program implementation and usefulness to related organizations. Several questions guided the analysis:

1) What are the benefits, if any, of jointly held professional conferences?
2) Are there drawbacks, and if so, what are they?
3) Given limited time and funding, do associated organizations support jointly held professional conferences as a way of encouraging pollination of ideas and communication across organizations?

Methodology

Data Collection Procedures

The evaluation design included an online post-conference survey sent immediately following the close of the conference and an online post-conference survey sent six months after the end of the conference. In addition to the surveys sent to all conference participants, an interview-type questionnaire with open-ended questions was sent by email to key individuals from both associations who were involved in planning the conference and to association liaisons at the USDA NIFA.

A census sample was used for the post-conference and follow-up surveys. All 443 conference participants were asked to complete those online surveys. As much as possible, recommended procedures for internet surveys were followed (Dillman, Smyth, & Christian, 2014; Monroe & Adams, 2012). To maximize response rates, Dillman et al. (2014) recommended personalized, repeated contact. At the conference, participants were asked to look for an email with a link to the evaluation survey. The first email was sent shortly after the conference concluded. Evaluators were unable to personalize contact because the internet survey program used, Survey Builder, did not have that capability. They did, however, contact participants three times over a four-week period. The second and third emails were sent in subsequent weeks, with the subject line and the day of the week and time of day varying with each email. The purpose of this procedure was to get the attention of participants who check their email on different days at different times. All emails included a link to the online survey and contact information in case there were questions or problems with the survey. The same protocol was followed for the six-month follow-up survey. No identifying information other than standard demographics was collected or used in the analysis.

The survey of planners and liaisons also took place six months after the conference and addressed the benefits and challenges of the conference to their respective organizations through several open-ended questions. This survey was implemented using one university's Qualtrics system. Planners and liaisons were sent two reminders.

Evaluation Tools

The authors of this article were members of the conference evaluation team that designed the surveys used in this study. Although many of the questions on the participant post-conference and follow-up surveys were those traditionally used on post-conference questionnaires, several were specifically designed to capture collaborative aspects and other issues related to jointly held conferences that the authors discovered in their review of the literature. Again, CCF designations were not made in the survey design process and were used only in analyzing the qualitative results. The surveys were not validated before use, but as will be explained later in this paper, question groupings indicated internal consistency based on the responses in this study.

On both participant surveys (immediately after the conference and six months later), questions were designed to capture satisfaction with the conference itself on a 4-point Likert-type scale (*not satisfied* to *very satisfied*). Questions addressed whether components of the program were useful, how important certain factors were in influencing attendance at the conference, satisfaction with the registration process and the accommodations, and how respondents rated the conference overall. The five items in this scale had a Cronbach's alpha of 0.704, indicating internal consistency, which means that the questions taken together measure conference satisfaction. Participants were also asked about the benefits and barriers to attending a jointly held conference. The first set of questions asked how attending the 2016 ANREP/NACDEP

joint conference benefited them. The response statements were (a) increased my understanding of issues relevant to my work; (b) increased my contacts for future collaborations; (c) gave me a new understanding of the mission/function of an Extension association other than my own; (d) increased my awareness of programs related to my work; (e) provided ideas on how to access resources related to my work; (f) met my professional development needs; and (g) will help me do a better job of meeting the needs of my students, audiences, or clients. Respondents indicated their degree of agreement or disagreement on a four-point scale (1 = *strongly disagree* to 4 = *strongly agree*). This scale had a Cronbach's alpha of .89, indicating internal consistency.

Another question asked how likely participants were to carry out a variety of actions in the next 12 months based on what they learned at this conference. Actions offered were (a) develop or restructure programs, products, or services for my students, audiences, or clients; (b) develop or revamp the evaluation strategy for my program, service, or product; (c) begin to plan a collaborative project with someone I connected with at the conference; (d) develop a grant proposal with other conference attendees; (e) join an association committee or workgroup; (f) run for an office or position within one of the associations; and (g) plan to attend the academic meeting of another Extension association. The response choices were 3 = *very likely*, 2 = *maybe*, 1 = *unlikely*, and 0 = *does not apply*. *Does not apply* responses were dropped from the analysis. This scale had a Cronbach's alpha of .675, indicating slightly less internal consistency, meaning that some people may favor certain factors over others.

Respondents were asked about factors that influenced their decision to register for the conference, with options of (a) conference location; (b) conference cost; (c) conference theme; (d) opportunity to give a presentation, poster, or workshop; (e) opportunity to network and have fellowship with Extension association peers; and (f) opportunity to learn from members of another Extension association. Response choices were 1 = *not important,* 2 = *slightly important,* 3 = *important*, and 4 = *very important*. This scale had a Cronbach's alpha of .572, again showing less internal consistency. Respondents were also asked to write what they thought was the most important benefit of having a jointly held Extension association conference.

On the six-month follow-up survey, participants were asked whether information, resources, and contacts from the ANREP/NACDEP conference helped them accomplish any of the items listed on the initial survey except "attended the professional meeting of another Extension association." This item was eliminated because not enough time had elapsed for this to have occurred. The response categories on the post-survey were 1 = *no and do not intend to do so*; 2 = *no, but intend to*; 3 = *partially accomplished*; and 4 = a*ccomplished*. Open-ended questions included (a) Did attending the conference contribute to your productivity in other ways? Please explain; (b) Please describe at least one specific accomplishment that you can attribute to your attendance at the joint 2016 ANREP/NACDEP conference; and (c) Please provide any additional comments or suggestions that you would like to share with the leaders of either association or with the planners of future conferences.

Open-ended questions on the conference planners' survey included (a) If you were involved in the initial decision to conduct a joint conference with ANREP and NACDEP, what were the things mentioned in support of a joint conference? (b) What were the things mentioned in opposition to a joint conference? (c) What were some of the challenges you and others faced in planning this joint conference? (d) What were the differences in planning this conference and planning other conferences in which you have been involved? (e) What advice would you give to others planning joint conferences like this one? (f) In what ways do you think participants benefited from the joint conference? Are there any other groups you would like to plan a joint conference with in the future? (g) If so, what are they and why, and (h) If not, why not?

Survey Responses

Of the 443 conference attendees, there were 253 responses to the first survey, a 57% return rate. There were 64 responses to the follow-up survey, a 14.5% return rate (based on the total number of attendees). Tables 1–3 provide participant demographics. The demographic percentages from the initial and follow-up surveys remained fairly consistent. A slightly higher percentage of participants belonged to NACDEP than ANREP, but representation was closely divided between the two organizations. Less than 7% of respondents did not belong to either organization. The largest group of participants were between the ages of 50 and 69; however, participants ages 35 to 40 were well represented. The majority worked for a university Extension service, which was expected since ANREP and NACDEP are Extension professional associations developed for specific subject-matter areas.

Table 1. Association Membership of Attendees and Respondents

Membership	Conference Attendees	% Attendees	# Initial Survey	% Initial Survey	# Follow-up Survey	% Follow-up Survey
ANREP only	174	39.4	107	42.3	25	39.0
NACDEP only	211	47.7	119	47.0	32	50.0
Both assoc.	13	2.9	10	4.0	3	4.7
Neither assoc.	44	10.0	17	6.7	4	6.3
Total	442	100.0	253	100.0	64	100.0

Table 2. Age of Respondents

Age	# Initial Survey	% Initial Survey	# Follow-up Survey	% Follow-up Survey
Under 35	37	14.6	9	13.2
35–49	91	36.0	26	38.2
50–69	118	46.6	32	47.1
Total responding	246	97.2	67	98.5
No response	7	2.8	1	1.5
Total	253	100.0	68	100.0

Table 3. Work Affiliation of Respondents

Work Affiliation	# Initial Survey	% Initial Survey	# Follow-up Survey	% Follow-up Survey
University Extension	225	88.9	65	95.6
University Non-Extension	10	4.0	1	1.5
County agency	5	2.0	0	0
Federal agency	2	.8	1	1.5
Nonprofit agency	1	.4	0	0
Private organization	1	.4	0	0
Student	3	1.2	0	0
Total responding	247	97.7	67	98.6
No response	6	2.3	1	1.4
Total	253	100.0	68	100.0

Data Analysis

Survey data were exported from the online survey software to Excel and imported into an SPSS database for analysis. Descriptive analyses were performed and are described in the results section. Responses to open-ended questions were analyzed using content analysis, which associates participant responses from the two professional association groups to predefined themes based on the community capitals in the CCF (Ezzy, 2002). Sometimes the responses included more than one thought or answer, and if that was the case, they were divided into multiple responses. This allowed researchers to pull apart answers into smaller statements and reassemble them in new ways (Krueger & Casey, 2000; Strauss & Corbin 1990). To ensure clear understanding and uniform interpretation, each row of an Excel spreadsheet contained a response, and each column contained a capital and a definition of the capital. To guard against personal biases that might influence findings, all four researchers independently coded all 156 comments with one or more community capitals that they thought described the comment best. After each researcher did their independent assessment, one point was assigned to the capital every time it was chosen, and the total points were summed.

Evaluation Results

Factors That Influenced Participants' Decisions to Attend the Jointly Held Conference

Four factors stood out as influencing attendees' decision to attend and are listed in order of importance: (a) opportunity to network and have fellowship with Extension association peers; (b) opportunity to give a presentation, poster, or workshop; (c) opportunity to learn from members of another Extension association; and (d) location. Opportunity to network and have fellowship with Extension association peers ranked the highest for all participants, ANREP participants, and NACDEP participants (Table 4).

Table 4. Factors that Influenced Participants' Decision to Attend

Decision Factors	M – all participants	M – ANREP	M – NACDEP
Opportunity to network and have fellowship with Extension association peers	3.5640	3.5535	3.5811
Opportunity to give a presentation, poster, or workshop	3.0850	3.0318	3.1081
Opportunity to learn from members of another Extension association	2.9197	2.8038	3.0946
Location	2.8452	2.7750	2.9467
Conference cost	2.7183	2.7438	2.7067
Conference theme (*building resiliency*)	2.2008	2.2063	2.1667

Response scale: 1 = *not important;* 2 = *slightly important;* 3 = *important*; 4 = *very important*.

Immediate Benefits to Participants Attending the Jointly Held Conference

On the initial survey, respondents rated the benefits that a person gained or might gain in the future from a jointly held conference. Although the means were all over 3.00 on a 4-point scale, the top three benefits for all respondents together – as well as for respondents divided by association group – were (a) increased contacts for future collaborations, (b) increased awareness of programs related to one's work, and (c) increased understanding of issues relevant to one's work. The means for NACDEP were consistently higher than for ANREP and also for all participants taken together (Table 5).

Table 5. Immediate Benefits of Attending the Conference

Benefit	Capital	M – all participants	M – ANREP	M – NACDEP
Increased my contacts for future collaborations	Social	3.5000	3.4310	3.5878
Increased my awareness of programs related to my work	Human	3.4677	3.4310	3.5077
Increased my understanding of issues relevant to my work	Human	3.4080	3.3898	3.4427
Provided ideas on how to access resources related to my work	Human	3.3198	3.3448	3.3256
Will help me do a better job of meeting the needs of my students, audiences, or clients	Human	3.2903	3.2759	3.3130
Met my professional development needs	Human	3.2686	3.2719	3.2992
Gave me a new understanding of the mission/function of an Extension association other than my own	Cultural	3.0504	3.0090	3.1040

Response scale: 1 = *not important;* 2 = *slightly important;* 3 = *important*; 4 = *very important*.

The content analysis of the qualitative data illustrates the same three benefits: increased awareness of programs related to one's work (*human capital*), increased contacts for future collaborations (*social capital*), and becoming a part of a larger team (*cultural capital*).

Participants most frequently cited *human capital* and *social capital*, with *cultural capital* third (Table 6). *Natural* and *financial* capitals were also noted but will not be included in the discussion portion of this paper because the number of comments in these categories was so small.

Table 6. Comments Related to the Benefits of Attending the Conference

Community Capital	Total Number of Points	Examples of Comments
Human – skills and abilities to access resources	336	I heard several presentations that I intend to follow up on to learn more. The topics will help me build skills and (hopefully) lead to better work. Saw examples of online courses being run by other ANREP members. Learned interesting new information on a wide array of topics.
Social – connections between people	282	This conference (ANREP) always helps me to "recharge my batteries" with kindred spirits interested in Extension scholarship. An added benefit was meeting with NACDEP. Met people from my university I hadn't met before!
Cultural – how people act within the community	129	I am a new employee of Extension, so I was able to learn more about the greater team I have become a part of.
Natural –assets in the community	21	The mobile workshop allowed me to see agritourism in another part of the US. Very interesting and very educational. Would like to use my newly made contacts to bring a group of producers for a visit.
Financial –assets invested in the community	15	An opportunity to collaborate on a regional Hatch grant

Long-Term Benefits for Participants

Long-term benefits of conference attendance are evidenced by participants' conference-related actions after returning home. To examine long-term benefits, responses on the initial and follow-up surveys were compared. In the initial survey, respondents were asked to respond to a series of prompts about their intent to use what they had learned or experienced at the conference. As seen in Table 7, participants most often selected *maybe* or *very likely* for the options "begin plans for a collaborative project with someone I connected with at the conference" (79.5%) and

"develop or restructure programs, products, or services" (84.0%). The majority selected *unlikely* for "run for an office or position within one of the associations" (76.4%) and "plan to attend the professional meeting of another Extension association" (59.6%). Participants were also able to choose "does not apply," and these responses were eliminated when calculating the total percentages listed in Table 7.

Table 7. Intention to Take Action after the Conference

Intentions	Capital	#/% Unlikely	#/% Maybe	#/% Very Likely	#/% Total
Develop or restructure programs, products, or services for my students, audiences, or clients	Human	37/16.1	108/47.0	85/37.0	230/100.0
Begin plans for a collaborative project with someone I connected with at the conference	Social	48/20.5	99/42.3	87/37.2	234/100.0
Develop or revamp the evaluation strategy for my program, service, or product	Human	65/28.5	120/52.6	43/18.9	228/100.0
Join an association committee or workgroup	Cultural	128/55.4	63/27.3	40/17.3	231/100.0
Plan to attend the professional meeting of another Extension association	Cultural	140/59.6	64/27.2	31/13.2	235/100.0
Develop a grant proposal with other conference attendees	Social	119/51.6	90/39.0	22/9.5	231/100.0
Run for an office or position within one of the associations	Cultural	172/76.4	44/19.6	9/4.0	225/100.0

On the six-month follow-up survey, participants were asked if they had accomplished any of the actions listed on the post-conference survey. As seen in Table 8, the most frequently cited fully accomplished action within the first six months was to *join an association committee or workgroup* (25.8%), however, if you combine partially accomplished with accomplished actions, *developing or restructuring programs, products, or services* is at the top of the list of accomplishments. This is consistent with the list of intended actions in Table 7. It is also noteworthy, that the combined percentage of *partially accomplished* and *accomplished* responses for attendees who said that they *began plans for a collaborative project with someone I connected with at the conference* (47.0%) put it second on the list of actions, which coincides with the high combined *maybe* and *very likely* ranking for that action in Table 7. It is also an indication that collaborative activity may be an important benefit of jointly held conferences. Although developing or revamping an evaluation strategy came in third in Table 7, it ended up last in Table 8. The reason for this discrepancy may be the short period of time between the post-conference survey and the follow-up survey.

Table 8. Actions Reported on the Six-Month Follow-Up Survey in Order of Highest Number/Percentage of Participants that Either Partially or Fully Accomplished the Action

Accomplishments	Capitals	#/% No, do not intend	#/% No, but do intend	#/% Partially accomp- lished	#/% Accomp- lished	#/% Total
Developed or restructured programs, products, or services for my students, audiences, or clients	Human	15/22.4	13/19.4	28/41.8	11/16.4	67/100.0
Began plans for a collaborative project with someone I connected with at the conference	Social	20/29.4	16/23.5	19/27.9	13/19.1	68/100.0
Developed or revamped the evaluation strategy for my program, service, or product	Human	27/42.2	14/21.9	21/32.8	2/3.1	64/100.0
Joined an association committee or workgroup	Cultural	39/59.1	7/10.6	3/4.5	17/25.8	66/100.0
Ran for an office or position within one of the associations	Cultural	59/89.4	2/3.0	0/0.0	5/7.6	66/100.0
Developed a grant proposal with other conference attendees	Social	48/73.8	14/21.5	1/1.5	2/3.1	65/100.0

Benefits of Jointly Held Conferences from the Perspective of Planners

Ten conference planners were surveyed, and six responded to the online survey (60%). The content of the answers was analyzed by looking for themes based on the capitals in the CCF. When asked about justifications for planning a jointly held conference (anticipated benefits), the planners' responses fell within three rationales: sharing resources (*human capital*), bridging the cultural or academic divide (*cultural capital*), and building professional relationships (*social capital*). When asked what benefits they thought participants gained (perceived benefits), their answers fell within the same categories (Table 9).

Table 9. Benefits Anticipated and Perceived by Conference Planners

Benefits	Capital	Examples of Comments	
		Anticipated Benefits	**Perceived Benefits**
Sharing knowledge and educational resources	Human	• A unique learning opportunity different from what we do in our 'regular' biennial conferences. • An opportunity for learning from one another.	• They got to see some things they would not otherwise get to see. • Many benefited from the opportunity to attend sessions a little out of their discipline and gain new perspectives.
Building professional relationships	Social	• Opportunities to get to know colleagues in other disciplines.	• Opportunities to meet Extension professionals in other disciplines. • The interactions between participants from different associations helped create new connections. • Some, I think, made new connections that they normally would not have.
Alleviating academic isolation	Cultural	• Way to build connections and future opportunities with NACDEP. • Synergy and win/win for members of each organization. • A means to build relationships between the two organizations. • A unique opportunity to our members -- different from typical conferences.	• Chance to stretch their thinking by participating in a presentation in other subject matter areas. • Got to see "how the other folks" do things. • Got to hear presentations from outside their usual focus area. • For people specialized in either discipline, it was a good crossover opportunity. • Got to be with a sister association that works in a similar area. Natural resources and community development have strong ties.
Saving the cost of attending more than one conference	Financial	• Savings in travel costs for dual members or people who might like to go to two events.	• For attendees working in both community development and natural resources, they did not have to choose which conference to attend.

Additional information provided by planners dealt with some of the logistical and social aspects of a jointly held conference. In response to questions about the planning and implementation process, they told evaluators that putting together this joint conference took substantially more effort and time from association officers and committee members. In addition, they said they had to make more effort to communicate with each other and with participants and negotiate with committee members and administrators to make conference-related decisions that would ensure the relevance of the conference to both associations.

Planners said that coordinating between two associations with different cultures and traditions presented unique challenges that might not occur in a single-organization conference. They said that cultural differences could be mitigated by coming to an agreement on specific parts of the conference (e.g., whether the awards ceremonies should be held separately or together), agreeing on the financial arrangements between the two associations early in the process, and jointly working with a conference organizer. They said that many aspects of the process went smoothly because of similarities between their respective associations and conferences. Each association did, however, have some unique traditions (one held an evening karaoke event, whereas the other held a 5k run), so those details needed to be addressed. In the end, those two activities were roughly equally attended by members of both associations; however, neither association adopted the other's special event for their own subsequent conference.

Benefits of Jointly Held Conferences from the Perspective of NIFA Liaisons

Finally, two national program leaders from NIFA, who serve as liaisons to NACDEP and ANREP, and who attended the conference were asked (a) Are NIFA leaders supportive of jointly held conferences? If so, what are they doing to promote this practice? (b) Do you think jointly held conferences foster cooperation among Extension associations and organizations? (3) Do you think jointly held conferences foster integrated, multi-state projects? If so, how? If not, why not? Table 10 summarizes their responses based on the three CCF capitals. The NIFA liaisons saw the potential benefit of a jointly held conference in allowing for networking and learning outside of one's main discipline; however, they also acknowledged time and resource constraints that may prevent adoption and long-term commitment of NIFA from promoting these types of jointly held conferences.

Table 10. Interview Responses of NIFA National Liaisons to ANREP and NACDEP

Question	Capital	Responses from NIFA Liaisons
What are NIFA leaders doing to promote jointly held conferences?	Cultural	• Share with listservs • Maintain other communication channels – internal and external • Send NIFA National Program Leaders (to conferences) • Have NIFA National Program Leaders participate in the planning process of future conferences
Do you think jointly held conferences foster cooperation among Extension associations and organizations?	Human Social Cultural	• Yes. They provide the opportunity to share interdisciplinary knowledge • Yes. They encourage networking beyond one's primary discipline or function • Yes. The joint ANREP/NACDEP conference is leading to a discussion among other groups to see if there is interest in a joint conference. • Yes. If opportunities were encouraged, then the likelihood of greater cooperation across Extension and its professional organizations would be enhanced.

Question	Capital	Responses from NIFA Liaisons
	Financial	• Maybe not. The potential could be somewhat limited by not having opportunities, time, or resources to explore cross-function efforts.
Do you think jointly held conferences foster integrated, multistate projects?	Cultural	• Yes, but there needs to be a champion who is willing to lead the effort and engage the respective groups. • If folks see it as a one-off, they are less likely to commit to a longer-term approach.
	Financial	• The possibility exists, but the potential cannot be realized without dedicated resources and activities that encourage uptake and adoption.

Discussion

Learning new information and skills is an important benefit of jointly held conferences. As mentioned earlier in this article, Price (1993) theorized that there were four reasons for attending academic and professional meetings. The first was education or *human capital*. Price (1993) said that education was the most important motivation for attendees. Similarly, Merriam, Caffarella, and Baumgartner (2007) demonstrated, using social cognitive theory, that conferences are important to the social learning process because they offer formal and informal methods of socializing and experiential learning. Indeed, conference attendees can learn as much from informal conversations during conference coffee breaks, and other social activities, as from the concurrent sessions (Senese, 2010). Along these lines, Hord (1996) said one way to assess the benefits of jointly held conferences is to measure the extent to which resources are shared.

In the study presented here, the largest number of participant comments about the benefits of this conference referred to gaining skills and abilities needed to access resources and knowledge. Participants also rated highly the *human capital* items listed in the benefits section of the conference survey – awareness of programs, understanding issues related to work, and ideas on how to access resources. The largest percentage of participants thought that they would develop or restructure programs based on what they had learned at the conference (*human capital*), and this proved to be the action that the largest percentage of the participants partially or fully accomplished. Although the mean score for the item, "The conference experience gave me an opportunity to learn from members of another Extension association," was slightly lower than for other items on the list of conference benefits, it still fell within the *agreed* response in the scale.

Networking and collaboration with new groups is another important benefit (Cherrstrom, 2012). The second reason for attending academic and professional meetings, according to Price, is networking. Hord (1996) suggests that conference planners might document the extent to which they are able to divide the labor involved in planning and implementing the conference, assess participants' feelings of academic isolation, and measure changes in their motivation to do joint scholarship. These *social capitals* have the potential to become long-term, lasting impacts of

jointly held conferences (Schuttloffel, 2010). In this study, participants rated "increased my contacts for future collaborations," a *social capital*, the highest on a list of benefits. More than three-fourths of the participants said they might or were very likely to begin plans for a collaborative project with someone they connected with at the conference, and 47% said that they had either begun or accomplished that objective. In addition, comments about *social capital* were the second-highest category among all capitals mentioned in response to the open-ended questions. Conference planners also targeted *social capital* in their answers. They saw a definite win/win scenario, synergy, and opportunity for connections as they planned and implemented the jointly held conference. They also said that they had to make more effort to communicate with each other during the planning process and had to negotiate conference-related decisions to ensure the relevance of the conference to both associations. Although the researchers did not ask participants if their collaborative project was with a member of another association, there is a chance that some cross-association projects were created.

Both conference planners and NIFA partners emphasized the *social capital* benefits of jointly held conferences, specifically the interaction and networking between association members and the exchange of information, skills, resources, and potential projects. Unlike the 2005 Academy of Human Resource Development International Research Conference (Wiessner et al., 2008), opportunities for collaborative knowledge construction were not a planned part of the Extension conference. Whether or not new knowledge construction will come out of the collaborations begun by conference participants is unknown and could be the subject of follow-up evaluation. Subsequent conferences planners might want to intentionally include opportunities for new knowledge construction.

All three groups indicated that *cultural capital* – the way people know and act within their organizations or conference – was a benefit of the conference. This corresponds to the fourth item on Price's list – professional savvy. In this study, the difference between those who said they intended to join an association committee or workgroup and those who, on the follow-up survey, said that they actually did join, was noteworthy. On the initial survey, 17.3% of attendees indicated that they were very likely to join a committee or workgroup following the conference, yet 25.8% of respondents said that they accomplished it at the time of the six-month follow-up survey. The *unlikely/no* group on the post-conference survey and the follow-up survey were within five percentage points of each other, so it appears that many *maybe* respondents took the leap and joined groups or committees of their association. If this is the case, it could indicate a longer-term *social capital* impact.

Conference planners, knowing that cultural and financial issues might arise, took a risk when they decided to combine association conferences. They recognized that each organization had different needs and that these needs had to be recognized and accommodated (Steffen et al., 2007). After it was over, they indicated that *human capital* was one of the positive impacts of the collaboration, noting that many participants benefited from the opportunity to attend sessions

"a little out of their discipline and gain new perspectives." Similarly, liaisons representing NIFA, those individuals who are often responsible for encouraging collaborative work and implementing and funding conferences, thought that *human capital* was a benefit of jointly held conferences. They noted that these conferences might provide the opportunity to share interdisciplinary knowledge.

Conference planners expressed hope that the joint ANREP/NACDEP conference will lead to a discussion among other groups to see if there is interest in holding jointly held conferences. The NIFA liaisons agreed that the success of the joint ANREP/NACDEP conference would stimulate discussion among other NIFA administrators about improving the culture of Extension, by finding opportunities for multiple Extension-related disciplines to meet together in a conference setting on a more regular basis. The caution, however, is that this will require a "champion" or "champions" who will dedicate themselves to moving this idea forward. Although NIFA partners see the human, social, and cultural capital benefits of jointly held conferences, they expressed concern about the increased need for resources and additional responsibilities involved in staging these types of conferences.

To our knowledge, the social capitals framework has not entered into discussions about conference benefits. Along with the results presented here, the framework helps others interested in conference planning, including creating stated goals, objectives, and structure. The social capitals framework is a way of understanding how conference participants interact (Flora & Flora, 2013). By considering human capital, *social capital, cultural capital,* and *financial capital,* the framework provides a convenient way of framing conference benefits and, therefore, designing conference activities to achieve optimal value for participants' time and registration fees, as well as external supporters such as NIFA. Further, the framework can provide structured support both before and after the conference to enable participants to benefit even more, a necessary result, as noted by several authors (e.g., Borg, 2015; Schuttloffel, 2010; Wiessner et al., 2008).

Limitations of the Study

Several limitations within the design of this study should be acknowledged. First, the return rate of the post-survey was 57.2% percent, so the opinions of 43% of the attendees at the conference are unknown. Only 14.4% of the 442 conference participants returned the six-month follow-up survey (or 25.2% of those who completed the post-survey). The authors do not know for sure that these missing respondents would answer similar to the actual respondents, even though they are also members of one of the two professional associations that sponsored the conference. NACDEP members represented a higher percentage of the respondents, even though ANREP's overall membership is higher. Another important limitation of the study is that the CCF was not used in planning any of the evaluation tools but was used only in analysis of the data. This was a particular problem because participants who answered quantitative questions were not given the

opportunity to select answers that represented all seven capitals. The other four capitals were not adequately explored in this study but might be the focus of future research. For example, financial capitals were not addressed in the post-conference survey or follow-up survey but did appear in the interview question responses from planners and NIFA liaisons. It is important to emphasize that the findings may not be generalizable to other jointly held conferences but can be used as suggestions of benefits and challenges that might be present in other similar conferences.

Conclusion

This research teaches us that jointly held conferences, such as the NACDEP/ANREP conference that was held in June 2016 in Burlington, VT, have strengths as well as challenges that planners, partners, and participants need to consider. The strengths have been described in terms of the organizational capitals that build collaboration among academics through shared resources, collaborative knowledge construction, alleviation of academic isolation, and creation of energy through interpersonal relationships in the academic community (Hord, 1986). This exploratory study has shown that a jointly held conference is an investment into at least three CCF capitals – *human, social,* and *cultural*. Members of each association gained new knowledge and skills (*human capital*), they began to form networks (*social capital*), and some attendees decided to join committees and groups related to their association and planned to attend a conference sponsored by another organization (*cultural capital*). Many participants at the conference applauded the efforts made by planners to create the jointly held conference and understood its value to their professional development experience. Planners from both associations closed the conference feeling that it was a success, and the post-conference and follow-up evaluations supported those perceptions.

More evaluation studies are needed on the subject of jointly held conferences. The authors recommend that as other associations consider planning and offering jointly held conferences, they compare data on the benefits and challenges of jointly held conferences with data from single organization conferences. Other evaluation methods might be considered, such as Ripple Effects Mapping (REM), which maps the flow of outcomes from multiple stakeholders. The CCF is just one framework that could be used to design evaluation tools and discuss benefits and challenges. Frameworks from other disciplines, such as community development, leadership studies, group dynamics, and the like, may aid in this discussion. Studies such as the one reported here are important because planners, sponsors, and participants with tightening budgets need to decide how to spend limited professional development funds. They need to decide whether they or the organization they represent benefit most from joint or separate events. Future planners cannot assume that a jointly held conference will be especially attractive to all members. They need to convince them about the benefits and challenges with empirical evidence.

As mentioned in the introduction, Schuttloffel (2010) found that jointly held conferences often occur because it sounds like a good thing to do, rather than because they have long-term positive results. She warned that the benefits of such conferences often end when the conference concludes. This sentiment was echoed by a NIFA liaison who believed that jointly held conferences needed a champion who will ensure that resources are available for "uptake and adoption." That partner commented, "If folks see it (a jointly held conference) as a one-off, they are less likely to commit to a longer-term approach." It makes sense to assess the impacts and challenges of jointly held conferences to better understand how they contribute to professional development in ways that single organization conferences might not. The challenge of planning and implementing a jointly held conference is to produce results that benefit both of the associations involved and their members (Steffen et al., 2007).

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School-Based Agricultural Education Students' Attitudes and Beliefs toward International Agricultural Concepts

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The purpose of this study was to determine the attitudes and beliefs of school-based agriculture education (SBAE) students toward international agricultural concepts. This study builds on several previous studies (Conner, Greer, & Stripling, 2017; Elliot & Yanik, 2002; Heinert, Lavery, & Roberts, 2014; Radhakrishna, Leite, & Domer, 2003). To explore new geographic regions of the United States, two states, one from the Midwest and one from the Northwest, were purposively identified. A 46-item instrument that measures attitudes, beliefs, understanding, and instruction in relation to international agriculture developed by Radhakrishna et al. (2003) was administered to students in three schools representing both rural and urban areas. A total of 133 surveys were returned, for a 55.2% response rate. Overall, students held positive attitudes and beliefs toward international agricultural concepts. Students expressed a need to understand basic geography in relation to international agricultural concepts, and students strongly agreed to concepts and information necessary to understand international agricultural concepts. When historical data were synthesized with data from this study, mean scores from all five studies across all four constructs were consistently high. Future research should focus on how students develop their attitudes and beliefs about international agriculture.

Keywords: School-based agricultural education, international agriculture, attitudes, beliefs

Introduction

The agriculture industry is a global enterprise (FAO, 2010). Globalization has affected nearly every facet of agriculture, from production to input supplies, and marketing and distribution. Today, one need only walk through a grocery store and read the country of origin or attempt to find the origination of a favorite candy bar to quickly realize that globalization has touched every part of the agricultural industry.

> Agriculture, like other sectors, operates increasingly across international boundaries, with even fresh fruits and vegetables shipped around the world; this introduces a complex regulatory regime, transportation logistics, and the need to work with different cultures, laws, and individuals. This intertwining of agriculture, culture, regulations, and concerns makes critical the need for professionals who have international exposure and sensitivities. (National Research Council, 2009, p. 31)

As the world's population increases to an estimated 9.5 billion people by 2050, agriculture finds itself in the world's eye as many work to tackle complex issues such as food security (FAO, 2009). While much within the agricultural industry happens at the local level, few can doubt the globally connected nature of today's agricultural industry.

As a result of a globally connected world, education and training for an effective agricultural workforce must include at least an international dimension to meet demands from the agricultural industry (Harder et al., 2015). To succeed in today's ever more globalized world, students must think globally and be able to consider different cultural perspectives (Crawford & Kirby, 2008).

> For the U.S. food and agricultural sector to be in a position to compete in the global markets of the 21st century, the food and agricultural education system must be expanded and strengthened to address the challenges and opportunities facing the global food system. (Mercier, 2015, p. 1)

The Longview Foundation (2008) issued a report describing a globally competent student as one that "can describe a body of knowledge about world regions, cultures, and global issues, and skills and dispositions to engage responsibly and effectively in a global environment" (p. 7). Many in higher education in agricultural education and Extension have recently shown interest in and written about efforts to provide education and training for staff, pre-service teachers of agriculture, and Extension agents (Conner & Roberts, 2013; Conner, Roberts, & Harder, 2013; Foster, Rice, Foster, & Barrick, 2014; Rice, Foster, Miller-Foster, & Barrick, 2014) on topics related to international agriculture and globalization.

Over the years, international programming and curricula have existed within agricultural education. Ibezim and McCracken (1994) reported that well over half (58%) of instructors of agriculture in 12 states from the Midwest reported teaching international topics in agriculture. Further, Michigan developed a manual called *Internationalizing Agricultural Education Programs* in the late 1980s (Hossain, Moore, & Elliot, 1995). After teachers had been using the manual for a few years, Hossain et al. (1995) found that, overall, teachers in Michigan had positive attitudes toward including an international focus in their curriculum compared to teachers who had not used the manual. Since that time, little empirical evidence exists to suggest that SBAE (school-based agriculture education) is using curricula with an international focus.

The National FFA Organization offers some international programs, such as the International Leadership Seminar for State Officers, FFA Stars and Proficiency Travel Seminar, and the National FFA Officers Global Experience (FFA, 2015). While the programs offered by the National FFA are impactful to participants, they have a limited capacity, only affecting a few hundred students per year. Also, the 2009 student delegation to the National FFA Convention called for greater opportunities for global engagement within agricultural education (National Council for Agricultural Education, 2011). This ultimately led to the creation of *A Strategy for Enhancing Global Engagement in Agricultural Education* (The National Council for Agricultural Education, 2011), a published document that presents ideas to increase the global engagement that takes place in middle school, high school, and university agricultural education programs.

The agricultural industry demands a globally minded and competent university graduate (National Research Council, 2009). Colleges of agriculture in many states have tasked themselves with providing international experiences for their students to fulfill these industry needs (Etling & Barbuto, 2002; Irani, Place, & Friedel, 2005). However, there is currently no national curricula for international agriculture for SBAE. Beyond the current efforts of the National FFA Organization, little is done to influence the behaviors of SBAE students to develop global competencies. Creating a national curriculum focused on producing globally-minded high school students (SBAE) would help to prepare high school students that are knowledgeable about international agriculture.

A series of studies using a virtually identical instrument and similar methods that span over a decade informs SBAE concerning the attitudes and beliefs of students related to international agriculture. Elliot and Yanik (2002, 2004) surveyed high school students of agriculture in Arizona and found they had neutral to low attitude and belief scores toward international agricultural concepts. Radhakrishna et al. (2003) found that high school students in Pennsylvania had somewhat higher attitude and belief scores toward concepts of international agriculture than those of Elliot and Yanik (2004). Heinert et al. (2014) found that, overall, Florida students from two high schools had positive attitudes and beliefs toward international agricultural concepts. Finally, when Conner et al. (2017) repeated the study in Tennessee, they found that, once again, students held positive attitudes and beliefs toward international agricultural concepts. Collectively, these studies originate from the southwest, southeast, and northeast U.S., leaving a gap in knowledge about the attitudes and beliefs toward international agricultural concepts of students from the Midwest and Northwest.

Two priorities of the *National Research Agenda of the American Association for Agricultural Education* (AAAE; Roberts, Harder, & Brashears, 2016) were addressed by the present study: Priority 3 – Sufficient Scientific and Professional Workforce that Addresses the Challenges of the 21st Century and Priority 4 – Meaningful, Engaged Learning in All Environments. This study aligns with the AAAE research priorities by allowing the profession to better understand the needs and interests of high school students in the area of international agriculture. Findings

from this study will add to the literature base and help agricultural educational professionals meet the needs of a diverse audience.

This study fills a necessary research gap by providing evidence, both geographically and temporally, that when synthesized with previous studies, creates a holistic national perspective of students' attitudes and beliefs toward international agricultural concepts. The collective findings will inform international agriculture curricular efforts by providing a foundation of international agricultural concepts for curricular writers to integrate into curricula. There is value in repeating research with similar methods but in a different context (Ary, Jacobs, Sorensen, & Razavieh, 2010). While purposive samples cannot be generalized to a greater audience (Ary et al., 2010), several purposive samples, taken from a large geographic area and gathered over time, help to form a relatively cogent picture of a phenomenon.

Theoretical Framework

This study was guided by the theory of planned behavior (Ajzen, 1985). The constructs of Ajzen's theory of planned behavior consist of a) attitude toward the behavior, b) subjective norm, and c) perceived behavioral control. According to Ajzen, an understanding of the three primary constructs indicate an individual's general intention to act (Ajzen, 1985). Based on this, the attitudes and beliefs that high school students carry toward international agricultural concepts indicate their intentions, and consequently, their behavior. SBAE programs hoping to influence the behavior of program graduates to pursue international coursework and experiences in post-secondary education or global careers must understand the attitudes and beliefs of their students to influence such behavior. A conceptual framework (see Figure 1) developed by Radhakrishna et al. (2013) was used to depict how attitudes and beliefs, knowledge, demographic characteristics, school characteristics, and international experiences may influence an individual's awareness and understanding of international agricultural concepts.

Figure 1. Conceptual Framework for this Study (Radhakrishna et al., 2003)
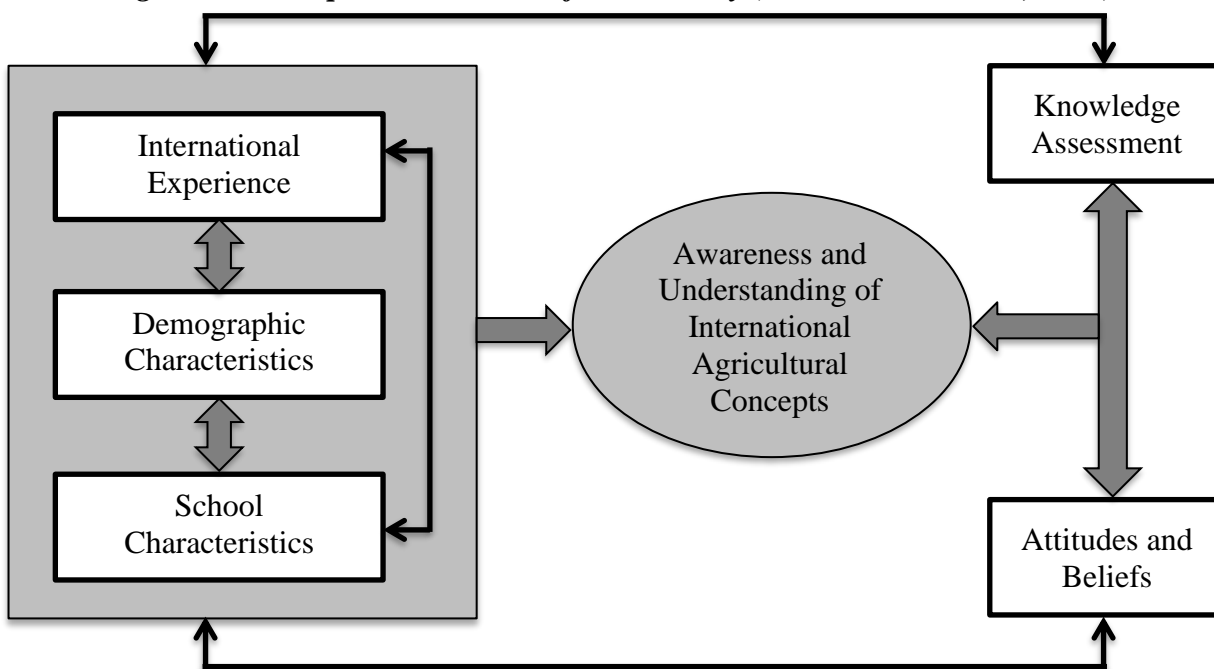
Purpose and Objectives

The purpose of this study was to determine the attitudes and beliefs of SBAE students toward international agricultural concepts. Specific objectives of the study were to:

1) Determine, using primary data, the attitudes and beliefs of students toward international agricultural concepts.
2) Determine, using primary data, student's views of the importance of concepts to be included in curricula design for a better understanding of international agriculture.
3) Determine, using primary data, if attitudes, beliefs, understanding, and attitudes toward instruction in relation to international agriculture concepts differ based on gender and school.
4) Compare historical and primary findings on attitudes, beliefs, understanding, and instruction toward international agricultural concepts.

Methodology

This study was descriptive in nature and utilized a 46-item instrument. The instrument was based on a survey designed by Radhakrishna et al. (2003), which was adapted from an instrument developed by Elliot and Yanik (2002). Based on Radhakrishna et al. (2003), the 46-items were categorized into four constructs: attitudes toward international agricultural concepts, beliefs toward international agricultural concepts, understanding of international agricultural concepts, and attitudes toward instruction of international agricultural concepts. Additionally, 11 questions focusing on participant background and demographics were included in the

questionnaire. Demographic questions were the same questions used in previous studies (Conner et al., 2017; Heinert et al., 2014; Radhakrishna et al., 2003) and focused on sex, class standing, school location, size of graduating class, and whether or not the participant lived on a farm. Each question/statement used a five-point Likert rating scale to measure the participants' responses. The rating scale consisted of the following: 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neutral*, 4 = *Agree*, and 5 = *Strongly Agree*. Radhakrishna et al. (2003) established content and face validity for the questionnaire by using four experts. Post hoc reliability analysis allowed us to determine the reliability of the instrument: attitudes toward international agricultural concepts (14 items, $\alpha = 0.89$), understanding of international agricultural concepts (6 items, $\alpha = 0.90$), beliefs toward international agricultural concepts (13 items, $\alpha = 0.86$), and attitudes toward instruction of international agricultural concepts (13 items, $\alpha = 0.90$).

To expand upon previous studies (Conner et al., 2017; Elliot & Yanik, 2002; Heinert et al., 2014; Radhakrishna et al., 2003), two states were purposively identified to participate in this study to explore a new geographic region of the United States. This study included one Midwestern state (Nebraska) and one Northwestern state (Oregon). One teacher educator in each of the two states was contacted and asked to identify urban and rural SBAE programs that would be willing to participate in this study. The teacher educators provided contact information for the participants.

Four schools were identified by the teacher educators and contacted. Three of the four schools agreed to participate and represented both urban and rural populations. School A is a large (2,300 students) urban high school in Oregon. The school is located just outside a metropolitan area. School A has over 130 faculty and staff members and offers many co-curricular and extra-curricular activities for its students. School B is a small (94 students) rural high school in Nebraska. The school is located in the north-central part of Nebraska and employs 26 certified staff members for the entire school district. School C represents a small (324 students) rural high school in Oregon. School C is a charter school and is the only high school in its school district.

The target population for this study was the SBAE population of students at the three schools that were selected for this study. However, the majority of the potential participants were under the age of 18 and required parental consent to participate in the study. The lack of returned parental consent forms was a limitation of the study and contributed to lowering the response rate. School A had 75 of its 103 SBAE students complete the questionnaire, school B had 46 of its 55 SBAE students complete the questionnaire, and school C had 12 of its 83 students complete the questionnaire. The total response rate was 55.2% of the target population. Hard copies of the questionnaires and the IRB parental consent forms were mailed to each of the three SBAE programs. Each agricultural teacher verbally explained the questionnaire/study to the students and sent the parental consent forms home with the students to ask for their parents' signature if they wanted to complete the questionnaire. Once the parental consent forms were returned to the agricultural teacher, the teacher had the appropriate students complete the questionnaire. Three emails were sent at one-week intervals to the agriculture teachers to remind

them to administer the survey instrument to the students who returned the parental consent form. The parental consent forms and the questionnaires were then mailed back to the researchers. Assent was implied from the return of the informed consent form and the survey. The data were compiled in a Microsoft Excel document and then analyzed using SPSS 22 to report descriptive statistics, which included means, frequencies, percentages, and standard deviations.

Results

The demographic profile of the student participants is depicted in Table 1. Most of the student participants were female (59.5%), either freshmen (32.8%) or seniors (27.5%), attended school in an urban environment (55.7%), had less than 100 (46.5%) students in their graduating class, and did not live on a farm (74.4%).

Table 1. Demographic Profile of Students (n = 133)

Variable	f	%
Sex		
Female	78	59.5
Male	53	40.5
Class Standing		
Freshman	43	32.8
Sophomore	29	22.1
Junior	23	17.6
Senior	36	27.5
School Location		
Rural	58	44.3
Urban	73	55.7
Size of Graduating Class		
Less than 100	60	46.5
101-200	4	3.1
201-300	21	16.3
301-400	13	10.1
401-500	4	3.1
500+	27	20.9
Live on Farm		
Yes	34	25.6
No	99	74.4

Note: Percentages do not calculate to 100% due to missing data

Objective one was to determine, using primary data, the attitudes and beliefs of students toward international agricultural concepts. Table 2 shows that the student participants held positive attitudes toward international agricultural concepts (Overall Mean = 4.13; SD = 0.52). Most (95.5%) agreed or strongly agreed with the following statement: *I should understand about agriculture and its importance to the world economy.* However, only 63.6% of the student

participants agreed or strongly agreed with the statement, *I should know more about the cultures of other countries* (3% disagreed or strongly disagreed; 33.3% neutral). The overwhelming majority agreed or strongly agreed with each item in Table 2.

Table 2. Students' Attitudes Toward International Agricultural Concepts (n = 133)

Statement	SD %	D %	N %	A %	SA %
1. I should understand about agriculture and its importance to the world economy.	0.0	0.8	3.8	29.3	66.2
2. Coming changes in world agriculture will have some impact on me in the future.	0.0	0.0	11.5	50.0	38.5
3. World agriculture has some effect on food prices in my local grocery store.	1.6	1.6	8.5	49.6	38.8
4. I should know more about how world agriculture affects food prices in the local grocery store.	0.0	3.8	11.3	43.6	41.4
5. I should know more about how world events affect local agriculture in my community.	0.8	1.5	15.2	48.5	34.1
6. World events have some impact on agriculture in my community.	0.8	3.1	15.4	50.8	30.0
7. I should understand more about the differences between developing and developed countries.	0.0	0.0	19.5	49.6	30.8
8. Learning more about agriculture in other countries will help me understand future changes in world agriculture.	0.8	1.5	18.2	43.2	36.4
9. I should understand how the culture of other countries impacts agriculture in those countries.	2.3	2.3	17.4	50.0	28.0
10. I should have a better understanding about how politics affect world agriculture.	0.8	3.8	18.0	48.9	28.6
11. I need to know more about world agriculture.	1.5	3.0	18.8	42.9	33.8
12. I should know more about other countries as a market for U.S. agricultural products.	0.0	1.5	26.3	43.6	28.6
13. Marketing U.S. agricultural products to other countries will help the U.S. economy.	0.0	1.5	27.1	36.8	34.6
14. I should know more about the cultures of other countries.	1.5	1.5	33.3	35.6	28.0
				Overall Mean: 4.13 (*SD* = 0.52)	

Note: Scale was 1 = *Strongly Disagree* to 5 = *Strongly Agree*.

Positive beliefs, as shown in Table 3, toward international agricultural concepts were held by the student participants (Overall Mean = 3.97; *SD* = 0.51). Student participants recognized that agriculture involves more than farming (95.3 % agree or strongly agree). Interestingly, the overwhelming majority agreed or strongly agreed with each statement in Table 3, except the following: *That I can learn about world agriculture from listening to selected radio programs* (13.6% disagreed or strongly disagreed; 40.2% neutral).

Table 3. Students' Beliefs Toward International Agricultural Concepts (n = 133)

Statement	SD %	D %	N %	A %	SA %
1. Agriculture involves more than farming.	0.8	0.0	3.9	17.8	77.5
2. That I can learn about world agriculture from attending events such as fairs or shows.	1.5	1.5	13.6	48.5	34.8
3. Natural disasters affect the price of food in my local grocery store.	1.5	1.5	15.2	47.0	34.8
4. U.S. trade partners (customers) help U.S. agriculture.	0.8	0.8	18.8	49.6	30.1
5. That a variety of audio-visual materials (websites, slides, videos, films, etc.) would help me learn more about world agriculture.	0.0	3.0	22.7	47.0	27.3
6. The U.S. should help other countries with food aid in times of famine.	0.0	3.8	22.7	41.7	31.8
7. An understanding of other cultures will help U.S. food producers to market their products abroad.	0.0	3.8	22.9	45.8	27.5
8. That guest speakers who are knowledgeable regarding international events would help me learn more about world agriculture.	0.8	0.8	26.5	48.5	23.5
9. An understanding of international political issues will help U.S. producers market their products abroad.	0.0	1.5	29.5	49.2	19.7
10. That computer programs that are internationally oriented would help me learn more about world agriculture.	0.0	2.3	31.8	46.2	19.7
11. Competition with other producers worldwide helps keep food prices rather reasonable.	1.5	7.6	26.7	44.3	19.8
12. That I can learn about world agriculture from watching selected television programs.	1.5	6.8	31.8	45.5	14.4
13. That I can learn about world agriculture from listening to selected radio programs.	3.8	9.8	40.2	34.1	12.1
				Overall Mean: 3.97 (*SD* = 0.51)	

Note: Scale was 1 = *Strongly Disagree* to 5 = *Strongly Agree.*

Objective two was to determine, using primary data, student's views of the importance of concepts to be included in curricula design for a better understanding of international agriculture. Table 4 summarizes the findings for this construct. Student participants expressed a need to understand basic geography in relation to international agricultural concepts (Overall Mean = 4.14; *SD* = 0.58). *Understanding location of states in major regions in the United States* was agreed or strongly agreed upon by 90.8% of the student participants. Interestingly, 76.2% agreed or strongly agreed that they needed to be able to locate the countries around the world.

Table 4. Students' Perception of Geography in Relation to International Agricultural Concepts (n = 133)

To help me understand agriculture from a global perspective, I should have a basic understanding of the United States and world geography, such as:	SD %	D %	N %	A %	SA %
1. Location of states in major regions in the United States.	0.0	0.8	8.5	58.5	32.3
2. Major regions in the United States.	0.8	0.0	11.5	51.5	36.2
3. The seven continents in the world.	0.0	3.1	13.1	45.4	38.5
4. Countries that are the most densely populated.	0.8	3.1	19.1	39.7	37.4
5. Major waterways used in shipping agricultural products.	0.0	0.8	22.9	41.2	35.1
6. Location of countries in the world.	0.0	2.3	21.5	46.2	30.0

Note: Scale was 1 = *Strongly Disagree* to 5 = *Strongly Agree.*

Table 5 identifies some concepts/information student participants felt were necessary to understand international agricultural concepts (Overall Mean = 3.97; *SD* = 0.51). *Global agriculture and the effects on American agriculture* was at the top of the list as 83.7% agreed or strongly agreed. Only 67.2% agreed or strongly agreed that information presented should not be too complex. The overwhelming majority agreed or strongly agreed with each item in Table 5.

Table 5. Students' Perception of Instruction for Understanding International Agricultural Concepts (n = 133)

I am more likely to understand global agriculture if given instruction about:	SD %	D %	N %	A %	SA %
1. Global agriculture and the effects on American agriculture.	0.8	1.6	14.0	52.7	31.0
2. Major agricultural products that are produced in my country.	0.8	1.5	14.5	59.5	23.7
3. What happens to local products once they leave the community?	0.8	0.8	18.5	48.5	31.5
4. How the U.S. works with other countries on economic issues.	0.8	0.8	19.4	55.0	24.0
5. How the U.S. works with other countries on political issues.	1.6	2.3	27.9	48.8	19.4
6. How the U.S. works with other countries on humanitarian issues.	2.3	3.1	28.2	46.6	19.8
A proposed set of lessons on international issues should:					
7. Prepare me for future changes in global agriculture.	0.7	1.1	15.2	51.1	31.6
8. Help me understand global agricultural marketing systems.	0.0	1.5	16.9	55.4	26.2
9. Provide an opportunity to interact with people in other parts of the world.	0.0	1.5	17.7	49.2	31.5
10. Help me function better as a citizen in a global society.	0.8	3.1	19.8	52.7	23.7
11. Provide me with an appreciation of the interdependency of nations around the world.	0.0	1.6	27.1	55.0	16.3
12. Not be too complex for me.	0.8	8.4	23.7	44.3	22.9
			Overall Mean: 3.97 (*SD* = 0.51)		

Note: Scale was 1 = *Strongly Disagree* to 5 = *Strongly Agree.*

Objective three was to determine, using primary data, if attitudes toward international agricultural concepts, beliefs toward international agricultural concepts, understanding of international agricultural concepts, and instruction of international agricultural concepts differed based on school and gender. The following two tables (Table 6 and Table 7) provide a comparison based on school and gender. School C had a higher mean score for attitudes, understanding, and instruction and was tied with School B for the highest mean score on the belief construct. Female students held higher mean scores for all four constructs than male students.

Table 6. School Comparisons on Attitudes, Beliefs, Understanding, and Instruction towards International Agricultural Concepts (n = 133)

	School A (*n* = 75)		School B (*n* = 46)		School C (*n* = 12)	
	Mean	*SD*	**Mean**	*SD*	**Mean**	*SD*
Attitudes	4.07	0.58	4.19	0.43	4.26	0.41
Beliefs	3.91	0.53	4.02	0.41	4.02	0.36
Understanding	4.11	0.56	4.16	0.67	4.31	0.41
Instruction	3.89	0.55	4.07	0.46	4.15	0.36

Note: Scale was 1 = *Strongly Disagree* to 5 = *Strongly Agree.*

Table 7. Gender Comparisons on Attitudes, Beliefs, Understanding, and Instruction towards International Agricultural Concepts (n = 133)

	Females		Males	
	Mean	*SD*	**Mean**	*SD*
Attitudes	4.21	0.46	4.06	0.54
Beliefs	3.98	0.45	3.96	0.51
Understanding	4.17	0.55	4.13	0.63
Instruction	4.04	0.49	3.93	0.47

Note: Scale was 1 = *Strongly Disagree* to 5 = *Strongly Agree.*

Objective four was to compare historical findings with the findings of this study on attitudes, beliefs, understanding, and instruction related to international agriculture concepts. Table 8 shows the comparison of five studies, four of which represent historical findings and one new finding from this study, on attitudes, beliefs, understanding, and instruction toward international agriculture concepts. Generally, the mean scores are quite high, ranging from 3.51 to 4.13 on the attitudes construct; 3.55 to 3.97 on the beliefs construct; 3.66 to 4.14 on the understanding construct; and 3.56 to 3.97 on the instruction construct.

Table 8. Comparison of Five Studies on Attitudes, Beliefs, Understanding, and Instruction towards International Agricultural Concepts

Construct	Arizona 2002-2004 (*n* = 98)		Pennsylvania 2002 (*n* = 62)		Florida 2013 (*n* = 69)		Tennessee 2014 (*n* = 123)		Nebraska and Oregon (current study) 2015 (*n* = 133)	
	Mean	*SD*	**Mean**	*SD*	**Mean**	*SD*	**Mean**	*SD*	**Mean**	*SD*
Attitudes	3.51	*	4.00	0.84	3.79	0.52	3.81	0.46	4.13	0.52
Beliefs	3.55	*	3.80	0.91	3.77	0.40	3.81	0.57	3.97	0.51
Understanding	3.66	*	4.17	0.73	3.84	0.58	3.76	0.51	4.14	0.58
Instruction	3.56	*	3.94	0.84	3.76	0.44	3.76	0.47	3.97	0.51

Note: Scale was 1 = *Strongly Disagree* to 5 = *Strongly Agree*; Standard Deviations were not reported by Elliot and Yanik (2002).

Conclusions, Implications, and Recommendations

The purpose of this study was to determine the attitudes and beliefs of SBAE students toward international agricultural concepts. Several conclusions can be drawn from the primary data collected in the current study. First, students held positive attitudes toward international agricultural concepts with an overall mean of 4.13 (*SD* = 0.52). Second, positive beliefs toward international agricultural concepts were held by the student participants with an overall mean of 3.97 (*SD* = 0.51). Third, students expressed a need to understand basic geography in relation to international agricultural concepts with an overall mean of 4.14 (*SD* = 0.58). Fourth, students strongly agreed that identified concepts and information were necessary to understand international agricultural concepts with an overall mean of 3.97 (*SD* = 0.51). Fifth, the genders and schools were found to be relatively similar on attitudes, beliefs, understanding, and instruction; however, female students held higher slightly mean scores for all four constructs than male students. Finally, adding the historical data from four studies to the present study and comparing all five studies showed mean scores across all four constructs were relatively high.

Interestingly, the items with the lowest levels of agreement were still overwhelmingly positive. The only item that did not have the majority of participants who agreed or strongly agreed was *That I can learn about world agriculture from listening to selected radio programs.* For example, over three-quarters of the participants agreed or strongly agreed that they should be able to locate countries around the world. Despite being the lowest agreed-upon item in the construct, participants seemed to have a solid understanding of the importance of being globally minded.

This study shows surprisingly similar findings to previous studies (Conner et al., 2017; Elliot & Yanik, 2002; Heinert et al., 2014; Radhakrishna et al., 2003). Collectively, these studies represent very different geographic regions of the U.S., span thirteen years, and combined

represent the perceptions of 485 purposively selected students. The instrument used for this study was very similar to the instrument Radhakrishna et al. (2003) modified from Elliot and Yanik (2002). The instrument Radhakrishna et al. used focused on the attitudes and beliefs of the participants and used a five-point Likert scale. The instrument consisted of 44 questions and was administered to high school students attending the Pennsylvania Governor School for Agricultural Sciences. Despite the instrument being over a decade old, the instrument was selected for consistency between the studies and to serve as replication. Although a random national sample would provide more generalizable results, the spatial and temporal variation provided by synthesizing these five studies does help us gain a better understanding of this phenomenon. Based on the results of this study, research should be conducted to explore international agricultural concepts that should be infused into an international agriculture curriculum for high school agriculture students.

This study was guided by the theory of planned behavior, which proposes an individual's attitude toward the behavior, subjective norms, and perceived behavioral control influence the individual's decision to act (Ajzen, 1985). Additionally, a conceptual framework designed by Radhakrishna et al. (2003) was used due to the focus on attitude and belief constructs. Given the high overall mean scores for attitudes and beliefs in both the primary data and historical data, it could be concluded that students' intentions toward learning about international agriculture concepts would also be strong (Ajzen, 1985). The participants held positive views towards learning about international agricultural concepts, and according to Ajzen (1985), people intend "to perform a behavior when they evaluate it positively" (p. 12). Further, based on the conceptual framework purported by Radhakrishna et al. (2003), the overall high attitude and belief scores should affect students' awareness and understanding of international agricultural concepts.

Teachers and curriculum writers should capitalize on these findings by developing and implementing curricula that focus on learning about international agriculture and cultural competence. This study could also be used by SBAE programs and agriculture teachers to provide evidence to take to school administrations in an effort to show the importance high school agriculture students place on International agriculture. The findings could then be used to design new courses and to supplement existing courses. Agriculture teachers could also use the data to develop both in-class learning experiences and study abroad experiences centered around International agriculture. To help future agriculture teachers, university agricultural teacher preparation programs should use this study to infuse International agriculture concepts into their teacher preparation program. By doing this, universities will help ensure that future generations receive an education centered around International agriculture. Ultimately, enabling and empowering this young generation of agriculturists will allow them to meet the call for a globally-prepared agricultural workforce (Crawford & Kirby, 2008; Longview Foundation, 2008; National Research Council, 2009).

Although the current results are insightful and provide justification for the development and implementation of an international agriculture curriculum, there are limitations to this study. This study only consisted of three schools from two states and may not accurately represent the entire Midwest and Northwest regions; therefore, the results of this study may not be generalizable. Additionally, the use of teacher educators in the respective states to identify schools that were likely to participate could have created some bias in the selection process.

A critical question unanswered by this study and the historical studies is *what experiences and activities have influenced student attitudes and beliefs about international agriculture concepts?* Future research should seek to gain an understanding of how students develop their attitudes and beliefs about international agriculture. Such knowledge will provide the greatest opportunity in building human capacity to achieve long-term impacts in addressing global food security and other mega-issues (FAO, 2009).

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Literacy in the Early Childhood Classroom: A SWOT Analysis of a Multi-State Literacy Train-the-Trainer Program

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Early childhood professionals attending in-depth literacy training have been shown to gain knowledge and change classroom practices. These early childhood professionals play an important role in children's literacy development. In this multi-state study, the effectiveness and usability of the Literacy in the Early Childhood Classroom training curriculum was evaluated using a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis. Eleven early childhood trainers participated in a train-the-trainer program and taught the literacy series to 238 early childhood professionals in four states. Participants attending the training series demonstrated significant knowledge gains on concepts related to oral language, phonological awareness, reading and vocabulary, and emergent writing. Trainers provided insights on successes of the literacy training series and what could be changed to improve the implementation and delivery of the series. Strengths of the training series included ease of implementing the training and strong supporting materials such as videos and children's books. Weaknesses of the series included program length and the need for concept clarity among some trainers. Opportunities included streamlining the training content and providing trainers with additional support prior to training implementation. Potential threats include the need to align the training curriculum to match different states' standards and childcare training policies.

Keywords: literacy, early childhood, preschool, SWOT analysis, professional learning

Introduction

Building a strong language and literacy foundation supports children's future school success (Pace, Alper, Burchinal, Golinkoff, & Hirsh-Pasek, 2019). Language skills developed in early childhood lay the groundwork for later reading and other academic skills (Dickinson, 2011). Children with stronger oral vocabularies at age 2 had better reading and math skills at the beginning of kindergarten (Morgan, Farkas, Hillemeier, Hammer, & Maczuga, 2015). Similarly,

children's reading scores in third grade are positively correlated with high school graduation rates (Hernandez & Annie, 2011). Although learning to read and write with proficiency is a long process, the foundation of literacy development begins with vocabulary development in early childhood (Fernald, Marchman, & Weisleder, 2013; Hindman, Wasik, & Snell, 2016).

There is a relationship between children's development of oral language skills and their development of reading comprehension skills (Lervåg, Hulme, & Melby-Lervåg, 2018). During a child's early years, having books in the home, reading with children frequently, and visiting the library regularly are all associated with higher language scores, letter writing, and spontaneous writing skills (Lonigan, 2006; Puranik, Phillips, Lonigan, & Gibson, 2018). Infants who are exposed to daily rich language have stronger language processing skills and vocabulary as early as age 18 to 24 months (Fernald et al., 2013; Weisleder & Fernald, 2013).

Early Learning Experiences that Contribute to Literacy Development

Numerous researchers have found that specific emergent literacy skills in early childhood, such as vocabulary development, word meaning, and narrative storytelling, contribute to later literacy development (Jalongo & Sobolak, 2011; Wellman et al., 2011). Researchers have grouped the skills necessary for young children to become successful readers into two categories (Vukelich, 2015). The first category, *code-related skills*, are skills used to "decode" written language by connecting print with oral language. Effective, developmentally appropriate teaching strategies in areas such as phonological awareness, print knowledge, and emergent writing can strengthen young children's code-related skills and provide the foundation for later reading. Unfortunately, many early childhood professionals do not understand how to help young children develop code-related skills and these skills are not included in some early childhood curricula (Dickinson, 2011; Phillips, Clancy-Menchetti, & Lonigan, 2008).

The second category, *meaning-related skills*, enables children to understand and create meaning from written language through vocabulary development. Evidence-based strategies to support young children's vocabulary development include engaging children in word play, repeating new words within meaningful contexts, and encouraging emergent writing (Bingham, Quinn, & Gerde, 2017; Jalongo & Sobolak, 2011; Puranik, Lonigan, & Kim, 2011). Education researchers recommend that these types of strategies be embedded in young children's learning experiences throughout the day (Dinnebeil & McInerney, 2011).

Early childhood professionals play important roles in children's literacy development. Intentional teaching practices such as careful curriculum planning, responsive instruction, and teaching pre-reading skills can help young children develop the code-related and meaning-related skills needed for reading and writing (Burchinal et al., 2008; Koutsoftas, Dubasik, & Moss DiDonato, 2017).

One of the most important strategies for supporting emergent literacy and increasing young children's interest in books is regular shared reading using dialogic reading techniques. Dialogic reading is a social form of reading aloud that builds literacy skills by encouraging children's active involvement in the story, asking questions, and reinforcing and expanding on children's responses (Lacour, McDonald, Tissington, & Thomason, 2017; Pollard-Durodola et al., 2011). In addition to using dialogic reading strategies, early childhood professionals can support emergent literacy by exposing children to rich and complex vocabulary, teaching concepts about print, and providing opportunities for emergent writing using invented spelling, which is defined as children's spontaneous attempts to spell unknown words independently (Sénéchal, Ouellette, Pagan, & Lever, 2012). Teachers can also expose children to rhyme, use rich language throughout the day, and support the development of dual-language learners' home language (Bierman et al., 2008; Bingham et al., 2017; Ying, Justice, Kaderavek, & McGinty, 2012).

The Need for Teacher Professional Learning Related to Early Literacy

Effective early childhood professionals use their conceptual knowledge of early literacy development to create healthy, supportive, and challenging learning environments for young children (National Association for the Education of Young Children, 2009). Even though early literacy research provides a clear picture of the most effective tools and strategies to support literacy development in early childhood, the quality of literacy-related instruction varies across different early childhood programs (Dickinson, 2011; Guo, Piasta, Justice, & Kaderavek, 2010). To provide developmentally appropriate literacy education, early childhood professionals need professional learning experiences that teach them effective ways to promote emergent literacy skills in young children and researchers have found that the most effective professional learning opportunities for early childhood teachers include characteristics such as multi-session training and opportunities for participants to share experiences, apply knowledge and practice skills (Bowman, Donovan, & Burns, 2001; National Early Literacy Panel, 2008). Teachers' progress in implementing literacy concepts can further be supported by mentoring or coaching (Beecher, Abbott, Petersen, & Greenwood, 2017; Downer et al., 2011; Gillentine, 2006; Landry, Swank, Anthony, & Assel, 2011; Neuman & Wright, 2010; Wasik & Hindman, 2011). In-depth professional learning focused on literacy can be effective in changing classroom practices and improving young children's literacy skills (Fukkink & Lont, 2007). In one study, Head Start teachers who received ongoing professional learning experiences focused on instructional strategies to improve young children's vocabulary, alphabet knowledge, and phonological sensitivity created higher-quality classroom environments to support literacy development. Additionally, children in those classrooms showed greater improvements in both phonological and vocabulary skills (Wasik & Hindman, 2011).

Purpose of the Study

The purpose of this study was to evaluate the effectiveness and usability of the *Literacy in the Early Childhood Classroom* training curriculum (Byington & Kim, 2015) in multiple states. Trainers evaluated specific components of the training series such as content, activities, timing, concept clarity, and ease of use that were related to implementing the training program. A SWOT (strengths, weaknesses, opportunities, and threats) analysis was used as a tool for formative evaluation to identify processes that made the program successful and processes that needed to be modified or eliminated to improve the program. The SWOT analysis enabled organization of the information into useful categories.

A SWOT analysis uses information from key informants to answer questions about the strengths, weaknesses, opportunities, and threats of a program. It is a widely-used technique in many professions, including management, non-profit organizations, and child care, and has been shown to be effective in identifying key successes and areas where improvement is needed (Helms & Nixon, 2010; Ortega-Altamirano, Rodríguez-Oliveros, González-Unzaga, & Reyes-Morales, 2018; Ratekin & Bess, 2003). Strengths are the positive aspects of the program under evaluation. Weaknesses are the areas in which the program could improve. Opportunities are ways that the program could be enhanced in the future. Threats are issues of concern that are external to the program but have the potential to affect that program (Helms & Nixon, 2010).

The goal of the SWOT analysis in the current project was to determine aspects of the literacy training program that were effective in preparing early childhood professionals to teach emergent literacy skills to young children, to identify program weaknesses, and to inform program improvement. A secondary purpose of the study was to provide a summative evaluation of training participants' knowledge gain related to language and literacy concepts in order to determine whether the program outcomes were achieved.

Methods

Participants

Trainer participants. The lead author recruited the Cooperative Extension (*Extension*) educators who served as trainers for early childhood professionals to participate in the study in two ways: (a) by distributing information and interest forms on the study at a National Extension Association of Family and Consumer Sciences meeting and (b) by reaching out to Extension Program Leaders in several states about possible participation. The eleven trainers, Extension faculty working in participating states (Georgia, Kansas, Iowa, and Michigan), were recruited to teach the *Literacy in the Early Childhood Classroom* training series to early childhood professionals in their home state.

All trainers ($n = 11$) had a bachelor's degree or higher. Six of the trainers had a master's or doctoral degree. All trainers were female and employees of Extension systems in their state. Ten of the eleven trainers were Caucasian; one was African American. About one-third of the trainers had less than five years of early childhood training experience, another one-third had between 6 and 15 years of experience, and the rest had more than 16 years of experience.

Early childhood professionals. Early childhood professionals were recruited by the Extension trainers using a variety of methods common to their individual states, including individual email contact, print flyers, phone contact with program directors, and advertisement through childcare resource and referral agency training calendars. The early childhood professionals ($n = 238$) attending the training series led by the trainers had worked in childcare from less than 1 year to more than 16 years (Table 1). Different numbers of early childhood professionals participated in each state. Forty-one percent (41%) of the early childhood professionals attending were from Georgia, 36% from Michigan, 16% from Kansas, and 7% from Iowa. The education level of participants varied from some high school to a master's degree or higher (Table 1).

Table 1. Demographic Characteristics of Early Childhood Professionals Attending Training Series

Demographic Characteristic	Percent of Participants
Years Working in Child Care (n = 228)	
Less than 1 year	11%
1 to 5 years	17%
6 to 10 years	19%
11 to 15 years	16%
More than 16 years	37%
Education Level (n = 231)	
Some High School	2%
High School Graduate or GED	23%
Some College	30%
Associate Degree	14%
Bachelor's Degree	25%
Master's Degree or Higher	6%

Participant attendance. Early childhood professionals attended between one and four sessions of the training series. About one-third (30%) of the participants attended all four sessions. Table 2 shows the breakdown of the number of sessions participants attended.

Table 2. Participant Attendance at Four-Session Training Series

Number of Sessions Attended	Number of Participants	Percentage of Participants
1	69	29%
2	70	29%
3	28	12%
4	71	30%

Literacy in the Early Childhood Classroom Curriculum and Training Sessions

The *Literacy in the Early Childhood Classroom* training curriculum was developed by Byington and Kim (2015) as a component of the professional development program for early childhood professionals who were participating in Nevada's Striving Readers Comprehensive Literacy Program, a federally funded program. Early childhood professionals participating in the Striving Readers Comprehensive Literacy Program received language and literacy training and coaching designed to improve the literacy instructional practices in their classrooms.

The *Literacy in the Early Childhood Classroom* training curriculum was peer-reviewed and included four 3-hour training (T) sessions on the following topics: (T1) Oral language and extended conversations, (T2) Phonological awareness and alphabet knowledge, (T3) Reading, books for learning, and vocabulary, and (T4) Emergent writing and environmental print. The training underwent several revisions, and the curriculum went through a formal peer-review process by five reviewers outside Nevada and was published in 2015.

Procedures

Before teaching the *Literacy in the Early Childhood Classroom* curriculum, trainers participated in an initial informational webinar and received a Trainer's Kit that included the printed curriculum, Training CD (PowerPoint, videos, and handouts), twelve children's books and training activity materials. The curriculum was provided in both an online format and print format. The curriculum included training outlines, lists of materials needed, complete PowerPoint scripts, all handouts, and supplemental materials. The trainer kits included the majority of materials needed to teach the training series. Trainers scheduled and taught the 4-session training series to groups of early childhood professionals in their respective communities. Trainers selected a schedule of sessions that best met the needs of their participants. Some trainers taught weekly sessions, while others taught sessions every other week or once a month. Throughout the project, the curriculum authors were available through email or phone conversations to answer any questions and address trainers' concerns.

After teaching each training session, trainers completed an online trainer feedback form and collected and mailed the participants' pre- and post-surveys to the lead author. At the end of the intervention, the lead author arranged a mutually convenient time to conduct a phone interview with each trainer. Phone interviews lasted between 20 and 40 minutes, depending on the amount of feedback given by the trainer.

Measures

Online trainer feedback forms. Trainers evaluated each individual training session by completing an online trainer feedback form. Trainers used a 5-point Likert-type scale to rate each training session on specific items. The items and associated Likert-type scales included:

- Ease of Use: Easy to Use (5) to Difficult to Use (1)
- Handouts: Relevant and Useful (5) to Not Relevant and Useful (1)
- Videos: Enhanced Concepts (5) to Did Not Enhance Concepts (1)
- Activities: Enhanced Concepts (5) to Did Not Enhance Concepts (1)
- Children's Books: High Quality, Engaging (5) to Not High Quality, Engaging
- Adequacy of Training Session Length: Adequate (5) to Not Adequate (1)
- Understandability of Content: Understandable (5) to Not Understandable (1)
- Concept Clarity: Clear (5) to Unclear (1)

Trainers also listed on the feedback form any activities that were modified during the training session and indicated how well activities were received by participants. Each trainer completed four online training feedback forms, one per session.

The online trainer feedback forms were developed by the authors and reviewed by professional peers to help determine face and content validity. Once the forms were completed by all of the trainers, the mean scores were calculated for each Likert-type scale item. A set of criteria was used to determine whether the quantitative results were strengths or weaknesses. Composite mean scores that were 4.0 or higher were considered strengths, and mean scores below 4.0 were considered weaknesses of the training program.

Trainer post-series follow-up phone interviews. Each trainer also participated in a post-series follow-up phone interview with one of the authors, in which the trainer answered 11 questions about her experience implementing the training. The phone interview questions were developed by the authors and reviewed by professional peers to determine that they were appropriate for the purposes of the study. The trainers were asked to describe their overall experiences with the training program and to discuss specific components of the program, such as the initial webinar, trainer's kit, and training activities. Trainers shared successes and challenges. They also provided recommendations on how to improve the training series in the future. The primary goal

of the phone interviews was to identify specific strengths, weaknesses, opportunities, and threats related to implementing the program.

Early childhood professionals' pre- and post-session surveys. Trainers asked early childhood professionals to complete pre- and post-session surveys at each of the four training sessions. Each session's survey included ten knowledge questions related to the language and literacy concepts taught during that session. The same questions were asked on both the pre- and post-session surveys. The session survey questions were developed by the authors and reviewed by professional peers for appropriateness for this study.

Data Analysis

Analysis of trainer online feedback form data. The responses of the trainers to the online feedback form were analyzed using descriptive statistics, including percentages of responses to each level of the Likert-type scaled items and the mean scores for all responses to each item for each training session.

Analysis of knowledge questions. The participating early childhood professionals' knowledge pre- and post-surveys were analyzed using paired-sample t-tests to compare pre- and post-evaluation knowledge scores. The a priori level of significance for pre-to-post knowledge differences was set at $p < 05$.

Content analysis of trainer interview data. Content analysis was used to categorize the trainer phone interview data in order to summarize and classify themes across trainers. Trainer interviews were transcribed, and the transcripts (without identifiers) were given to the three principal researchers. The researchers reviewed each question independently and identified the main themes and supporting quotes. Once these independent reviews were completed, the researchers discussed the themes they identified to reach consensus about the main themes. Specific quotes from the interviews were selected to support each of the themes identified. The three researchers then worked together to organize themes into the four categories of SWOT analysis.

Results

Early Childhood Professional Participants' Knowledge Change

The early childhood professionals attending the *Literacy in the Early Childhood Classroom* training series in each state completed pre- and post-surveys measuring their knowledge of specific literacy concepts at the beginning and end of each session. Only matched pairs (i.e., surveys from participants who completed both a pre- and a post-survey) from each session were included in the analysis.

Participants demonstrated statistically significant increases in knowledge at the end of each session. Table 3 shows the results of the knowledge pre- and post-session questions analyses for each training session.

Table 3. t-test Analyses of Early Childhood Professionals' Scores on Session Pre- and Post-Knowledge Question Surveys

Training Session	n	Pre-Session Mean (Standard Deviation)	Post-Session Mean (Standard Deviation)	p value
T1: Oral Language	139	5.32 (1.78)	6.85 (1.43)	<.001*
T2: Phonological Awareness	140	5.96 (1.84)	6.99 (1.85)	<.001*
T3: Reading and Vocabulary	154	6.36 (1.66)	8.21 (1.38)	<.001*
T4: Emergent Writing	135	7.12 (2.10)	8.07 (1.55)	<.001*

*A priori significance level $p < .05$

Strengths, Weaknesses, Opportunities, and Threats Related to the *Literacy in the Early Childhood Classroom* Curriculum and Training Program Identified by Trainers

Trainers provided in-depth feedback on the training series through online trainer feedback forms and post-session phone interviews. The following is a summary of the trainers' feedback from the trainer feedback forms and phone interviews, organized using the conceptual framework of a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis.

Strengths of the Training Series

Trainers identified the following strengths of the training program during the phone interviews.

Webinar. The majority of the trainers (9 of 11) stated that the initial webinar was helpful because the information given was a basis for planning the training sessions. One trainer explained, "It was beneficial to go through all of the materials and write down how each item related to the lessons." Trainers stated that the webinar helped to prepare them for their role in the training and research project and gave them an overview of the materials included in the trainer's kit.

Trainer's kit. Trainers indicated that the materials in the trainer's kit were sufficient and ready to use. They liked that many of the items were laminated and printed in color. They specifically mentioned the children's books, videos, handouts, and hands-on activities included in the kit as useful tools. During the phone interview, one trainer stated, "It was very helpful that the materials were packaged by training [session]." Trainers mentioned that the kit included some examples of unique literacy ideas and that the training curriculum was clearly scripted.

Ease of use. Trainers rated the ease of use of each training session on the online trainer feedback forms using a Likert-type rating scale from *Easy to Use* (5) to *Difficult to Use* (1). Table 4 summarizes the trainers' ratings for ease of use for each session. As all of the mean scores for this item were higher than 4.0 and positive feedback on this item was given by the trainers during the phone interviews, ease of use was considered a strength for all four sessions. During the phone interview, one trainer stated, "All of the material and information flowed smoothly because it was so well organized."

Table 4. Trainers' Ratings of Ease of Use of the Literacy in the Early Childhood Classroom Curriculum's Individual Training Sessions' Curricula

Training Session	Easy to Use……...………………….……………………...to Use					Mean
	5	4	3	2	1	
T1: Oral Language	36%	45%	18%	0%	0%	4.18
T2: Phonological Awareness	30%	70%	0%	0%	0%	4.30
T3: Reading and Vocabulary	45%	55%	0%	0%	0%	4.45
T4: Emergent Writing	40%	60%	0%	0%	0%	4.40

Sufficient support from authors. Trainers were asked during the phone interview whether they had received sufficient support from the curriculum authors to implement the training series. Most trainers stated that they had received sufficient support and did not need to ask for additional support. Trainers also stated that they received quick answers to any questions or concerns.

Supporting materials. Trainers rated the supporting materials using the online trainer feedback forms for each training session (including handouts, videos, training activities, and children's books) on their relevance to the content and whether they enhanced the training concepts. Table 5 summarizes the mean ratings for each of these items. The four training sessions are listed as T1, T2, T3, and T4. As all of the mean scores for these items were higher than 4.0 and positive feedback on these items was given during the phone interviews, these items were considered strengths. Comments from trainers during the phone interviews about the support materials included, "The handouts hit important points," "The videos were excellent examples that demonstrated the true meaning of how to do the activities," "The hands-on activities ensured the participants would go home and use the ideas," and "The books were amazing; some were new to participants, and some were unfamiliar."

Table 5. Trainers' Mean Ratings of the Literacy in the Early Childhood Classroom Curriculum's Supporting Materials (n = 11)

SUPPORTING MATERIALS	LIKERT-TYPE SCALE USED (1-5)					
Handouts	**Relevant and Useful**……………………………**...and Useful**				**Not Relevant**	
Training Session	**5**	**4**	**3**	**2**	**1**	**Mean**
T1: Oral Language	82%	9%	9%	0%	0%	4.73
T2: Phonological Awareness	50%	40%	10%	0%	0%	4.40
T3: Reading and Vocabulary	70%	20%	10%	0%	0%	4.18
T4: Emergent Writing	50%	40%	10%	0%	0%	4.40
Videos	**Enhanced Content**…………………………………**Content**				**Did Not Enhance**	
Training Session	**5**	**4**	**3**	**2**	**1**	**Mean**
T1: Oral Language	82%	18%	0%	0%	0%	4.82
T2: Phonological Awareness	50%	50%	0%	0%	0%	4.50
T3: Reading and Vocabulary	64%	36%	0%	0%	0%	4.64
T4: Emergent Writing	40%	50%	0%	0%	0%	4.30
Activities	**Enhanced Concepts**…………………………………**Concepts**				**Did Not Enhance**	
Training Session	**5**	**4**	**3**	**2**	**1**	**Mean**
T1: Oral Language	73%	27%	0%	0%	0%	4.73
T2: Phonological Awareness	60%	30%	10%	0%	0%	4.20
T3: Reading and Vocabulary	73%	27%	0%	0%	0%	4.73
T4: Emergent Writing	40%	50%	10%	0%	0%	4.10
Children's Books	**High Quality, Engaging**…………………………………**Engaging**				**Not High Quality,**	
Training Session	**5**	**4**	**3**	**2**	**1**	**Mean**
T1: Oral Language	100%	0%	0%	0%	0%	5.00
T2: Phonological Awareness	80%	10%	10%	0%	0%	4.70
T3: Reading and Vocabulary	91%	9%	0%	0%	0%	4.91
T4: Emergent Writing	80%	20%	0%	0%	0%	4.80

Training session organization. During the phone interviews, trainers also identified the training organization and layout as a strength of the training. As one trainer stated, "I was really impressed by the information. It was engaging and adapted to all types of learners."

Trainer perspective about participants' response to the training. Overall, during the phone interviews, trainers described the training, from the trainers' perspectives, as a positive experience for the early childhood professionals who participated and stated that attendees stayed very engaged during the training. One trainer explained, "Participants seemed to respond very positively when they came back at the next session. They talked about what they had implemented in their classes."

Trainers also mentioned that participants especially loved the activities and hands-on components of the training. According to one trainer, "I had them share the next time we met, and I could tell they were connecting with the information."

Weaknesses of the Training Series

Trainers identified the following weaknesses of the training program.

Trainers' informational webinar. During the phone interviews, several trainers shared suggestions for improving the initial webinar to introduce trainers to the curriculum. The main theme was to have several shorter webinars instead of one webinar at the beginning of the project. Trainers stated that a lot of information was covered in a one-hour webinar, and it might have been better to have shorter webinars, each covering content on each of the four sessions.

Program length. Trainers shared three major challenges related to program length as suggestions for how the program could be improved: (1) difficulty of recruiting participants for a 12-hour series, (2) challenges of covering material in a 3-hour session, and (3) effectiveness of 2-hour vs. 3-hour training sessions. Some trainers shared that offering a 12-hour training series made it harder to recruit participants because early childhood professionals also had to meet other training requirements in their state. This factor could have also influenced the number of participants who only attended one to three sessions of the training. The challenge of recruiting participants for a 12-hour training series was especially true in states that only require early childhood professionals to attend 10 hours of training per year.

Trainers rated the length of each training session using the online training feedback forms on a rating scale from *Adequate* (5) to *Not Adequate* (1). Table 6 summarizes the trainers' impressions of how adequate the length was for each session. Since all of the mean scores for this item were lower than 4.0, this item was considered a weakness of the training program. The trainers disagreed on whether the length was adequate. During the phone interview, several of the trainers stated that three hours for each training session was not adequate to teach all of the training content.

Table 6. Trainers' Ratings of Adequacy of the Literacy in the Early Childhood Classroom Program's Training Sessions Lengths

| Training Session | Adequate……………………….……………...……Adequate | | | | Not | Mean |
	5	4	3	2	1	
T1: Oral Language	27%	18%	18%	9%	27%	3.09
T2: Phonological Awareness	20%	20%	30%	20%	10%	3.20
T3: Reading and Vocabulary	27%	45%	9%	9%	9%	3.73
T4: Emergent Writing	30%	40%	20%	10%	0%	3.90

Training content. Based on the comments in the phone interviews, the majority of trainers agreed that less content and more discussion time would have improved the training sessions. Several trainers stated that there was too much information in each training session and that it was difficult to teach all of the content in three hours. The trainers who identified this weakness stated that they wanted less content and more time for discussion within each session. One trainer stated, "It would probably have been good to have more time for discussion as the participants wanted to talk more about things they found interesting, but we needed to keep going to get through everything." Some trainers struggled to determine what content to cut out of the training due to time constraints.

Trainers rated the content of each training session using the online trainer feedback form on a rating scale from *Understandable* (5) to *Not Understandable* (1). Table 7 summarizes the level of understandability of each session. Based on the mean scores from the online trainer feedback forms, it would be assumed that Understandability of Content would have been a strength, however, based on the feedback during the phone interviews, this item is listed under weaknesses.

Table 7. Trainers' Ratings of Understandability of the Literacy in the Early Childhood Classroom Curriculum's Content

| Training Session | Understandable………………………Understandable | | | | Not | Mean |
	5	4	3	2	1	
T1: Oral Language	45%	55%	0%	0%	0%	4.45
T2: Phonological Awareness	50%	40%	10%	0%	0%	4.40
T3: Reading and Vocabulary	82%	18%	0%	0%	0%	4.82
T4: Emergent Writing	60%	40%	0%	0%	0%	4.60

During the phone interview, one trainer stated, "The participants had trouble understanding some of the concepts." Another trainer said, "Less slides and less content would have been better." It appeared that the content in some of the sessions was more understandable than in others.

Difficulty of concepts. Some, but not all, of the trainers stated during the phone interviews that some of the concepts shared in the training were too difficult for participants to understand. One trainer stated, "The level of the concepts seemed too high for some of the participants with less education. Some of the terminology was harder for them to understand." In contrast, a trainer stated, "Participants were mesmerized by the training and the opportunity; they wanted to learn, they were engaged." Another trainer said, "The level of concepts was fine. Everyone understood them, and they made good sense." The level of concepts seemed to be both a strength and weakness, depending on the trainer and the specific participants attending the training series.

Concept clarity. Trainers rated the concept clarity of each training session using the online trainer feedback form on a rating scale from *Clear* (5) to *Unclear* (1). See Table 8 for a summary of participants' ratings of concept clarity. The mean scores from the online trainer feedback forms indicated concept clarity as a strength. However, based on the phone interview with the trainers, more clarity was needed for some content in the oral language, phonological awareness, reading and vocabulary training sessions.

Table 8. Trainers' Rating of the Literacy in the Early Childhood Classroom Curriculum's Concept Clarity

Training Session	Clear…………………………….…………...…..Unclear					Mean
	5	4	3	2	1	
T1: Oral Language	64%	27%	9%	0%	0%	4.54
T2: Phonological Awareness	40%	60%	0%	0%	0%	4.40
T3: Reading and Vocabulary	36%	55%	9%	0%	0%	4.27
T4: Emergent Writing	40%	60%	0%	0%	0%	4.40

Opportunities for the Training Series

The trainers identified the following opportunities to enhance the *Literacy in the Early Childhood Classroom* curriculum and training series.

Trainers' informational webinar. During the phone interviews, trainers suggested that it is important for all of the project trainers to have received the trainer's kits and curriculum before the initial webinar. (Because several trainers committed to join the project shortly before the webinar, there was not enough time to mail the trainer's kit to all trainers before the webinar.) There was also a suggestion by a trainer that it would have been helpful if the webinar had

provided ideas on how activities from the training series could be modified for different audiences. For example, how could the activities be modified for participants with higher and lower levels of understanding of the concepts presented?

Length of sessions. Trainers had differing opinions on the length of sessions during the phone interviews. One trainer said, "I was going to recommend 2-hour sessions, but after the discussion with some of the participants, I determined 3 hours was fine because the training kept their attention." Another trainer said, "I liked 3-hour sessions because it let us dig in." There are some potential opportunities for meeting the needs of trainers and participants by offering different training options. Some trainers suggested taking each 3-hour session and breaking it into two 2-hour sessions or having an option to pick and choose the activities for either a 2-hour or 3-hour session. There is also the opportunity to streamline the content by reducing the number of slides in each session and providing trainers with strategies on how to adjust concepts taught based on the learner's level of understanding.

Accessing funding. One of the opportunities suggested by a trainer during the phone interview was related to accessing funding to purchase children's books and make-and-take activities for the participants. Several trainers indicated it would have been helpful to have funding to buy some of the children's books featured in the program for the participants. One trainer stated, "It would be great to connect with a funding source to purchase children's books to give to the participants. They were good books to share." One trainer shared that she had received $1,500 in outside funding to purchase children's books for participants. Another trainer gave the participants books she had obtained from hosting a Scholastic book fair.

Addressing trainer concerns. There are additional opportunities to address some of the concerns that trainers shared about the training during the phone interviews. One trainer stated that before she taught the training sessions, she was hesitant about some of the material that was less familiar and afraid the participants wouldn't understand certain concepts. This trainer also stated, "The training went over fine, and the second time I taught, it went much better after I had practiced and said aloud the concepts." Another trainer stated feeling overwhelmed at the beginning of the project. The concerns shared by trainers are opportunities to identify additional ways to ensure that trainers have adequate background and comfort with the material before they start teaching the program.

Threats to the Training Series

Participants did not note any external or internal threats to the training series. Potential threats identified by the authors will be discussed in the discussion section.

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Discussion

This study identified Strength, Weakness, Opportunities, and Threats of the multi-state *Literacy in the Early Childhood Classroom* training series. Table 9 outlines the Strengths, Weaknesses, Opportunities, and Threats identified by the study. The purpose of the SWOT analysis was to examine the successes, challenges, internal opportunities, and external threats to implementing the *Literacy in the Early Childhood Classroom* training program in multiple states in its current format. The insights from the SWOT analysis indicated what aspects of the training series worked best for the trainers and what could be changed to improve the effectiveness of implementation and delivery of the training program. The study also evaluated the impact of the curriculum and training series on gains in the knowledge scores of participants (pre and post) on four language and literacy topics.

Table 9. Summary of the Literacy in the Early Childhood Classroom Program's Strengths, Weaknesses, Opportunities, and Threats

Strengths	Weaknesses
-Initial webinar	-Only one initial informational webinar
-Trainer's kit, organized by session	-Program length (too long)
-Ease of use	-Too much training content
-Sufficient support from authors	-Needed more time for discussion
-Supporting materials including handouts, videos, training activities, and children's books	-Some concepts difficult to understand
	-Too many PowerPoint slides
-Training session organization	-Needed more clarity on some concepts
-Positive response from participants	
Opportunities	**Threats**
-More webinars on how activities could be modified	-No threats were identified by trainers
-Streamline content	Potential threats identified by authors
-Reduce PowerPoint slides	-Aligning the training curriculum to match
-Provide trainers with more teaching strategies	different states' standards and childcare training
-Access funding to purchase children's books	policies
-Identify additional ways to support trainers, such as in-depth communication prior to implementation	-Funding
	-Time and effort commitment to implement series

This study revealed that *Literacy in the Early Childhood Classroom* program had many strengths. Specific strengths identified from the online trainer feedback forms included ease of use and supporting materials. During the post interviews, most of the trainers stated that the trainer's informational webinar and organization of the training series were strengths. Consistent with previous research (Downer et al., 2011; Wasik & Hindman, 2011), this multi-state training series helped the trainers of early childhood professionals in this study use targeted instructional strategies to support early literacy skills and provide the training sessions participants with opportunities to share experiences and practice skills during training sessions. In addition, the

training program provided, what the trainers felt, were high-quality books related to early language and literacy topics and shared activities that could be implemented in early childhood classrooms. This is important because children's experiences with books and other written materials are related to print knowledge and dialogic reading experiences can foster early literacy development (Lonigan, Allan, & Lerner, 2011).

A few weaknesses were identified by trainer participants in this study. These included that there was only one trainer's informational webinar, each training session may have been too long, too much information was shared in each session, and some concepts in the oral language, phonological awareness, and reading and vocabulary sessions were perceived by trainers to be difficult for some early childhood professionals to understand, especially if the participant had less formal education or experience in early childhood. Previous research suggests that the training series could still be effective if shortened from 12 hours to 10 hours. According to one earlier study, a 10-hour total time, low-intensity series of professional development training (five two-hour training sessions), focused only on literacy, significantly improved the literacy practices and knowledge of early childhood professionals (Gerde, Duke, Moses, Spybrook, & Shedd, 2014).

This study also identified several suggestions for improving the program. The opportunities identified in this study clarified the importance of pre-planning and in-depth communication with trainers prior to their teaching the training sessions. The trainers in this study indicated the need to receive the trainer's kits and curriculum before the initial webinar and to have several shorter webinars for each of the four sessions. Working with trainers to customize the training series to the requirements of their specific state, without compromising the quality of content taught, was also something that the trainers indicated would improve the program. States have different requirements for professional learning hours, so it is important to consider state regulations when planning how to implement the training series (PreschoolTeacher.org, 2018).

Accessing funding is another way identified by the trainers to promote the *Literacy in the Early Childhood Classroom* program and provide early childhood professionals with books featured in the program for use in their classrooms. Local or state funding that supports early learning initiatives may be a source of financial support to defray the cost of children's books. Trainers could also investigate in-kind donations from bookstores or including the cost of books in a participant fee for the training.

Although the trainers did not identify any specific threats, the authors identified some potential threats to expanding the program to additional states exist. Possible threats include aligning the training curriculum to match different states' standards and childcare training policies. States also vary in the number of hours of training early childhood professionals are required to complete each year. Asking early childhood professionals to commit to attending 12 hours of training in a state that only requires 10 hours of training per year would require persuasive

marketing from the trainer. The need to receive funding and give time and effort commitment to implementing the series are also potential threats.

Based on participants' ratings of their knowledge, participants learned important concepts about early literacy at each training session. This finding is consistent with an earlier meta-analysis, which found that specialized training improves the competencies of early childhood professionals, including their attitudes, knowledge, and skills (Fukkink & Lont, 2007).

Limitations

The study has several limitations that should be noted. The training series was only replicated in four states, and the sample size was moderate. Trainers volunteered to participate in the study, and how the trainers delivered the training content was not assessed. Because the focus of the study was on formative feedback on the training series, this study did not include a control group. Early childhood professionals' frequencies of implementation of literacy instructional practices were self-reported so they may not accurately reflect actual practices.

In this study, the researcher provided some of the possible items in the trainers' online survey and the trainer interviews instead of only using generic questions, such as "What are the strengths of the program?" This may have resulted in items being included in each of the SWOT categories that might not have shown up if the participants had not been prompted by those items. The lack of interaction among the trainers by using the online feedback form may have resulted in some ideas not being included in the SWOT analysis or ideas not being fully developed.

Another potential limitation of this study was that the researchers assigned the items to SWOT categories rather than the participating trainers. This may have resulted in items being assigned or prioritized differently than if they had been discussed and assigned by the trainers.

More research is also needed to learn how specific teacher characteristics, including education and classroom experience, is related to their levels of knowledge about literacy development. This type of information could inform how curricula could be modified to address specific subpopulations of early childhood professionals' needs to enhance their knowledge gains.

Lastly, although this formative evaluation provides important information about implementing the program in multiple states, additional studies are needed that are structured in ways to address these limitations.

Implications

The trainers participating in this study were asked if they planned to teach the *Literacy in the Early Childhood* training program again. All of the trainers responded in the affirmative. As one trainer said, "I think you hit the mark with this training and the importance of the literacy

areas covered. I was excited to participate. The materials were good, and overall, it was a very positive experience." Therefore, the *Literacy in the Early Childhood Classroom* training series will continue to be taught in the states included in the study as well as additional states. The curriculum authors will make revisions to the webinar and training program based on the weaknesses and opportunities identified in the current SWOT analysis.

Conclusions

The *Literacy in the Early Childhood Classroom* training series had a positive impact on both trainers and early childhood professionals who attended the training series. Overall, trainers indicated that the training series was easy to use, and participants responded positively to the interactive training format. Trainers planned to continue using the training sessions and supporting materials after the research project ended.

There are also opportunities to improve the training series in the future by addressing the length of the training (both the overall length of the series, as well as the length of the individual sessions), providing greater clarity about some of the training content, and ensuring that all trainers have the background and confidence to teach the material prior to implementation. With these minor updates, the *Literacy in the Early Childhood Classroom* training series will continue to be used in preparing early childhood professionals to teach emergent literacy skills to young children.

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Parental Anxiety Associated with Summer Camp Experiences: A Comparative Analysis Across Volunteer and Employee-Staffed Camps

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Parent anxiety can limit a parent's willingness to involve their child in out-of-school time experiences such as summer camps. Researchers have studied anxiety within the context of camp, but these studies used narrow frameworks of anxiety. In this exploratory study, we collected open-ended responses about causes of parent anxiety associated with summer camp experiences from 656 parents whose children attended one of two Extension-administered camps. The camps represented different camp staffing models—one primarily staffed by volunteers and the other primarily staffed by employees. The primary purpose of the study was to identify salient categories of anxiety and to examine if anxiety differed based on staffing model. The secondary purpose was to develop a camp-related parent anxiety measure informed by the anxiety categories. Eleven categories were constructed from the data, which both affirmed and expanded existing literature on parent anxiety associated with camp experiences. No differences in parent anxiety were found based on staffing model, suggesting that parents were no more likely to perceive anxiety associated with camp when the program was staffed with volunteers as they were when the program was staffed by employees. Implications for practice and future directions are examined.

Keywords: parent anxiety, summer camp, staffing model, qualitative research, volunteers, employees, separation, out-of-school time

Introduction

Although parents recognize involving their children in out-of-school time (OST) experiences may provide important developmental benefits (Henderson, Whitaker, Bialeschki, Scanlin, & Thurber, 2007), such experiences may also be a source of anxiety for parents (Prezza, Alparone, Cristallo, & Luigi, 2005). While literature regarding parental perspectives of their child's OST experiences has evolved (Bultas, Steurer, Balakas, Brooks, & Fields, 2015; Clary & Ferrari,

2015), only a handful of studies have examined parental anxiety[1] (PA) within these settings (Gagnon & Garst, 2019; Kingery, Peneston, Rice, & Wormuth, 2012; McFarland, Hammon, Zajicek, & Waliczek, 2011). These studies provide frameworks for how PA associated with OST experiences has been conceptualized, including separation-related anxiety (Kingery et al., 2012; Simons et al., 2007), social versus environmental anxiety (Prezza et al., 2005), child-focused versus family-focused anxiety (Ogston, Mackintosh, & Myers, 2011), physical safety versus social standing anxiety (Fisak, Holderfield, Douglas-Osborn & Cartwright-Hatton, 2012), and people versus nature anxiety (Gagnon & Garst, 2019).

Beyond these frameworks, research supports alternative reasons parents may be anxious about their child's involvement in OST experiences. The context in which a child is participating in an OST experience may influence whether a parent is anxious about that experience. For instance, nature can be a source of PA (Beyer et al., 2015), as many OST experiences take place in an outdoor context. In this frequently novel nature-based setting, youth and their parents may encounter plants, animals, or terrain not experienced during a typical day (Olsen, Powell, Garst, & Bixler, 2018), and these potential encounters may be a source of concern for parents. PA associated with OST experiences may also be influenced by the degree to which parents have previous experience with the activity. For instance, findings from Garst, Gagnon, and Bennett's (2016) study of potential contributors to PA from the perspective of camp directors, suggested a lack of prior parental experience in the camp setting was a common characteristic of those expressing anxiety about their child's participation in camp. Further, researchers have associated the extent to which parents display excessive levels of control and protection behaviors (i.e., overparenting) with PA within the context of these OST experiences (Gagnon & Garst, 2019).

Managing PA within OST settings such as summer camp has emerged as a critical issue for practitioners (American Camp Association, 2013). Research in this area suggests an ongoing need to better manage PA influences on camp directors' program administration decisions, such as the development of parent communication strategies, policies and procedures, or alternative staffing approaches to address anxious parents' expectations and concerns (Garst et al., 2016). Despite the emerging concerns among OST practitioners, few studies have examined PA within OST settings; furthermore, few empirically validated measures capturing PA and its covariates within this context are available. Some, such as the Parent Worry Measure (PWM; Fisak et al., 2012), were developed for academic contexts (e.g., elementary and preschools). Others, such as the Parental Anxiety associated with Outdoor Experiences and Overparenting (PAOEO) scale (Gagnon & Garst, 2019), assess parental anxiety within a relatively narrow framework (e.g., anxiety related to people or nature). Thus, the emergence of practitioner concerns regarding PA as a factor that constrains a child's participation in an OST program, such as summer camp, and the need to understand factors that may influence parental anxiety in these alternative contexts,

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[1] Here and throughout the manuscript, the term "parental anxiety" is referred to in the non-clinical sense. The literature supports use of the terms "anxiety" and "worry" interchangeably when referenced in a non-clinical context.

informed the present study. Importantly, a deeper understanding of PA within OST settings may empower program providers to better serve parents with diverse perspectives, as well as drive future research into the influences, causes, and consequences of PA associated with OST experiences (e.g., parental separation, novelty of the experience; see also Thurber & Sigman, 1998).

Parent Anxiety Associated with Program Staffing Models

As suggested by Garst et al. (2016), PA is an emerging and important concern impacting dimensions of program administration, including parent communication, policy and procedure development, and staffing approaches. With these dimensions in mind, camps can be categorized based on how they are administered and staffed using primarily *volunteer* or *employee* staffing models. Camp volunteers are unpaid, generally work shorter-duration camp sessions, and receive fewer days of pre-camp training (i.e., up to 1 day of training; Epley, Ferrari, & Cochran, 2017). Conversely, camp employees are paid staff, generally work longer-duration camp sessions, and typically receive additional days of pre-camp training compared to their unpaid volunteer peers (i.e., up to 5 days of training; American Camp Association, 2012).

Although the camp literature has not fully examined how camp staffing models may influence PA, studies comparing volunteer versus employee staffing models illustrate how parent perceptions of these programs might differ. For example, Metz, Roza, Meijs, van Baren, and Hoogervorst (2017) studied users of social services to better understand perceptions of trust toward volunteers and employees. In their study, user relationships with volunteers were distinguished by "affective trust" (i.e., empathetic, less judgmental) while user relationships with employees were reliant on "cognitive trust" (i.e., qualified, more expertise). Other studies also suggest parent perceptions of volunteer versus employee-staffed programs may differ based on participant outcomes (Mishara et al., 2016; Tomlinson, Sherr, Macedo, Hunt, & Skeen, 2017). For instance, in an examination of how volunteers and employees influenced youth outcomes within the context of community-based programs, Tomlinson et al. (2017) demonstrated youth attending programs staffed by employees experienced better cognitive development when compared to youth attending programs staffed by volunteers. In contrast, Mishara et al. (2016) found in post hoc analyses that volunteers were more likely than employees to be associated with positive program outcomes. Specifically, in their study, Mishara et al. (2016) illustrated when compared with employees, volunteers were viewed as more empathetic and respectful toward those receiving services and received higher scores on a crisis outcomes scale.

Taken together, these studies suggest two reasons why PA levels might differ based on camp staffing model. First, recognizing that a lack of trust can influence PA associated with camp experiences (Garst et al., 2016), parental perceptions of anxiety may differ based on employee versus volunteer models (Metz et al., 2017) and whether parents have trust in the individuals responsible for supervising their child. Second, as suggested by Tomlinson et al. (2017), parents

may report greater levels of outcome for their child when programs are staffed by employees versus volunteers. Put differently, parents may favor employee models over volunteer approaches if the parent perceives employees as more competent and more likely to facilitate safe, high-quality programs for their child.

Study Purpose and Contribution

Parental anxiety (PA) is an increasing concern for those charged with managing and facilitating OST experiences. Thus, to better understand PA and its potential subdimensions within the context of a common OST experience, camp, this study had three purposes. First, this study explored categories of PA parents associated with their child's participation in summer camp (e.g., separation-related anxiety [Kingery et al., 2012]; social vs. environmental anxiety [Prezza et al., 2005]) through a content analysis of parental reports of anxiety. Second, this study examined potential differences in camp-related PA based on camp staffing model (i.e., comparing employees versus volunteers; see Metz et al. [2017]; Mishara et al. [2016], and Tomlinson et al. [2017]). Third, given the limited measures of PA within OST experiences administered by either employees or volunteers, this study used the results of the content analysis to develop a measure of camp-related PA (e.g., see Kunz & Grych [2013] and Rowan & Wulff [2007] for other examples of measures emerging from content analyses).

Method

Study Design and Context

As part of a larger 2017 study exploring parent perceptions of their child's camp experience, responses to an open-ended question about parental anxiety were collected from parents whose children attended one of two university-affiliated camp programs. The camps were located in two regions of the U.S. and affiliated with Extension programs. The concept of "Extension" is based on the idea of extending university-based knowledge (from state land-grant institutions) to local communities through the dissemination of research-based practices (USDA, 2018). One camp program used a volunteer staffing model (i.e., Extension model), and the other used an employee staffing model (i.e., Extension-Enterprise model). In the Extension model, 15 residential camp sessions, lasting 4-7 days each, depending on camper age, were administered by local county Extension educators with support from their land-grant institution. Volunteers recruited and trained at the local level by the county Extension educator led the camp sessions. These volunteers received 30 hours of pre-camp training through the state 4-H program. In the Extension-Enterprise model, eight residential camp sessions lasting five days each were administered by one university program unit and staffed entirely with paid employees. These employees were required to complete five to seven days of training before they could take custodial care of campers. In addition, employees supervising high-risk areas (i.e., aquatics, adventure) were required to receive an additional three to five days of specialized training.

Study Sample and Recruitment

Administrators of the Extension and the Extension-Enterprise model programs recruited parents into the study. Prior to data collection, the research team obtained Institutional Review Board approval for the study through the two universities, and informed consent was obtained from the study participants. One week following their child's camp experience, parents received an email from camp administration with a link to an online Qualtrics questionnaire and instructions for completing the questionnaire. One week later (two weeks following completion of their child's camp experience), camp administration sent a reminder email to parents along with a prompt to complete the questionnaire if they had not already done so. Parents received an incentive for survey completion through an opportunity to collect one of six $100 gift cards.

Camp administrators distributed a total of 929 emails to parents whose children attended the Extension model camp. Out of these 929 emails, 214 parents responded to the questionnaire and completed the open-ended question for a response rate of 23%. Similarly, a total of 1,262 emails were distributed to parents whose children attended the Extension-Enterprise model camp. Out of these 1,262 emails, 442 parents responded to the questionnaire and completed the open-ended question for a response rate of 35%. Across both sites, 656 parents responded to the open-ended question for a response rate of 30%.

The questionnaire collected demographic data from all respondents (see Table 1). Parent respondents tended to be female (89.6%) and white (89.8%). The largest percentage of participants (26.5%) reported an annual income between $100,001-$150,000, and more than two thirds (79.7%) indicated they were married. Participants were well educated, with most reporting either a Bachelor's degree (36.9%) or a Master's degree (28.7%). Although close to a third of participants (29.1%) had not attended camp as a child, 21.7% had attended camp either 1 or 2 years, with an average of 3.91 years of previous camp attendance as a child.

Table 1. Parent Descriptives Across the Two Participating Camps

Demographic Characteristics: Percentage (Frequency)
Parent Gender
Female = 89.6% (588)
Male = 10.2% (67)
No response = <1% (1)
Parent Race
White = 89.8% (589)
African American = 4.4% (29)
Latino = 1.5% (10)
Asian Origin = 1.4% (9)
East Asian (Indian) = <1 (2)
Multiple Race = 1.5% (10)

Demographic Characteristics: Percentage (Frequency)
Parent Income
0-$12,500 = <1% (3)
$12,501-$25,000 = 1.5% (10)
$25,001- $35,000 = 2.1% (14)
$35,001-$50,000 = 4.6% (30)
$50,001-$75,000 = 10.7% (70)
$75,001-$100,000= 16.0% (105)
$100,001-150,000 = 26.5% (174)
$150,001-$200,000 = 13.1% (86)
$200,001-$250,000 = 6.4% (42)
$250,001 and up = 5.8% (38)
Prefer not to respond = 8.8% (58)
No response = 4.0% (26)
Parent Relationship Status
Single = 3.7% (24)
Divorced = 7.6% (50)
Widowed = <1% (3)
Married = 79.7% (5236)
Remarried = 4.0% (26)
Separated = 1.2% (8)
Long-term relationship = 3.4% (22)
Parent Education
High school diploma or equivalent = 2.7% (18)
Some college (no degree) = 9.9% (65)
Technical degree or certification = 4.1% (27)
Associates degree = 7.3% (48)
Bachelor's degree = 36.9% (242)
Master's degree = 28.7% (188)
Doctorate or Ph.D. = 10.2% (67)
Parent Experience with Camp
Did not attend camp as a child = 29.1% (191)
1 year = 11.6% (76)
2 years = 10.1% (66)
3 years = 9.9% (65)
4 years = 9.9% (65)
5 years = 9.3% (61)
6 years = 4.7% (31)
7 years = 2.4% (16)
8 years = 3.2% (21)
9 years = 1.4% (9)
10 years = 3.4% (22)
11+ years = 1.4% (9)
No response = 3.7% (24)

Data Collection and Analysis

Parents responded to the question, "What are reasons why parents feel worried about their child attending camp?" The research team used an open-ended, inductive approach to content analysis (Maxwell, 2012), defined as "a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (Hsieh & Shannon, 2005, p. 1278), to analyze responses. Similar content analysis coding approaches—moving from codes to categories to themes—have been used to understand open-ended question responses (Carr & Williams, 1993; Pritchard & Havitz, 2006). In this study, conventional content analysis guided the data analysis, which was appropriate because the purpose of this study was to describe a specific phenomenon (i.e., parent perceptions of anxiety) (Hsieh & Shannon, 2005).

After the research team identified themes, frequency effect sizes (see Table 2) were calculated for each theme following the recommendations of Onwuegbuzie and Teddlie (2003) to identify the number of participant responses within a theme that contained a finding divided by the total number of responses. In general, frequency effect size provides a way to determine and compare the magnitude of an effect, in this case, the salience of parent anxiety. The calculation of frequency effect sizes has been used in other qualitative studies to assess and report the relative magnitude of qualitative thematic findings (Sandelowski, Barroso, & Voils, 2007).

The research team used multiple coders to strengthen the trustworthiness of the interpretation of the data analysis and reduce investigator bias (i.e., investigator triangulation; Creswell & Miller, 2000), consistent with the approach used by Pritchard and Havitz (2006). Furthermore, coders were blind to the camp staffing model (i.e., Extension or Extension-Enterprise) while coding. The research team followed a systematic coding process outlined by Hruschka et al. (2004) to ensure intercoder reliability (i.e., intercoder agreement) across the coders, including "segmentation of text, codebook creation, coding, assessment of reliability, codebook modification, and final coding" (p. 310). First, each coder independently coded 20% of the open-ended responses; that is, each coder identified segments of text (i.e., words, phrases, sentences) representative of one concept based on the meaning of that text segment. While coding, each coder created an independent codebook. Coders then met to discuss the initial set of codes and assess reliability. Next, coders merged the independent codebooks to create one final codebook that reflected coder agreement. After all open-ended data were analyzed using the final codebook, the coders met again to assess reliability.

With regard to intercoder reliability, Hruschka et al. (2004) stressed that the use of multiple coders strengthens the reliability of the codebook. Across the three coders, intercoder agreement was .99, which McHugh (2012) described in the category of "above .90 almost perfect" (p. 280). Salient codes were then identified based on frequency, and categories of PA were determined based on conceptual similarities across salient codes. In addition to investigator triangulation,

the coders strengthened the validity of the study findings through careful attention to disconfirming evidence during the coding process (i.e., data suggesting parents were not anxious about their child attending camp; Creswell & Miller, 2000).

Results

The first study purpose was to explore categories of PA associated with their child's summer camp participation. Eleven categories of PA emerged through the coding process (see Table 2). These categories included (in order of frequency): separation and loss of communication; not worried or an alternate response; safety and concerns about peers/bullying; lack of trust in camp staff and administrators; lack of parent control and overprotection; child's adaptability for camp and their behavior at camp; child's social needs and enjoyment; lack of parent/child understanding of, and preparedness for, camp; child's health, medical, and physical needs; fear influenced by media and society; and nature-related worry. Frequency effect sizes ranged from 0.24 (for "parental separation and lack of communication" to 0.003 (for "nature-related concerns). Representative quotes presented in Table 2 provide evidence of the emergent categories.

Table 2. Evidence Supporting Parental Anxiety Themes Associated with Summer Camp Experiences

Categories	Frequency	Frequency Effect Size	Representative Quotes
Separation and loss of communication	159	0.24	"When a child attends camp, it is often the first time they are away from their family for an entire week and there is no opportunity to talk with them…" "We are so conditioned, as parents, to know what our kids are doing every moment that it produces anxiety when we don't."
Not worried or alternate response	122	0.18	"I don't have any worries about our kids attending camp. As a family, we spend a lot of time doing outdoor activities and we are comfortable with that."
Safety and concerns about peers/bullying	100	0.15	"Safety…nobody watches your kids like you do. It's something every parent worries about." "I think most parents feel fear for the safety of their children - we worry that something bad will happen…injury, sexual abuse, bullying…"
Lack of trust in camp staff and administrators	74	0.11	"Parents worry if they don't know staff members or don't have information on the credentials and screening of staff members." "Leaving your child with a complete stranger" "…that the counselors are not experienced enough to handle the kids."

Categories	Frequency	Frequency Effect Size	Representative Quotes
Lack of parental control and overprotection	57	0.08	"Because they don't have control over what their kids do…" "Some parents have difficulty letting go of control." "They cannot control or protect their child."
Child's adaptability for camp and their behavior at camp	55	0.08	"We were worried that she would become homesick." "I was mainly worried about how my child would adapt and being homesick." "You are never quite sure he will cope."
Child's social needs and enjoyment	44	0.06	"Unsure my child will 'fit in' and make friends." "I want my child to feel included…and well liked. Letting her go into an experience like this was difficult."
Lack of parent/child understanding of, and preparedness for, camp	41	0.06	"Not knowing exactly what is going on." "[Parents] don't know enough about who's going to be there, where it is, what is going to happen."
Child's health, medical, and physical needs	23	0.03	"My child has ADD and needs reminders to remember daily self-care." "I am…worried about health issues specific to my child's allergies." "I wasn't sure if he had been paying attention to the lessons we had been trying to teach him about taking care of himself…if he would actually brush his teeth and put on deodorant."
Fear influenced by media and society	13	0.02	"We are bombarded with stories about kids in dangerous situations by the news media." "…the media shares negative experiences with school, summer programs, and daycares."
Nature-related worry	2	0.003	"I only worry about bug bites and sunburn." "I worry about mice in their cabin. Mousetraps going off all through the night."

The second study purpose was to determine how camp-related PA might differ based on camp staffing model. Based on the results of the content analysis (Table 2), the research team tested the categories to examine possible differences between the Extension (volunteer) and the Extension-Enterprise (employee) model camps. Specifically, a multinomial logistic regression was conducted, comparing Extension and Extension-Enterprise camps to determine if response to the open-ended question was conditioned on program staffing model (i.e., volunteer vs. employee driven; see Table 3). At a global level, the research team found no significant difference between the Extension camp add the Extension-Enterprise camp based on whether they responded to the open-ended question: $\chi^2(9) = 14.911$, $p = .093$. Further, the research team found no significant between-group differences for most categories identified in Table 2: "separation and loss of communication" ($b = -.154$, Wald $\chi^2(1) = .310$, $p = .578$), "lack of trust in camp staff and administrators" ($b = -.204$, Wald $\chi^2(1) = .317$, $p = .573$), "parent control and overprotection" ($b = -.092$, Wald $\chi^2(1) = .064$, $p = .801$), "child's social needs and enjoyment" (b

= -.467, Wald $\chi^2(1)$ = 1.301, p=.254), "lack of understanding and preparedness for camp" (b = .173, Wald $\chi^2(1)$ = .193, p = .660), "child's health, medical, and physical needs" (b = -.903, Wald $\chi^2(1)$ = 2.324, p = .127), "fear associated with the influence of media and society" (b = .467, Wald $\chi^2(1)$ = .697, p = .404), or "not worried or provided an alternative response" (b = .216, Wald $\chi^2(1)$ = .584, p = .445). In one instance, the research team found a statistically significant between-group difference, "concerns about child's adaptability for camp and their behavior at camp" (b = -.940, Wald $\chi^2(1)$ = 4.893, p = .027). Another category ("concerns about nature") was not included in the analysis as it only had two responses, both at the Extension-Enterprise camp, thus between-group comparisons were unavailable.

Table 3. Multiple Regression Analysis for Between-group Differences of Extension (Volunteer) and Extension-Enterprise (Employee) Camps

Extension (Volunteer) vs. Extension Enterprise (Employee)	b (SE)	p value	95% CI for Odds Ratio	Odds Ratio	
			Lower		Upper
separation and loss of communication	-.154 (.277)	.578	.498	.857	1.475
lack of trust in camp staff and administrators	-.204 (.361)	.573	.402	.816	1.657
parent control and overprotection	-.092 (.366)	.801	.445	.912	1.867
child's social needs and enjoyment	-.467 (.410)	.254	.281	.627	1.399
lack of understanding and preparedness for camp	.173 (.395)	.660	.549	1.189	2.577
child's health, medical, and physical needs	-.903 (.593)	.127	.127	.405	1.294
fear associated with the influence of media and society	.467 (.560)	.404	.533	1.596	4.780
concerns about child's adaptability for camp and their behavior at camp	-.940 (.425)	.027	.170	.391	.898
not worried or provided an alternative response	.216 (.283)	.445	.713	1.241	2.159

Note: R^2 = .023 (Cox & Snell), .023 (Nagelkerke). Model $\chi^2(9)$ = 14.911, p = 093; b = regression coefficient; *SE* = Standard Error; *p* value = probability value.

The third study purpose was to generate items to inform a measure of PA to guide future research. Specifically, this study proposed Likert-type items (i.e., 1-7 scale where 1= very untrue and 7= always true) to inform a PA measure based on the categories generated from the results of the content analysis described in Table 2. The research team identified a set of factors with items developed (or adapted from validated measures) to reflect the categories in Table 4. These factors include separation; safety (adapted from Fisak et al., 2012); trust in staff; overparenting (Gagnon & Garst, 2019); child adaptability and behavior; social support and enjoyment; preparedness; health, medical, and physical needs; media-induced fear (adapted from Bennetts et al., 2018); and nature (adapted from Gagnon & Garst, 2019).

Table 4. Proposed Items for a Parent Anxiety Associated with Summer Camp Scale Developed from Emergent Categories

Scale	Items
Separation	I worry about being away from my child.
	I worry about not being in contact with my child.
	I worry when I can't communicate with my child.
	I worry about not seeing my child.
Safety (Adapted from Fisak et al., 2012)	I worry that something bad will happen to my child.
	I worry that my child will be injured.
	I worry that someone will harm my child.
	I worry that my child will be bullied.
Trust in staff	I worry about how staff will manage my child.
	I worry about how my child will be supervised by staff.
	I worry that the staff are not properly trained.
	I worry that staff will not pay attention to my child.
Overparenting (Gagnon & Garst, 2019)	I make important decisions for my child.
	I have told my child that he/she needs my support to succeed in life.
	I try to protect my child from negative influences.
Child adaptability and behavior	I worry that my child won't follow the rules.
	I worry about my child's behavior.
	I worry about how my child will act.
	I worry about my child getting into trouble.
Social support and enjoyment	I worry that my child will be disliked by others.
	I worry that my child won't make friends.
	I worry that my child will be rejected by others.
	I worry that other children won't accept my child.
Preparedness	I worry that my child won't know what to expect.
	I worry because I don't know what my child will do.
	I worry that my child won't be prepared for the activities.
	I worry that my child won't have everything they need.
Health, medical, and physical needs	I worry that my child's health needs won't be taken care of.
	I worry about my child's medical condition(s).
	I worry about my child's personal hygiene.
	I worry about my child's physical health.
Media-induced fear (Adapted from Bennetts et al., 2018)	I worry about my child when they are out without an adult.
	I worry about letting my child go anywhere without an adult.
	I worry about my child when they are out somewhere familiar without an adult.
	I worry about letting my child go out anywhere without me.
Nature (Gagnon & Garst, 2019)	I am afraid that my child will get lost outside in nature.
	I am afraid of wild animals or insects outside in nature.
	I am afraid of my child getting hurt if he/she plays outside in nature.

Discussion

This study explored sources of parent anxiety and compared PA across parents whose children attended summer camps that differed based on staffing model (i.e., primarily volunteers or primarily employees). Eleven categories of camp-related PA were identified. The prominence of separation and loss of communication (between parent and child) as a primary source of camp-related PA in this study is consistent with prior literature (Simons et al., 2007). Indeed, the frequency effect size for this dimension of PA was of a much greater magnitude ($r = 0.24$) when compared with that of other categories. Few camp studies outside of the homesickness literature (Kingery et al., 2012; Thurber & Sigman, 1998) have examined separation associated with summer camp experiences. Thus, this study responds to Simons et al.'s (2007) call for more camp-related research on parental anxiety concerning separation from their child.

The findings of this study can also be compared with those from Fisak et al. (2012), who also asked parents open-ended questions related to sources of PA. Some categories of PA that emerged in this study were conceptually similar to categories identified by Fisak et al. (2012). For instance, Fisak et al.'s "wellness/physical well-being" is reflective of this study's "child's health, medical, and physical needs" and Fisak et al.'s "social competence/social adjustment" is similar to this study's "child's social needs and enjoyment." However, "life success/ achievement" was a prominent category in Fisak et al.'s study yet was not identified in this study. This difference may be explained by the uniqueness of OST experiences, such as summer camp, when compared with other settings that may be more familiar to parents (Olsen et al., 2018), or because Fisak's study asked parents to identify sources of anxiety globally, while in this study questions were specific to the summer camp experience.

The study findings support and expand upon the work of Garst et al. (2016), who measured camp director perceptions of PA. For example, separation, lack of trust in staff and administrators, and safety concerns emerged as salient causes of PA in both studies. Notably, this study found almost no evidence of nature-related causes of anxiety, which is surprising considering literature suggesting parents are fearful of their child's contact with the outdoors (Beyer et al., 2015; Gagnon & Garst, 2019). The lack of nature-related PA in this study suggests that nature-related PA may be a characteristic of specific parent populations rather than a widespread characteristic of most parents.

The lack of a statistically significant difference between sources of anxiety due to camp staffing model, as evidenced by the multinomial logistic regression, is interesting considering prior literature suggesting volunteers and employees are viewed differently due to trust and/or parent perception of outcomes (Metz et al., 2017; Tomlinson et al., 2017). These findings might reflect the familiarity some parents have with Extension or existing trusting relationships between parents and volunteers. If parents perceive volunteers and employees differently, then the results of this study suggest that such perceptions do not necessarily increase parental anxiety. From the

perspective of those responsible for program delivery, it is encouraging that parents did not perceive differences across Extension and Extension-Enterprise camps based on whether they were staffed by volunteers or employees. This may suggest that staff performance is consistent across these camp staffing models, at least within the targeted camps. Thus, this study may offer an empirical rebuttal to the conventional wisdom that employees are better equipped than volunteers when it comes to the provision of quality youth programs and supports the "interchangeability" of volunteers and employees, as suggested by Handy, Mook, and Quarter (2008). However, due to the significant variability in camp volunteer training and preparation, more research is needed to confirm this study's findings in other samples of camp staff.

This finding of no statistical difference may also be explained by parents' lack of awareness of differences between camp staffing models. That is, parents may not perceive differences between a volunteer and an employee (i.e., as someone who might differ based on their camp experience or amounts of pre-camp training), assuming such differences exist. Further, anxiety-producing characteristics of the camp experience, although sometimes related to a staff domain (e.g., lack of trust in staff and administrators), may be associated with differences parents cannot easily detect during camper drop-off and pick-up, or may be informed by other parents' impressions and therefore may not be captured in post-camp measures. In short, parents may be equally likely to be anxious (or not) across Extension volunteer and Extension-Enterprise employee staffing models because their anxiety is more closely related to more proximal factors such as separation and loss of communication.

Future Directions

An intentional future direction was to generate items that could inform a measure of PA to guide future research. Informed by studies using qualitative data to guide scale development (Kunz & Grych, 2013; Rowan & Wulff, 2007; Shoffner, Newsome, Barrio Minton & Wachter Morris, 2015), the current study sought to expand existing measures of PA. In doing so, this study extends the literature related to parental anxiety by broadening the categories of anxiety parents may report within the context of OST experiences (e.g., lack of trust in camp staff and administrators; a child's health, medical, and physical needs). Although the frequency effect sizes for some of the PA categories were small, their presence in a large sample of parents across camps representing two different camp models suggests important factors when evaluating sources of camp-related parental anxiety.

Another future direction is examining PA within the context of camps serving children with disabilities and/or special medical needs. Research suggests a child's ability level can influence PA (Antle, Mills, Steele, Kalnins, & Rossen, 2008; Ogston et al., 2011). For instance, Antle et al. (2008) found parents of children with disabilities most often worried about their child's safety as their child became increasingly independent, as well as how their child would be productive in life and develop the necessary social supports to be successful. Further, Ogston et al. (2011)

stressed that "parents face great responsibility in caring for their children, but this responsibility is heightened for parents who have a child with a disability. It is important to understand the experience of . . . worry in mothers of children with disabilities" (p. 1379). Such a study of PA within the context of camps serving children with disabilities and/or special medical needs would inform whether such camp experiences elicit unique anxieties in parents.

Implication for Practice

This study can inform messaging for parent communication, education, and orientation programs, particularly programs such as youth camps and similar OST programs that involve overnight separation from parents and interaction with novel people, settings, or experiences. Specifically, this study identifies common sources of anxiety for parents who send their children to summer camp. Program providers could use the study findings to guide the development of targeted information that helps parents better understand topics such as successful separation of parents and children; administrative practices providing for youth physical and emotional safety; and procedures for staff screening, training, and supervision. Indeed, many of the study findings represent actionable concerns. For example, camp program providers can take specific steps to build relationships with parents to reduce anxiety associated with lack of trust in program staff and administrators. Thurber (2005) offered strategies for addressing camp-related anxiety among children, and several have implications for parents, such as normalizing separation-related anxiety; providing parents and their children with "sneak preview" access to what the camp experience will be like to increase familiarity and reduce novelty; educating parents about supportive and unsupportive behaviors prior to and after camp-related separation; and practicing time away from home so parents and children can better cope with separation. Program providers can also supply parents with information about how camp staff are trained and prepared for their roles and responsibilities, as well as an opportunity to meet camp staff, to facilitate parent trust in staff.

Limitations

Although this study provided insights into PA associated with summer camp experiences, a few limitations are recognized. First, as a qualitative study, the findings are limited to the targeted population of parents. However, the large sample size and the collection of data across camps reflecting two staffing models in two different U.S. regions offer a credible glimpse into PA in camps. Second, the findings were based on a homogenous sample of parents comprised primarily of well-educated White mothers. Although such homogeneity is common in camp-related parent research (Gagnon & Garst, 2019), it may be that the causes of PA identified in this study are germane to this homogenous population of parents. What about the anxieties of parents representing differing groups? For example, although nature was not a salient cause of anxiety in this study within this population of parents, some literature suggests African Americans may view nature as a source of anxiety (Chapman, Kertz, Zurlage, & Woodruff-

Borden, 2008). Third, self-report bias on the part of parents may have influenced the accuracy of the study findings; however, the similarities in findings between this study and Garst et al. (2016) suggest that different informants (e.g., camp directors and parents) perceive similar sources of PA.

Conclusions

Recognizing the role parents and caregivers play as decision-makers regarding children's out-of-school time experiences, it is important to consider factors, such as anxiety, that may influence parental decision-making. This study was one of the few examinations of camp-related PA in a large sample of parents of early adolescents, which is particularly relevant in an era of parental overprotection and excessive control that may be fueled by PA (Fisak et al., 2012; Gagnon & Garst, 2019). This study was also the only known examination of PA in camps based on a comparison of volunteer and employee staffing models, providing evidence that PA may be unrelated to differences in these models. As this study broadens the understanding of the categories of camp-related anxieties parents perceive, it can guide the development of parent messaging and education interventions designed to reduce camp-related parental anxiety. Furthermore, because exploratory research, such as the current study, is an important step toward the development of confirmatory research, this study is positioned to inform improved measurement of PA in out-of-school time programs such as summer camps.

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Evaluation of a Supermarket Environmental Change Intervention: Findings from a Low-Fat Milk Couponing and Educational Marketing Pilot

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The purpose of this study was to evaluate a multifaceted, collaborative approach to supermarket environmental change that included in-store couponing and educational marketing to increase low-fat milk purchasing across a 48-store supermarket chain serving predominately Hispanic customers. Point-of-sale (POS) and process data collected during the 16-week program implementation included in-store radio advertising, in-store signage, and POS coupons. POS data were analyzed by the coupon marketing partner, and a chi-square test was conducted to test for significant differences between groups. POS data indicated that 44,050 low-fat milk coupons were issued to traditional full-fat milk purchasing customers with a redemption rate of 5.3%. Of these, 42% became repeat low-fat milk purchasers (i.e., after initial purchase with coupon, customer re-purchased low-fat milk). Results from the chi-square test revealed significant differences in rates of purchase between those who received a coupon (5.87%) and those who did not (4.00%), ($\chi 2 = 8.61$, $p = .0033$). Findings indicate that collaborative public health efforts between retail and marketing partners to

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engage supermarket customers in a multifaceted yet targeted intervention are feasible and can shift purchasing behaviors towards a healthy alternative. This study has implications for informing future environmental change supermarket strategies.

Keywords: Policy, Systems, and Environmental Change (PSE), low-fat milk, nutrition, health promotion, coupon, supermarket intervention

Introduction

Despite efforts to improve dairy consumption in the United States, only 14% of Americans consume the recommended three cups of dairy per day (Centers for Disease Control and Prevention, 2015). Recommendations further encourage the consumption of low-fat milk, which provides the same basic nutrients but with less saturated fat and fewer calories compared to whole milk (U.S. Department of Health and Human Services and U.S. Department of Agriculture, 2015). Yet, most recent sales data show that only 25% of milk sold in the United States is low-fat (U.S. Department of Agriculture Economic Research Service, 2019). Low-fat milk and other dairy foods are an important part of a nutrient-rich diet, providing critical nutrients including calcium, phosphorus, riboflavin, vitamin B_{12}, protein, zinc, magnesium, selenium, potassium, vitamin A, and vitamin D. Furthermore, consuming recommended amounts of dairy is associated with lower risk of metabolic syndrome (Chen et al., 2015; Kim & Je, 2016; Shin et al., 2017).

Historically, approaches to shifting dietary choices have targeted individual behavior change, although more recent approaches emphasize a policy, systems, and environmental change (PSE) model (Frieden, 2010). By improving the food environment, for example, PSE efforts address the retail context and shift the default toward healthier selections (Bowen, Barrington, & Beresford, 2015; Escaron, Meinen, Nitzke, & Martinez-Donate, 2013; Frieden, 2010). To date, PSE efforts related to food environments have focused not only on the *location* of food retailers (Karpyn, Young, & Weiss, 2012) but also on wide-scale *educational outreach* (4-H and SNAP-Ed), on increased variety and *availability* of healthier products (Cannuscio et al., 2013; Odoms-Young, Zenk, Karpyn, Ayala, & Gittelsohn, 2012), and on examining how 'better for you' products are *marketed in-store* (Cohen, Collins, Hunter, Ghosh-Dastidar, & Dubowitz, 2015; Glanz, Bader, & Iyer, 2012). Such in-store marketing interventions are most aligned with the environmental change aspect of PSE, which has been defined to include visual or observable approaches to modify or enhance the built or physical food retail environment, and which may include economic, social, normative and message environments (California Department of Public Health, 2017).

The present study examines an in-store marketing, environmental change intervention that combines price reduction strategies (couponing) with product promotion and healthy educational marketing efforts (in-store radio messages, clings, and shelf tags) in a supermarket chain serving

predominately Hispanic customers. The integrative field-based approach sought to assess whether coupons affected low-fat milk sales among exclusive full-fat milk buyers in stores where a coordinated low-fat milk educational marketing campaign was also in place.

By collaborating with academic, nonprofit, and industry partners, this research aligns with Extension's health and wellness priorities (Braun et al., 2014; Braun & Rodgers, 2018; Buys & Koukel, 2018) and makes three contributions. First, it serves as a large-scale pilot of a potentially sustainable environmental change strategy by providing valuable information about how in-store marketing and couponing campaigns can be integrated in partnership with industry, nonprofit, and academic sectors alongside health education outreach efforts, to achieve optimal health behavior change in real-world settings. Second, it describes how multiple in-store marketing approaches (e.g., couponing, clings, radio messages) for one product can be implemented across a large chain of supermarkets targeting Hispanic consumers. Finally, it provides an example of an assessment approach that describes how such integrated efforts affect consumer purchasing behavior for a targeted, healthy alternative product.

Methods

Intervention Design

Targeted product. Milk was selected as the targeted product with the goal of increasing the number of consumers who exclusively purchase whole milk to purchase low-fat milk options (1% or skim). The intervention was implemented across 48 stores. Product promotion activities included shelf tags and clings to market low-fat milk; in-store radio messages in Spanish and English; and, for eligible customers, a $2 off low-fat or skim milk discount coupon printed at the register. All customers were exposed to the in-store marketing and promotion activities (i.e., shelf tags, clings, in-store radio), but only a random sample of customers was provided with a $2 off low-fat milk coupon (described below). The coupons had a 6-week rolling expiration and were issued over a 16-week period. No competing price promotions on milk were implemented during the study timeframe.

Random assignment. To identify the pool of potential customers who could receive a coupon, Catalina Systems, a national company that works with supermarkets to operate grocery scanner systems used to distribute targeted coupons, used historical shopper-level purchase data (tracked through encrypted debit/credit cards) to identify shoppers who purchased full-fat or 2% milk in the past six months and did not buy 1% or skim milk during the past year. To ensure shoppers attended these stores on a regular basis, the pool of targeted shoppers was limited to those who shopped more than once over each consecutive eight-week period throughout the analysis timeframe. Just over 73,000 shoppers met the criteria (i.e., regular shoppers who were exclusive full-fat milk buyers) across all 48 stores. Among the shoppers meeting the criteria, 53,000 were randomly selected to receive a $2 off coupon for low-fat milk during their next visit. The

remaining 20,000 customers did not receive coupons and served as a control group for this facet of the intervention.

Evaluation Approach

The process evaluation design broadly followed the framework articulated by Baranowski and Stables (2000) and included the following components in reporting the study's design and findings: *context* (aspects of the environment of an intervention), *resources* (the materials or characteristics of agencies and implementers necessary to attain project goals) *implementation* (extent to which the program is implemented as designed), *reach* (extent to which an intervention component was received by the target group), *initial use* (extent to which a participant engaged in intervention activity; i.e., purchase low-fat milk), and *continued use* (extent to which a participant continued to engage in intervention activity). Initially, the partners (*resources*) collectively worked to finalize a clear description of the *context* and intervention, and to specify what constituted complete program delivery (*implementation*). Next, we identified collaborative, feasible, program delivery methods that would allow us to contain costs while effectively evaluating program delivery of both the couponing and educational marketing components. As described below, our process evaluation data collection activities included examination of photographs of in-store signage taken by store management and supplemented with on-site observations when needed (*implementation)*, telephone interviews with dairy management (*implementation)*, and overall recording of coupons distributed (*reach*), coupons redeemed (*initial use)*, and customers' low-fat milk repurchase rates (*continued use)*.

Context. All 48 stores in the Arizona-based supermarket chain were included in the study. Stores clustered around Phoenix and Tucson, two of the most populous cities in Arizona (U.S. Census Bureau, 2018), but also included Yuma and several smaller border communities. Stores offered a full range of ethnic and Hispanic food varieties, including fresh, frozen, deli, and prepared foods. In Arizona, the median income for Hispanic wage earners is $20,000 as compared to $31,800 for white non-Hispanic residents. Further, 38% of Hispanic children and 26% of adults live in poverty, double that of non-Hispanic whites (16% and 13%, respectively) (Pew Research Center, 2019). During the intervention period, Supplemental Nutrition Assistance Program (SNAP) sales across the supermarket chain ranged from 10%-30% of sales, averaging 26% by store. Of the literature available on milk consumption among Latino- and Hispanic-Americans, research indicates an increased likelihood to consume high-fat milk vs. low-fat milk (Ayala, Baquero, & Klinger, 2008; Delapa et al., 1990; Novotny et al., 2003; Wechsler & Wernick, 1992).

Resources

Collaborative partnership strategy. The in-store couponing and educational marketing campaign was designed, implemented, and driven by the collective interests and resources of six partners: (1) Arizona-based supermarket chain (supermarket managers and dairy managers

across 48 stores), (2) American Heart Association, (3) Arizona State University (ASU), (4) Donna Levine Associates, Inc. (Chicago, IL), (5) Catalina Systems, and (6) The Food Trust (Philadelphia, PA). Partners worked collectively to develop a strategy that would (1) help to reduce caloric intake among high-risk populations (Hispanic populations in particular), (2) incorporate the American Heart Association's "Heart-Check" shelf tag program (see Figure 2; Johnson et al., 2015), (3) utilize the supermarket chain's existing Catalina point-of-sale (POS) systems to document POS analytics in cooperation with university and retailer partnerships, (4) be cost-neutral or profitable for the supermarket, and (5) be implemented feasibly in a relatively large sample of consumers and supermarkets stores. Study methods were reviewed and determined exempt by the IRB of the Arizona State University.

Development of educational marketing materials. Shelf tags, clings, and coupon wording were designed by partners in collaboration with the American Heart Association and the supermarket chain's dietitian and tested at the community-level for general acceptability. Once drafted, materials were sent to Catalina Systems for alignment with their recommendations for placement, positioning, and optimized layout (see Figure 1). The coupons were then reviewed by the president of Donna Levine Associates, who served as the study's in-store marketing feasibility and implementation expert.

Figure 1. Shelf Tag and Checkout Coupon

Implementation. In-store radio messages, shelf tags, and clings were launched three weeks before the couponing effort to "prime" the consumer. The following in-store radio message was developed by the retail dietitian in conjunction with the research team: "Have you considered switching to 1% or Fat-Free Skim Milk? It has all the nutrition of regular milk with less calories and fat." The message ran in both English and Spanish, every two hours (per supermarket chain's policy for radio ads) according to the stores' radio cycle across the 40 stores. The remaining eight stores did not have the capacity for in-store radio. However, these stores were included in the analysis since the radio messages were only one aspect of the educational marketing campaign, and this study was intended to examine a multicomponent intervention across an entire supermarket chain.

Adherence to proper initial placement of shelf tags and clings was captured via photographs taken by the supermarket managers. Supermarket managers sent photos of the in-store placement of the shelf-tags and clings to the corporate dietitian who also shared copies ($n = 43$) with the principal investigator by email. Stores not providing images ($n = 5$) were visited in-person by the research team. The couponing effort began three weeks after the launch of the in-store radio messages, shelf tags, and clings. During the first three weeks of the couponing effort, a telephone survey of dairy managers was conducted at each store ($n = 43$) to ascertain the dairy managers' awareness of (1) in-store radio messages being played, (2) use of clings, (3) use of shelf tags, and (4) milk coupons being offered.

Reach, initial use, and continued use. To measure coupon distribution and redemption as well as volume sales, the retail partner (Arizona-based supermarket chain) shared real-time coupon distribution and redemption data as well as corresponding POS data for volume purchased with the couponing partner (Catalina Systems). Reach was then assessed by measuring the number of coupons distributed. All transaction-related data were ultimately aggregated. Coupons were issued for 16 weeks and expired 6 weeks after issuance. Therefore, initial use was assessed by measuring the total number of coupons that were redeemed by eligible customers over the 22-week period. Continued use was assessed by measuring the repurchase rate of eligible customers who repurchased low-fat or skim milk after their initial purchase with a coupon during a period that extended 10 weeks after the last coupon expired (32 weeks).

Analysis

Coupon data were analyzed by the couponing firm through a restricted partner agreement and included reports of the number of coupons distributed (16 weeks), the redemption rate and the average volume purchased during the intervention (22 weeks), and the overall repurchase rate during the extended 10-week period. For those who made repeat purchases, analyses examined the average volume per repeat purchase, the average number of trips per repeat purchase, and the overall percentage of repeat purchases. A chi-square test was conducted based on the results provided by Catalina Systems to determine whether the purchasing differences between those receiving coupons and those not receiving coupons were statistically significant. Statistical testing beyond that conducted by the couponing firm was conducted using SAS Version 9.4.

Results

Implementation

After examining photos of the in-store placement of educational marketing materials, it was determined that all but five stores initially set up their marketing materials according to protocol. Photos included images of shelf tags on shelves ($n = 43$; see Figure 2) and clings on dairy cases ($n = 36$, the remaining seven stores did not have cases where clings were feasible; see Figure 3). While the radio messages played throughout the store, the shelf tags and clings were displayed

only in areas where milk was available. The last five stores required in-person visits and observations to confirm materials were displayed as requested. A telephone survey of dairy managers revealed that 12 of 43 managers were aware of the store using radio messages, and 26 indicated they were aware the store was offering milk coupons.

Figure 2. In-Store Shelf Cling

Figure 3. In-Store Shelf Tag

Reach, Initial Use, and Continued Use

Reach was assessed by measuring the number of coupons distributed. Of the 53,000 customers in the experimental group, 44,050 were provided a coupon over the 16-week period. Initial use was assessed by measuring the total number of coupons that were redeemed by eligible customers in the experimental group ($n = 44,050$) over a 22-week period (16-week distribution plus 6-week expiration). The frequency of coupons redeemed totaled 2,334, or 5.3% of total coupons distributed. Results from the chi-square test showed that those who received a coupon purchased low-fat milk at a higher rate (5.87%) than those who did not receive a coupon (4.00%), ($\chi2 = 8.61$, $p = .0033$). Continued use was assessed by measuring the total number of eligible customers who repurchased low-fat or skim milk after their initial purchase with a coupon, up to 32 weeks. Of the 2,334 customers who initially purchased low-fat milk during the 22-week period, 42% repurchased low-fat or skim milk during the extended 10-week period, totaling 980 repeat purchasers. Among repeat purchasers, 57.7% made two or more repeat purchases totaling 565 consistent repeat purchasers. For all participants who made repeat purchases, the average volume per repeat purchaser was 3.24 gallons.

Discussion

Our study demonstrates the feasibility of implementing a multifaceted marketing campaign to shift consumer purchases from full-fat to low-fat milk using product coupons and in-store

educational messages. Findings revealed that 5.87% of exclusive high-fat milk customers that received a low-fat milk coupon purchased lower fat milk, and 42% of those that made a low-fat purchase went on to re-purchase low-fat milk without a coupon. The project is an example of an evaluation of an integrative and collaborative approach to implementation of an environmental change pilot and may serve to inform future projects seeking to shift default purchasing toward healthy, under-consumed foods.

Partnerships and Environmental Change Initiatives in Extension

The advancement of community-based partnerships and collaborations is a long-standing pillar of the work done by Cooperative Extension. For example, the Extension Committee on Organization and Policy's (ECOP) 2014 Framework for Health and Wellness (i.e., integration of nutrition, health, and environment systems and health literacy) identifies and connects the six key priorities of extension with actionable objectives (Braun et al., 2014). Specifically, the model depicts how support for health policy issues education, and integrated nutrition, health, environment, and agricultural sciences, requires progress on indicators to build and grow community-collaborations focused on health, while working to advance the achievement of healthy environments and safe, affordable food. Together, according to the model, these efforts contribute to community support for healthy lifestyles and ultimately increases the number of Americans who are healthy at every stage of life.

In alignment with efforts to advance community partnerships to improve health and wellness, Cooperative Extension programs nationally have advanced their understanding of the role of PSE efforts in achieving behavior change objectives. In-store marketing efforts are an example of environmental change in the context of PSE and are typically characterized by manipulation of one or more of the 4 P's (Price, Promotion, Placement, and Product), often affecting the food retail environment in a way that drives the public in conscious and unconscious ways toward certain foods and brands (Armstrong, Adam, Denize, & Kotler, 2014; Zimmerman, 2011). A review of in-store marketing approaches by Glanz et al. (2012) identified six available public health-oriented studies that focused on in-store couponing as a way to promote healthy eating and, like our study, found that couponing efforts often increase product sales. However, the review also pointed out that the sustainability of such efforts may be limited given cost considerations, including the expense associated with funding and distributing coupons. The present pilot study provides one example of how partnerships with the dairy industry, supermarkets or nonprofit organization efforts like American Heart Associations' Heart-Check program may reduce costs and improve the potential for sustained efforts when common objectives are identified and aligned.

Integrative marketing. Our study is one of only four major multi-component supermarket interventions to date to focus exclusively on the promotion of low-fat milk (Finnell & John, 2018; Reger, Wootan, & Booth-Butterfield, 1999; Reger, Wootan, Booth-Butterfield, & Smith,

1998). Prior low-fat milk promotion efforts have largely focused on social marketing aspects of the work and have neglected price reduction strategies. For example, work by Finnell and John (2018) found a net 1.5% increase (from 10% to 11.5% market share) in 1% milk sales at the store level after a 12-week social marketing intervention in Oklahoma City, OK. Reger et al.'s (1999) study found larger effects, with self-reported increases in low-fat milk purchasing from 29% before the paid advertising campaign to 46% upon completion. An even earlier study in West Virginia (Reger et al., 1998) found that a media campaign complemented with community-based nutrition education resulted in a significant increase in low-fat milk sales. In our study, the added effect of the coupon plus in-store marketing intervention resulted in 1.87% greater low-fat milk sales among exclusive full-fat milk purchasers. With the in-store marketing approach alone, milk sales increased by 4%. Our results are consistent with prior research in that they reveal a willingness on the part of the consumer to switch from high-fat to low-fat options (Finnell & John, 2018; Reger et al., 1998, 1999) and suggest that in-store educational messages are also effective at increasing purchasing of targeted healthy items.

Repeat purchasing. As a result of our collaboration with Catalina Systems, we were able to examine the rate of repurchases among those who purchased low-fat milk once, and nearly half of those who purchased low-fat milk once purchased the product again. Our findings represent a novel contribution to the field as we could not identify prior studies that reported repeat low-fat milk purchasing rates for individuals who exclusively purchased whole fat milk prior to any intervention.

While our research did not focus on the rationale for repeat purchasing from the perspective of the buyer, prior research may provide some insight. One study by Weiss et al. (2015) documented substantial differences in perceptions of the taste of full-fat and whole milk as compared to actual preferences during blind taste tests. In this study, consumers were asked to taste blind-samples of skim, 1%, and 2% milk and determine the type of milk. Results showed that 81% of whole milk buyers incorrectly identified low-fat milk as whole milk, and 70% of whole milk drinkers and 65% of 2% milk drinkers considered switching to low-fat milk after tasting the product (Weiss et al., 2015). This may explain the repeat low-fat milk purchasing, reinforcing the notion that once consumers taste low-fat milk, it is found to be an acceptable alternative to whole milk.

Collaborative approach to implementation. Our collaborative partnership was an intentional strategy used to address challenges related to implementing supermarket interventions that are identified in the literature. For instance, in their process evaluation of a 4-month multicomponent supermarket study in Baltimore City, Lee et al. (2015) used shelf tags and nutritional education alongside community events and taste tests to promote multiple products, including dairy items. Such an approach is similar to several other studies that examined food marketing and environmental changes in stores serving underserved communities (Baquero, Linnan, Laraia, & Ayala, 2014; Curran et al., 2005; Gittelsohn et al. 2010; Rosecrans et al.,

2008). In their assessment, Lee et al. (2015) found that the limited availability of store management created implementation hurdles. This issue, coupled with complications of employee attrition and the large number of products included in the intervention (condiments and spreads [49 items], fruit and vegetables [93 items], dairy products [63 items], etc.) made program promotion difficult, and at times, compromised implementation fidelity (Lee et al., 2015). While store-owner buy-in was sufficient, the authors recommend that future studies seek buy-in from managers and retailers alike. Our approach, which was not without limitations, achieved strong collaborations at the retailer level and with supermarket managers to ensure high program implementation fidelity.

Another study by Polacsek et al. (2018) encountered different implementation issues. Their objective was to determine whether a supermarket double-dollar fruit and vegetable (F&V) incentive increased F&V purchases among low-income families. Similar to our study, Polacsek et al. (2018) used coupons issued at the point-of-sale; however, instead of adopting a coupon "good for future purchases" approach, they created same-day coupons, which the researchers intended customers to use at the time of purchase. These materials (same-day coupons) did not integrate smoothly with shoppers' habits or previous experiences with the POS coupons, and the design put the onus of responsibility on the cashiers, which resulted in many of the coupons being handed to the customer for future use instead of same-day. By collaborating with an established POS coupon company already working with the retailer and supermarket staff at the retailer-level, our study was integrated smoothly at the shopper- and retailer-level as was evidenced by the coupon redemption rate (5.3%), addressing limitations previously encountered by Lee et al. (2015) and Polacsek et al. (2018).

Strengths and Limitations

Process data identified several promising approaches to ascertaining program implementation in-store. Images from retail partners coupled with dairy manager data identified gaps in understanding how to maximize resources and interests for study implementation and measurement that integrate easily and efficiently within real-world settings.

Strengths

Collaborative partners. Working in partnership with industry, nonprofit, academic, and retail experts allowed our multi-component intervention to maximize its reach. Interests on the part of all partners were addressed through the intervention. The American Heart Association aligned its Heart-Check program with the low-fat healthy product campaign, the supermarket chain and its dietitian offered healthier products at decreased prices, and the academic partners collected data to better understand how to operationalize a large-scale product promotion and couponing intervention across a store chain.

The partnership with Catalina Systems was instrumental to our study design and allowed easy access to historic shopper data and weekly sales data and provided a mechanism to issue coupons without having to implement an external couponing system. Further, management and staff were already familiar with how Catalina Systems generated coupons as well as how to distribute them to the customer and were open to maximizing their investment in the partnership.

The supermarket dietitian was also heavily invested in this program and played an integral role in the coordination of the effort, including engaging the range of partners involved in the program. The dietitian had strong relationships with the American Heart Association because of engagement in the "Heart-Check" shelf tag program and had experience in implementing nutrition shelf tag programs. Further, the in-store dietitian supported in-store implementation.

Cost management. In-kind efforts, including the time each partner spent on the project, the cost of data collection via the automated coupon system, and the design costs for the shelf tags and coupon images reduced implementation costs, and partnership agreements were leveraged so that work could meet multiple objectives simultaneously. Our example demonstrates how mutual benefit can motivate partners to dedicate time and resources to implement healthy initiatives at the community, store, and individual levels.

Limitations

Chain-wide intervention. Challenges in study design whereby both shoppers who received and did not receive coupons were exposed to in-store marketing efforts limit our ability to interpret what portion of the increase in milk sales would have occurred absent any intervention. However, contamination of the intervention across a chain is always possible since consumers can shop in more than one store location. Our intervention also faced logistical challenges regarding the need for different sizes and placement of shelf tags and timing of in-store radio spots due to store-specific technology and radio advertising.

Tracking purchases. Another challenge encountered stems from the fact that the supermarket chain implementing the intervention did not have a loyalty card. Thus, the only method to track individual customers' purchases over time was through electronic card data. This meant that customers paying with cash were ineligible for the intervention. Because our intervention was collaborative, our data collection efforts were reliant on the POS systems in place at each supermarket, which in turn were utilized by Catalina Systems to provide weekly redemption information to study partners. While this process was effective for our partnership, the number of steps in the process could present challenges for future studies.

Generalizability. Milk prices are regulated throughout the United States, and certain states do not allow stores to use coupons to discount milk below cost (i.e., California). Therefore, the generalizability of results from the current study may be limited by state. Further, our targeted customer base was predominately Hispanic, which likely limits generalizability to other ethnic

groups. However, results from the process evaluation show generalizable promise in other ways. For instance, many supermarket studies have focused on the in-store promotion of more than one item (e.g., fruits *and* vegetables) but limited the number of stores in which these items were promoted (e.g., one to four stores) (Baquero et al., 2014; Olstad et al., 2016; Polacsek et al., 2018). Because our intervention was scaled to an entire chain, it demonstrates feasibility at a systems level. Further, because study partners worked in collaboration, implementation efforts were achieved through existing infrastructure and did not require the use of additional tracking mechanisms (e.g., customized loyalty card, same-day coupons).

Because we partnered with a coupon marketing firm, proprietary issues prevented full access to raw data. As a result, we were unable to track certain purchasing patterns (e.g., overall low-fat milk purchases). Despite these analytic limitations, our reliance on the coupon marketing firm's data analytics provides a model that can be used in the industry to measure the impact of promotions, making the findings more relevant for retailers who are key partners in these public-private partnerships and whose buy-in is critical for the success of such partnerships.

Contributions of the Current Study

As Extension leaders, researchers, and practitioners continue to struggle to help families achieve a healthy and balanced diet, there is a need to build an evidence base for how to sell more-nutritious foods, and fewer low-nutrient, high-calorie food/beverage products in a profitable or cost-neutral way (Braverman, 2019). Increasingly, industry methods (e.g., electronic supermarket sales data, inventory data, and loyalty card output) are being used in public health research to determine consumer behavior and shopping patterns, and examples of PSE approaches and their evaluation are important for future implementation efforts. Our collaboration with Catalina Systems enabled us to identify customers who were exclusive full-fat milk buyers using historic shopper data, which in turn allowed us to target customers who would most benefit from receiving a low-fat milk coupon. Additionally, our study offers concrete guidance for the rate of return of coupons in this category (5.3%). Such data are informative, particularly when interventions are fiscally constrained, and redemption rates are used to drive decisions around depth of issuance.

Future Research

To sustainably shift the purchasing patterns of supermarket customers towards healthier options (i.e., low-fat milk), multifaceted efforts should be employed. The current study demonstrated that it is feasible to engage multiple stakeholders, including retail and coupon marketing partners, to successfully implement a couponing campaign where a coordinated low-fat milk promotional in-store marketing campaign was in place. Future couponing interventions should extend the findings from the current study by (1) expanding beyond one product (low-fat milk) to include multiple products (whole-grain foods, lower-sodium items, or low-fat dairy in other forms such as cheese or yogurt), (2) identifying customers on multiple attributes using historic

shopper data, and (3) advancing a collaborative-based model that includes Extension partners and is responsive to the real-world social and physical contexts in which the study takes place. This intervention and evaluation demonstrate the feasibility of such a collaboration, however, by including more than one product, it is possible to pre-identify customers on more than one attribute (e.g., inclusion criteria = exclusive low produce buyers, exclusive sugar cereal buyers, exclusive high-fat milk buyers, and high salty snack buyers). Within a SNAP or WIC context for example, stores in partnership with social science researchers and health advocates could broaden the impact of the intervention by targeting specific bundles of products with coupons tailored to a specific customers' purchasing history. In their systematic review of grocery store interventions, Escaron et al., (2013) found that efforts to address both supply- and demand-sides of grocery interventions hold most promise, suggesting that the approaches tested here may provide even greater impact when coupled with supply-side (i.e., product availability, depth of stock) interventions, such as those targeting smaller stores.

Conclusion

The 2015-2020 Dietary Guidelines and the Institute of Medicine (IOM) recommend that collaborative multicomponent studies explore how to improve food environments to make it easier for the public to shift their dietary habits towards more healthful options (Koplan, Liverman, & Kraak, 2005; U.S. Department of Health and Human Services and U.S. Department of Agriculture, 2015). At the same time, Cooperative Extension through its work with SNAP-Ed and the Expanded Food and Nutrition Education Program (EFNEP) are advancing efforts to target PSE changes in order to address disparities in health and diet among those at greatest risk for diet-related disease (Braun et al., 2014; Cates et al., 2014; National Institute of Food and Agriculture [NIFA], 2017).

Our study found several elements that positively contributed to the project's feasibility of implementation. First is the development of strong, collaborative relationships with academic, nonprofit, and industry partners to utilize different types of capital (knowledge, social, economic) available within the partner network (e.g., registered dietitian who was affiliated with the supermarket chain participating as both nutrition consultant and implementation expert). Second is low-cost program monitoring methods, including photos, telephone interviews with dairy managers, and pre-existing data tracking systems. Third, evaluation demonstrated that the use of couponing in addition to in-store messaging resulted in 1.87% higher product sales suggesting that coupons add success to shifting purchasing toward healthier products, both in the shorter- and longer-term with repeat purchasing likely (58%). By supporting the work of retailers and promoting the consumption of low-fat, high protein foods, such as milk, our study provides an example of a public-health informed evaluation of a collaborative program to improve food environments and affecting positive health behavior change in real-world settings.

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Early Childhood Obesity Prevention in Rural West Virginia
Extension's Role and Lessons Learned

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The Cooperative Extension system is uniquely positioned to lead rural community efforts to prevent obesity in early childhood. This article explores best practices in promoting healthy weights among young children and shares examples and resources relevant to Extension programming. The West Virginia (WV) Healthy Children Project aims to improve community, home, and early care and education (ECE) environments by promoting healthy eating, physical activity, outdoor play, and reduced screen time. This project primarily focuses on interventions with ECE providers serving 2-5-year-old children in three rural counties. Comprehensive assessments informed the interventions and guided Community Advisory Committees. ECE providers were trained in "I Am Moving, I Am Learning" (IMIL) and "Nutrition and Physical Activity Self-Assessment for Child Care" (Go NAP SACC) best practices and were supported with technical assistance and classroom resources. Garden-based learning, natural playscapes, painted playgrounds, and farm-to-ECE further enhanced the environments and experiences. Community leaders were engaged in advisory committees, transformative projects, and local family-focused activities. The efficacy of these practices was tracked using quantitative and qualitative evaluation strategies conducted throughout the project, including observations, ripple effects mapping, and questionnaires. This article describes the overall project strategies and reveals the lessons learned and the challenges encountered.

Keywords: early care and education, childhood obesity prevention, Extension model, healthy lifestyle, community engagement, parent engagement, IMIL, Go NAP SACC

Introduction

The mission of the U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA) is to "invest in and advance agricultural research, education, and extension

to solve societal challenges" (USDA, 2018, p. 5). Obesity is a major societal challenge – one that Extension organizations may help to address. The Cooperative Extension (Extension) system is uniquely positioned to help lead community efforts to reduce obesity in young children. Extension has built a reputation on its ability to develop and foster state and community partnerships, implement research-informed strategies, and reach broad and diverse audiences. Together, these organizational qualities are invaluable in addressing chronic health issues. Child obesity is one example of a chronic health issue on which the Extension system is well-suited to focus its energies and resources. The purpose of this article is three-fold: (1) to discuss factors related to obesity trends, barriers, and facilitators; (2) to explore family, community, and early childhood solutions for the prevention of obesity; and (3) to share examples, resources, and experiences relevant to Extension programming for early childhood obesity prevention in rural communities.

Background

The costs and consequences of obesity are well-documented and include additional medical care, decreased work-related productivity, disability, premature death, and various social and psychological issues. The prevalence of adult obesity exceeds 30% in the United States, accounting for $149.4 billion in medical costs at the national level (Kim & Basu, 2016). According to the 2015-16 U.S. Centers for Disease Control and Prevention's (CDC) National Health statistic data, nearly 40% of adults were overweight or obese (CDC, 2017a). High obesity rates in U.S. adults impact individual health and our society at large. The CDC estimates that 71% of young people in the U.S. would not be able to join the military if they wanted to and that an unhealthy weight would be the cause of ineligibility in nearly one-third of possible recruits (CDC, 2017b). It is also evident that the proportion of U.S. children who are overweight or obese is alarmingly high, and this poses severe consequences for generations to come (Institute of Medicine, 2005).

Preschool-aged overweight or obese children (Body Mass Index greater than the 85th and 95th percentiles, respectively) are five times more likely to be overweight or obese as adolescents and adults (CDC, 2016a; Cunningham, Kramer, & Narayan, 2014). In addition, the prevalence of obesity in children tends to increase with age, which makes early childhood a critical age for obesity prevention efforts (Foster, Farragher, Parker, & Sosa, 2015). Establishing environments that promote healthy behaviors in early childhood may significantly reduce future obesity risk (Natale et al., 2013). Since more than half of U.S. children under age five spend significant time in nonparental childcare settings, this provides an opportunity to focus obesity prevention efforts in preschool and childcare environments (CDC, 2016b; Natale et al., 2013). Furthermore, health disparities between urban and rural environments and populations are well documented. For example, rural residents tend to eat diets higher in fat and calories, are less physically active, and engage in more screen time activities than urban residents (U.S. Department of Health and Human Services, 2015). Rural communities face a myriad of barriers to healthy lifestyles, such

as high poverty rates, less access to opportunities for physical activity and healthy eating, limited resources, and inadequate transportation. Extension systems need to consider these factors in addressing obesity in rural areas.

A review of the research on early childhood obesity prevention identified these six promising strategies (Benjamin Neelon, Østbye, Hales, Vaughn, & Ward, 2016; Hassink, 2017; Reynolds, Cotwright, Polhamus, Gertel-Rosenberg, & Chang, 2013): a

- Integrating obesity prevention curriculum on healthy eating, physical activity, and body image into the existing school curriculum;
- Including more sessions on physical activity and fundamental movement skills throughout the week as well as increasing ways for parents of young children to access this information;
- Improving the nutritional quality of foods made available to children;
- Creating an environment and culture that supports children eating nutritious foods and being active throughout each day;
- Providing support for teachers and other early care and education (ECE) staff to implement health promotion strategies and activities (e.g., professional development, capacity building activities); and
- Engaging parents to support activities in the home setting to encourage children to be more active, eat more nutritious foods, and spend less time in screen-based activities.

Research indicates the need and opportunity to prevent obesity during the first years of life (Natale et al., 2013). It is estimated that around 27% of 2-5 year-olds are overweight or obese, and more than 60% of children under six are in non-parental care on a weekly basis (Reynolds et al., 2013). These numbers illustrate the need for increased and improved early childhood education programs focused on obesity prevention (Reynolds et al., 2013). It is essential for schools, childcare settings, the healthcare system, and the broader community to provide programs that promote healthy behaviors in everyday practices in homes (Hassink, 2017). ECE settings often serve as "homes away from home" for children, and therefore, can be particularly influential in children's lives (Reynolds et al., 2013).

While there is limited rigorous research on interventions with young children, particularly with minority, limited resource, and rural children, expert recommendations consistently endorse comprehensive obesity prevention program supports that include healthy eating and physical activity behavioral components (Foster et al., 2015). There are no simple solutions, and experts advocate for additional research to precisely hone in on proven strategies. The Institute of Medicine (IOM) identified five critical focus areas for future research on childhood obesity prevention: (1) physical activity, (2) nutrition environments, (3) consistent messaging, (4) expanding stakeholder roles, and (5) making schools a focal point for obesity prevention (IOM, 2012a). There is a broad consensus that to successfully impact obesity rates, an ecological

approach that engages all sectors of society is needed (IOM, 2012a, 2012b; Khan et al., 2009). Responding to this research recommendation, federal legislation, funding, and programs increasingly emphasize public health approaches that involve policies, systems, and environmental changes.

Conceptual Frameworks

The Cooperative Extension's National Framework for Health and Wellness, as shown in Figure 1, visually depicts the complex interplay between individual, community, and societal factors (Braun et al., 2014). Based on the social-ecological model and systems thinking, this framework identifies six program priorities, outcome indicators, and potential partners. The center of the framework is the long-term goal of every Extension health program – to increase the number of Americans who are healthy at every stage of life. The framework's outer rings show the essential areas of knowledge and skill, and the systems that influence and support individuals, families, communities, and society at large to achieve this goal.

Figure 1. Cooperative Extension's National Framework for Health & Wellness
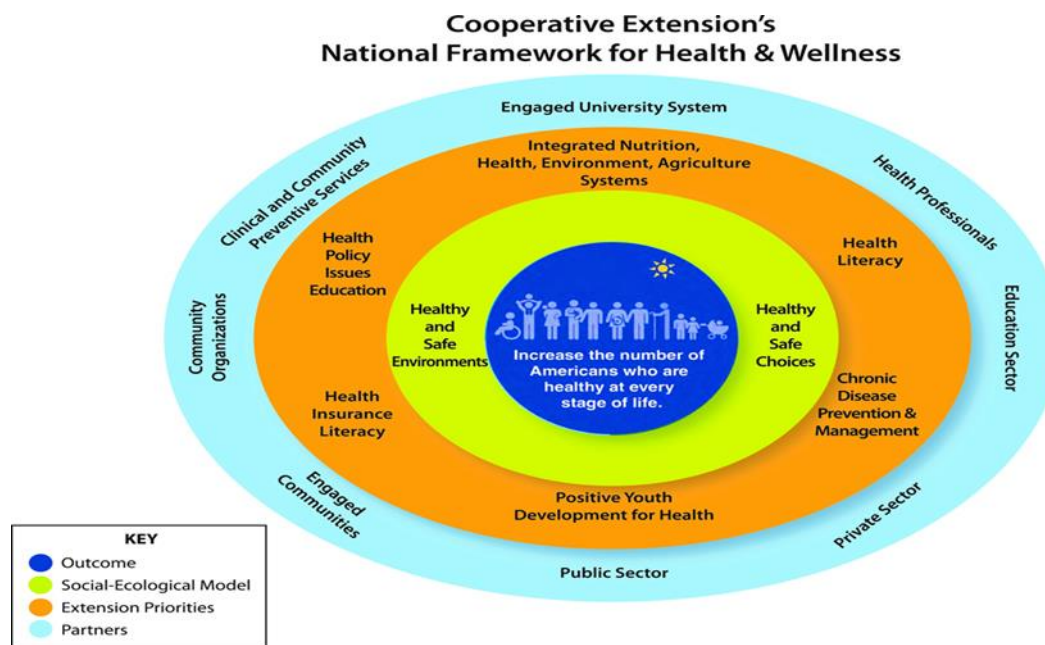
A second framework that is especially relevant is the Spectrum of Opportunities for Obesity Prevention in the Early Care and Education Setting, as shown in Figure 2. This framework shows the multitude of elements that may impact the weight status of children in ECE settings (Segal, Rayburn, & Martin, 2016).

Figure 2. The Spectrum of Opportunities Framework for State-Level Obesity Prevention Efforts Targeting the Early Care and Education Setting

The WV Healthy Children Project was informed by both frameworks which feature opportunities to impact childhood obesity and are closely aligned with Extension's organizational and programmatic strengths. Extension's strengths include a national network of respected and trained community educators and expertise in relevant areas of community engagement, such as nutrition, physical activity, parenting, and youth development. Moreover, Extension educators employ a comprehensive approach to engagement, leadership, and action. According to the IOM, solutions to help address the obesity epidemic must come from multiple sources (individuals, organizations, and agencies), involve multiple sectors at various levels, and incorporate multiple comprehensive prevention strategies (IOM, 2012a). Given the complex and pervasive nature of childhood obesity, it is imperative that Extension is at the table and accepts the challenge to actively engage in a broad range of obesity prevention efforts.

WV Healthy Children Project – An Overview

The West Virginia University (WV) Extension Service created the WV Healthy Children Project to help combat the staggering statistics for childhood obesity. Project counties were preselected

by the funding agency based on rurality and high (> 40%) adult obesity rates. These criteria for project participation were based on previous research that has shown certain characteristics of rural communities contribute to disparate levels of childhood and adult obesity. According to the U.S. Census Bureau Rurality Level, all three project counties are considered mostly rural, with 50-99.9% of the population living in rural areas in 2010 (Ratcliffe, Burd, Holder, & Fields, 2018). Using lessons learned from other WV ECE health initiatives, this project focuses on interventions with ECE providers in three rural counties. Providers serve 2-5-year-old children and include pre-K and Head Start teachers and providers in childcare centers, family childcare facilities, and homes.

Assessing the Community, Home, and Early Care and Education Environments

The project's first phase was a formative appraisal designed to determine community-level resources and to assess the current perceptions and environmental and behavioral influences related to early childhood obesity within the communities, ECE settings, and home environments. Twenty-five parents/guardians participated in three focus groups, and 37 community stakeholders from various community sectors participated in key informant interviews. Questions focused on the perceived prevalence of childhood obesity, as well as the related barriers and facilitators. Each was asked about their current and/or potential roles in promoting healthy lifestyles in young children. There was a consensus among focus group participants and key informants, revealing a dearth of healthy eating and physical activity opportunities for young children and a strong focus on sports activities, which are not appropriate for young children. Furthermore, cost, transportation, and distance were identified as significant barriers to healthy eating and physical activity. Results of the formative phase provided important insight and were used to shape the intervention approaches of the project.

ECE providers in the three counties were contacted with information about the project and were asked to participate. A total of 27 ECE providers participated, which included providers from 15 pre-K and Head Start classrooms, three childcare centers, three family childcare facilities, and six family childcare homes. The baseline for the project was established through observations conducted in classrooms and childcare centers using a validated tool called the Environment and Policy Assessment and Observation (EPAO), which entails a full day of direct observation and document review (Ward et al., 2008). In addition, each ECE provider completed a Nutrition and Physical Activity Self-Assessment for Child Care (Go NAP SACC) prior to intervention (The University of North Carolina at Chapel Hill, 2017). The Go NAP SACC tool includes four modules addressing Nutrition, Physical Activity, Outdoor Play & Learning, and Screen Time (Battista et al., 2014). Through the self-assessment process, ECE providers gained a better understanding of how their current practices compared with best practices. They developed an improvement plan, and these goals were tracked over time to determine goal attainment and barriers/facilitators.

Early Care and Education Interventions

After self-assessment, ECE providers attended an educational training on how to incorporate nutrition and physical activity best practices into their daily routines. Training components were derived from the nationally recognized initiatives "I Am Moving, I Am Learning (IMIL)" and "Go NAP SACC." IMIL utilizes a health hero named CHOOSY (**C**hoose **H**ealthy **O**ptions **O**ften and **S**tart **Y**oung) and music embedded with health messages. Upon completion of the training, all sites received music CDs and other health materials featuring CHOOSY. Training was offered to all participating ECE providers, and a refresher course was offered each year.

Support and technical assistance were provided monthly to each ECE provider by county-based Extension personnel. The focus of this technical assistance was to help ECE providers achieve their goals and strive toward best practices. WVU Extension mentors provided resources and ideas on ways to implement the ECE provider's goals. In addition to the technical assistance, funds were allocated to ECE providers to purchase classroom and playground supplies to enhance their nutrition and physical activity environments. For example, ECE providers selected equipment for gross and fine motor development and creative play (e.g., tricycles, balance beams, and healthy food models). They were also provided with a variety of books and gardening supplies to start raised-bed and container gardens at their sites. Children helped plant the gardens and harvested the produce to create enthusiasm for tasting and eating fresh foods. The health hero, CHOOSY, periodically visited sites and engaged the children in physically active song and dance. Children had the opportunity to interact with CHOOSY, whom they learned about and saw in their classroom materials.

The project implemented various farm-to-ECE activities to encourage consumption of fresh produce and physical activity. Farmers markets were held at pre-K, Head Start, and childcare centers in the spring and fall months. In each project county, the pre-K and Head Start classrooms participated in field trips to local farms. During the summer months, boxes of fresh produce were provided monthly to childcare sites and individual families. Families also received steamer bags and healthy recipes with tips to prepare the produce.

Several surveys were completed periodically throughout the project to gain input and track progress. These included: (1) a survey of ECE provider knowledge of best practices, actual practices, and self-efficacy based on Alkon et al. (2014) and Gosliner et al. (2010); (2) a survey assessing current farm-to-ECE activities, perceived barriers, and current interest in farm-to-ECE activities; and (3) IMIL practices.

Family Engagement

Strong family engagement is vital in promoting children's health and well-being.   Therefore, an additional aim of this project was to actively engage families, reinforcing health messages the children received in the ECE setting within the home environment. ECE providers were given a

variety of health materials to send home on a regular basis to strengthen the health messages and activities that were taking place within the ECE setting. Take-home materials included a CHOOSY music CD, a CHOOSY magnet, a series of CHOOSY family activity handouts, and a CHOOSY magnetized refrigerator frame to display that week's family activity handout. A CHOOSY Healthy Habit System was pilot tested to encourage parents and children to engage in targeted behaviors at home. ECE providers challenged families to return information regarding the physical activity and healthy eating changes they were making at home. The children were then able to share what they were doing at home with the providers and other children in the classroom in a systematic way.

During the formative phase of the project, both parents and providers expressed concerns that transportation was the biggest barrier for families to attend events outside of the ECE day. The project initially intended to plan a series of family events as part of the parent engagement component. However, it was decided to instead partner with existing community events that were already frequented by families with young children. As part of these events, project staff facilitated physical activity and/or healthy eating activities with families and the health hero, CHOOSY.

A CHOOSY consistent messaging campaign was conducted throughout the three project counties to connect the ECE, home, and community environments. Three CHOOSY messages were disseminated throughout the county through a variety of media, including online social media sites, billboards, posters, brochures, newspaper advertisements, and grocery store cart ads. Messages encouraged families to be active together every day, eat a rainbow of fruits and vegetables, and include outdoor activities in family routines.

Community Engagement

One Community Advisory Committee (CAC) was formed in each county to advise the project team on strategies on how to best implement project components. The term "community" represents all rural communities within each county. Additional tasks for committee members were to provide oversight for the community mini-grant process, support project-related events, and advocate for and disseminate project information to their organizations and the community at large.

CACs were involved in three funding cycles of community mini-grants aimed to improve the nutrition and physical activity environments and practices of families with young children. Interested community organizations were informed about this opportunity to partner and submit a competitive application. CAC members reviewed applications and sent their recommendations to the project leaders. Twenty-eight projects in the three counties were selected for funding. A total of $65,000 supported projects, such as outdoor pavilions, outdoor water fountains, natural learning environments, walking trails and signage, high tunnels for growing produce, and other

sustainable ventures. Each project organization was supported by a CAC mentor to help troubleshoot any problems and to ensure timely completion of all project components.

In addition to mini-grants, each county received supplies for "painted playgrounds." CAC members selected sites to paint colorful and appealing stencil designs in various community locations (e.g., playgrounds and sidewalks) to encourage children to jump, hop, and have fun being physically active. Second, funding for one natural learning environment or playscape was provided to each county. Trainings were conducted for community members in each county by a company that specializes in planning and building natural learning environments. Once appropriate community sites were chosen, architectural plans were developed, and community build days were organized. Each community decided what elements to include in their natural learning environment. The painted playgrounds and natural playscapes are visible improvements and opportunities for families to be active in their communities for years to come.

Related to the community engagement component, a ripple effect mapping (REM) session was conducted. REM is a participatory evaluation methodology that uses appreciative inquiry, mind mapping, and qualitative analysis and helps to uncover intended and unintended project outcomes from the perspective of participants and stakeholders (Kollock, Flage, Chazdon, Paine, & Higgins, 2012). In this process, participants selected one or two partners and interviewed each other to identify (1) a highlight, achievement, or success related to the WV Healthy Children Project; (2) unexpected things that have happened as a result the project; and (3) connections with others, new and/or strengthened, resulting from the project. Participants reported to the larger group on what they learned in their partner interviews, and a ripple map was created using xMind software. The final step in the REM process involved the project staff, evaluators, and Extension educators determining which components of the Extension Health and Wellness Framework were reportedly addressed by the project. Each ripple was linked with at least one component from the social-ecological models, Extension priorities, and partner list. Two Extension priorities stood out: (1) positive youth development for health and (2) integrated nutrition, health, environment, and agriculture systems.

In the final year of project funding, a project sustainability training was conducted in all three project counties. The purpose of these trainings was to revisit the accomplishments that each community achieved and to develop a plan for community ownership for the continuation and expansion of project activities. Community members were asked to take leadership roles in these identified activities and to develop a plan to keep the momentum moving forward.

Lessons Learned

Early childhood obesity prevention is a complex issue that WVU Extension has worked to improve. This project strived to encompass all sectors of the rural communities using the conceptual frameworks, as well as the five critical areas identified by the IOM: (1) physical activity; (2) nutrition environments; (3) consistent messaging; (4) expanding stakeholder roles;

and (5) making schools a focal point for obesity prevention (IOM, 2012a). Evidence-informed tools, resources, and strategies were incorporated to help build a successful model (Nemours Children's Health System, 2016). While this was not a research project, the project team offers the following lessons learned to other Extension systems that are seeking to improve early childhood obesity prevention initiatives.

- Cultivate the Community's Support

  Community buy-in is essential to creating community change. Connections with schools, ECE providers, and a broad array of community organizations evolved into relationships. These relationships facilitated stronger program support and constructive feedback and helped promote programs within the communities. Some stakeholders who initially did not recognize their role or influence on young children's health and obesity prevention realized this through their involvement in advisory committees, mini-grants, and project activities.

- Mentor Community Champions

  It was evident from the beginning that each county needed "champions" to explain the various project components and to build the trust of community members. The ECE providers and the Extension educators served as champions and were crucial to successful implementation. Extension educators promoted the project and fostered community collaborations. ECE providers were key in gaining the trust of parents and children so they would more readily engage in activities and behaviors that were at first unfamiliar to them.

- Anticipate Turnover

  When working on multi-year, multi-county, and multi-faceted projects, personnel turnover is not unusual. Throughout the 4-year project, there was turnover at all levels (investigators, project staff, county staff, and ECE providers) that led to delays in hiring replacements, training needs, and communication issues. However, this issue was addressed with specific plans to keep the project moving forward. Project personnel from neighboring counties were able to assist with project planning, trainings and implementation, and ECE training was held each year so that new providers were included in the project.

- Meet ECE Providers Where They Are to Create Win-Win Solutions

  Initially, some providers were hesitant to set goals to incorporate best practices for nutrition, physical activity, outdoor play, and screen time because they thought it might be a burden to their already hectic schedules and overwhelming

responsibilities. Extension educators worked with ECE providers on their goals. Educators were creative in suggesting ways to incorporate health messages and activities into existing lesson plans and routines. This seemed to relieve providers' initial reluctance. Providers reported that the project's physical activity and nutrition resources were helpful in goal attainment. ECE providers offered feedback and input, which further improved their level of engagement and excitement for the project.

- Get to Know Parents

  Parent engagement was a persistent barrier, affecting participation in community events and evaluation components. Lack of parent engagement was not unique to this project, as providers reported that few parents typically respond to their requests. The project team found that partnering with providers and familiar community groups and activities led to greater parent engagement in some cases. The project team often heard from parents that they could not participate in school and community events due to transportation issues. These issues were evident when a series of planned evening Family Fun Events resulted in low participation in all three counties. One county found closer collaboration with school- and community-based events helped reduce transportation issues so more families could participate. Instead of conducting independent project events, the team contributed to existing, well-established events.

- Be Visible

  Increasing the project's visibility was important in connecting with parents. Strategies included take-home CHOOSY magnets and family activities, social media, improvements at playgrounds and parks, and consistent health messages in grocery stores and places frequented by families with young children.

- Make Friends with Local Farmers

  Limited access to fresh produce was a challenge, particularly for the childcare centers, facilities, and in-home providers. Because these providers operate with limited staff and resources, trips to the grocery store are not always possible, and healthy options in small, rural communities are often limited. To reduce this barrier, local farmers were engaged and offered fresh produce boxes with recipes to families and childcare facilities throughout the growing season. The boxes offered increased access to fruits and vegetables for providers and families.

- Embrace Your Own Learning Curve

  Extension educators broadened their own skills beyond traditional direct education roles to include promoting physical activity opportunities and ECE technical

assistance. Comprehensive, multi-level strategies required the team to understand complex community cultures and reach beyond their comfort zones in stimulating policy, systems, and environmental changes.

This project created a "learning laboratory" for the project team and all partners to continually learn and grow together.

Conclusion

Successful community-based prevention models are needed to accelerate the progress in childhood obesity prevention. Combining elements of the Cooperative Extension's National Framework for Health and Wellness with CDC's Spectrum of Opportunities for Obesity Prevention in Early Child Care Settings served as a valuable starting point for conceptualizing a comprehensive model for changes at the individual, family, organization, and community levels. Research provides additional direction in identifying promising interventions. A vast amount of research indicates that ECE settings can significantly affect children's physical activity, healthy eating, and screen time habits, yet many rural childcare centers do not have resources to make changes in these areas. Increasingly, state agencies have developed policies and systems for obesity prevention in ECE settings, and broader community support is clearly needed. Community collaborations focused on early childhood obesity prevention can help to expand project reach by leveraging and pooling resources. Additionally, evidence-informed tools, such as IMIL, Go NAP SACC, and EPAO offer consistency with training and messaging, as well as with measuring outcomes. This project may be the first of its kind to employ this combination of quality tools. The WV Healthy Children Project serves as an example of how one state Extension system brought together the necessary components to lead the way in making positive changes in early childcare settings in rural communities.

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Ms. Mary Eleanor Burkhart-Polk is a Graduate Research Assistant and provides assistance to this project with publications and overall support.

Acknowledgments

Perceptions of Job Competencies and Mentoring Program Development for Extension Administrative Assistants: A Focus Group Study of Multiple Extension Employee Groups

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Extension workplace mentoring programs may produce increased Extension programming competence, organizational commitment, job satisfaction (Denny, 2016), and leadership effectiveness (Kutilek & Earnest, 2001). The study described in this article aimed to gather information for a proposed mentoring program for Extension administrative assistants. A total of 12 focus groups were conducted with 78 participants representing five employee groups: administrative assistants, Extension agents, county directors, state specialists, and department heads. Employee groups were separately interviewed. Findings indicated that respondents perceive the role of an administrative assistant as critically important, and major competencies required by the administrative assistant role are people skills/customer service, bookkeeping, technology, and a willingness to learn/adaptability to change. Respondents perceived that workplace mentoring is important, and it should be required of all newly-hired administrative assistants. Regarding incentives, administrative assistants felt that counting mentoring time as part of their University's annual professional learning requirement of 32 hours would encourage participation. Major recommendations include the establishment of an e-mentoring program that incorporates the administrative assistants' academic, career, and personal goals in addition to organizational policies and procedures.

Keywords: mentoring, administrative assistants, Cooperative Extension, onboarding

Introduction

Adult and youth mentoring has been important in a number of Extension contexts including Extension professionals mentoring volunteers and childcare providers (Byington, 2010); Extension professionals and others mentoring community members (Dodge, 2015); and 4-H volunteer mentors guiding at-risk youth in 4-H technology programs (Toelle, Terry, Broaddus, Kent, & Barnett, 2015). Additionally, Extension workplace mentoring has contributed to organizational goals such as onboarding newly-hired county Extension educators (Kutilek & Earnest, 2001; Place & Bailey, 2010).

This study was motivated by the need to understand different Extension employee groups' perceptions regarding administrative assistants' job competencies and a potential mentoring program. In 2010, the University of Tennessee Extension (UT Extension) introduced a new strategic plan that included a number of action steps to strengthen employee engagement, including the goal to implement a mentoring program (University of Tennessee Extension, 2010). In response to this plan, a human resources study explored ways to promote healthy lifestyles for Extension employees (Donaldson & Franck, 2019). In the previous study, focus group interviews, planned discussions that help capture perceptions from a select group of people (Krueger & Casey, 2009), were employed. Focus groups are useful when researchers need to understand experiences, viewpoints, and/or impressions of a group of people and also aid in forming relationships between the researchers and the participants in the focus group (Mertens, 2010). For those reasons, focus groups were also used for the present study.

Theoretical and Conceptual Framework

Mentoring is a complex concept that has been defined as a learning partnership between mentor and mentee to guide the mentee's development toward personal, educational, or career goals (Cohen, 1995; Eby, Rhodes, & Allen, 2007). Workplace mentoring involves an experienced employee (mentor) who helps a less experienced employee (mentee) to succeed in the workplace (Eby et al., 2007). Contemporary mentoring approaches emphasize that mentees have multiple mentors, that communication between mentor and mentee is primarily through electronic media, and that mentees seek different mentors during their careers to address their changing needs (Scandura & Pellegrini, 2007).

The mentor may serve in a number of roles for the mentee, including friend, role model, coach, guide, and teacher (Clement, 2011). According to Cohen (1995), the mentors' interpersonal behaviors are of utmost importance in guiding the mentees' achievement of career and educational goals. Cohen described these interpersonal behaviors as ranging from a relationship emphasis (to establish trust between the mentor and mentee) to a visioning emphasis (to encourage the mentee to achieve goals). Mentors and mentees have different perspectives on the mentoring experience. Mentors tend to focus on "tangible, work-related results" of the mentees, while mentees focus on the relationship and interpersonal aspects (Denny, 2016).

In a review of mentoring literature supporting the Cooperative Extension System as a learning organization, Denny (2016) found that mentoring programs for Extension employees may result in increased Extension programming competence, organizational commitment, and job satisfaction. Kutilek and Earnest (2001) assessed the leadership effectiveness of 30 Extension professionals participating in a workplace mentoring program, and results indicated that overall leadership effectiveness increased due to the experience.

What are the factors that make an Extension mentoring program successful? In an evaluative study of a new mentoring program among Extension professionals, Place and Bailey (2010) outlined several factors including the need for mentors and mentees to have similar personalities and geographic proximity, the need for a regional Extension director to make mentor-mentee selections, and the need for a handbook to outline task lists for both mentors and mentees.

Of the previous studies mentioned, none represented Extension administrative assistants. While a number of Extension mentoring programs are in force, such as in Kentucky (Farrell, 2017), Virginia (Virginia Cooperative Extension, n.d.), and North Carolina (McRae et al., 2017), none could be identified specifically for Extension administrative assistants. Little is known about this employee group, yet Extension administrative assistants are often the first contact for clients calling or visiting the local Extension office (Sneed, Elizer, Hastings, & Barry, 2016).

Purpose and Objectives

The overall purpose of this study was to understand perceptions of multiple Extension employee groups that could inform a potential mentoring program for administrative assistants, an initiative of the UT Extension strategic plan. The first objective was to describe Extension administrative assistant competencies as perceived by Extension administrative assistants, Extension agents, county Extension directors, state specialists, and department heads. The second objective was to collect specific ideas for an administrative assistant mentoring program.

Methods

This study involved focus group interviews, and all procedures, including recruitment, consent, and interview questions, were approved by the Institutional Review Board at the University of Tennessee, Knoxville (UTK-IRB-16-02932-XP).

Participants

Participants were employees of the UT Extension organization. Participants were nominated by regional and state Extension directors who provided a list of 120 potential participants they perceived as knowledgeable about administrative assistants' job competencies and potential needs for mentoring. Invitations were sent via email to all of the nominated individuals asking them to participate in a two-hour focus group. Follow-up invitations were sent to those who did

not respond to the first invitation. A total of 12 focus groups were conducted throughout the state, with 78 participants (65% of those nominated). Three focus groups were conducted simultaneously in each of the three UT Extension regions (Central, Eastern, and Western), with separate focus groups for administrative assistants, agents, and county directors. In addition to the regional focus groups, three focus groups were conducted at the state level on University of Tennessee campus in Knoxville. This included one group of department heads, one group of state Extension specialists, and one group of administrative assistants. The number of groups and the number of participants by job position are shown in Table 1.

Table 1. Participants by Extension Job Position (N = 78)

Job Position	Number of Groups	Number of Participants	Average Group Size
Agents	3	20	6.6
County directors	3	13	4.3
Administrative assistants	4	35	8.75
State specialists	1	7	7.0
Department heads	1	3	3.0

Procedures

Researchers wrote questions and pilot-tested questions with three retired Extension employees; two were retired state specialists, and one was a retired administrative assistant. The employees found that questions were aligned with the study objectives and that the interview topics (job competencies, staff development, and mentoring) flowed well. The same questions were used for every focus group. Example focus group questions were:

What would an effective mentoring program for administrative assistants look like?

Probes – Think about an effective employee mentoring program for Extension employees.

a. How can we make this program beneficial?
b. How can we make this program convenient?
c. How can we encourage people to participate?

The researchers provided instruction to the same three retired Extension employees who served as focus group protocol reviewers to serve as moderators for the focus groups. The moderators received instruction in following the script and using digital recorders. In addition, the moderators completed the Institution's certification in human subjects research.

The focus groups lasted for an average of 103 minutes, with a range of 85 to 128 minutes. All focus group discussions were digitally recorded, and transcripts were made from the recordings. Each transcript was analyzed and coded. Researchers mined the data to create codes, in other

words, to "tag the data" based on common responses (Creswell, 1998). As a standard set of questions was used, each transcript was analyzed question by question consistent with Patton (2015). We used an open coding approach whereby the themes emerged from the participants. Open coding represents inductive analysis as opposed to using preconceived themes (Bogdan & Biklen, 2003; Patton, 2015). Then the themes for the five employee groups (agents, county directors, administrative assistants, state specialists, and department heads) were aggregated within the five groups (Creswell, 1998). Finally, the researchers compared and contrasted the major themes across all five employee groups.

Regarding verification, an external audit was used (Creswell & Miller, 2000). The external auditor was a University administrator and researcher who was familiar with the Extension organization but did not conduct this study. The auditor examined all transcripts, themes, findings, and data analysis procedures. The auditor found that the study procedures and findings were credible. For additional verification, a graduate student performed a separate analysis of the focus groups, which showed the same themes identified by the researchers and external auditor (Kruger & Casey, 2015).

Results

Describe Extension Administrative Assistant Competencies

Table 2 provides a list of competencies named by employee groups. The competencies discussed across employee groups were (a) people skills/customer service, (b) computer/technology, (c) bookkeeping, and (d) willingness to learn/adaptability to change.

All employee groups shared that people skills, including customer service, was the paramount competency for Extension administrative assistants. One county director described the administrative assistants' people skills as defining "the whole image of our office." People skills were discussed both in terms of relating to Extension colleagues and serving Extension clients. Respondents expressed that people skills/customer service were antecedents to all other administrative assistant skills as it was challenging to teach excellent people skills/customer service skills, while all other aspects of the job could be learned "on the job." As one administrative assistant explained:

> I mean, you can teach someone to run an Excel program or to run an Outlook calendar but you can't really teach someone how to interact with people in the way that we want that interaction. Especially out in the counties, the administrative person may be the only person in the office when someone walks in the door.

Participants discussed that using computers and technology were essential competencies. Specifically, participants mentioned using basic software and updating office websites and social media accounts. Participants shared that phone systems and other office equipment were

technologically advanced, and administrative assistants required skills in those for a functional Extension office. Also, respondents described how administrative assistants often instruct agents and other Extension professionals how to use a certain technology or software. Administrative assistants expressed that having strong computer competencies was extremely helpful for their jobs and minimized stress when administrative assistants were starting their jobs.

The technology discussion led most of the groups to a discussion of another competency: willingness to learn and adaptability to change. In Table 2, willingness to learn and adaptability to change are combined. This is because participants discussed willingness to learn and adaptability to change in tandem as illustrated by this representative comment from one administrative assistant:

> Even if you come into the job knowing Excel, Word, and PowerPoint, other things that we use, and knowing IRIS and some of these other things. Odds are that in a year or two, these things will change, and you've got to. You better be flexible and willing to learn something new. And you better be willing to learn new technology. So flexibility is another aspect of it. They need to be flexible to change.

Respondents shared that to be effective, administrative assistants did not have to know every aspect of every technology, but they did have to be willing to learn to meet the needs of the office, as one participant stated: "willing, continuing to learn, [and] adaptability." In addition, the groups discussed the different aspects of change, such as personnel changes in the office and different work assignments based on the time of the year. As one county director explained: "I don't know how you identify it but willingness or ability to change and adapt. You know, based on either the time of year or new effort, or you know, many different things, always changing."

Participants discussed three major aspects of the fourth competency, bookkeeping: financial transactions, record keeping, and knowledge of University policy. Respondents also discussed how county-level administrative assistants had to follow bookkeeping policies from both the University and county government.

Table 2. Administrative Assistant Competencies

Competencies	Administrative Assistants	Agents	County Directors	State Specialists	Department Heads
Bookkeeping	•	•	•		•
Communication			•		
Computer/Technology	•	•	•		•
Multitasking	•				
People Skills/Customer Service	•	•	•	•	•
Problem Solving				•	
Proofreading		•			
Reliability	•				
Willingness to Learn/Adaptability to Change	•	•	•	•	

Staff Development Needs for Extension Administrative Assistants

Table 3 provides a list of staff development needs discussed across the employee groups. Whereas the groups were asked directly about suggestions for a proposed mentoring program for administrative assistants, every group stated that administrative assistants first needed staff development prior to a mentoring program. [While this was in addition to the original objectives to describe competencies and collect ideas for a mentoring program, it reflects the organic nature of needs assessment studies.] In all cases, participants discussed the general staff development needs of the newly hired Extension administrative assistants rather than staff development needed to introduce the mentoring program, such as roles and expectations.

The format and suggested platforms varied some from group to group, but participants largely focused on two needs: (a) the need for a handbook with important job information and (b) staff development online modules that cover specific topics important to administrative assistants. Participants shared that an online handbook that covered important policies and procedures would be valuable for newly-hired administrative assistants. This handbook would provide administrative assistants with answers to common questions. One administrative assistant shared: "I think the handbook would probably be the first source [rather] than the mentor because sometimes the mentor is not going to be available, and you'll have the handbook to look at. You'll have that to refer to."

This handbook would also include information on the structure and organization of the state Extension organization. Participants also shared that online modules would be preferred over face-to-face staff development events due to increased convenience and timeliness and no required travel.

Table 3. Suggestions Regarding Administrative Assistant Staff Development

Staff Development Suggestions	Administrative Assistants	Agents	County Directors	State Specialists	Department Heads
Administrative Assistant Handbook			•	•	
Annual In-Person Conference		•			
Expert Contact List			•	•	
Introduction to UT Extension			•		
Online Modules (Preferred) and In-Person Courses/Events	•	•	•	•	
Monthly Webinars			•		
Staff Development Needed Prior to A Mentoring Program	•	•	•	•	•

Collect Specific Ideas for an Extension Administrative Assistants' Mentoring Program

Table 4 provides a list of mentoring program ideas discussed by employee groups. Respondents discussed how mentors and mentees should be matched so that they would be in close proximity to limit travel. The groups agreed that a mentoring experience should be required of all newly hired administrative assistants. Administrative assistants and department heads felt that mentors and mentees should form mutual relationships rather than being assigned by administrators. Participants explained that these mutual relationships (or naturally occurring, as discussed by Dougherty, Turban, & Haggard, 2007) would create better employee relationships because employees with similar personalities would naturally interact.

Respondents shared that program participation hinged on appropriate incentives, especially for mentors. Suggestions for these incentives included plaques or other extrinsic awards. However, some felt a worthy incentive would be the opportunity to receive staff development in how to be an effective mentor. Others felt that providing travel funds for all mentoring activities would be convenient and encourage participation. Also, administrative assistants shared that since University of Tennessee administrative assistants are required to complete 32 hours of professional development annually, it would be advantageous if they could count time spent in mentoring activities as part of this required professional development time.

Table 4. Suggestions Regarding Administrative Assistant Mentoring Program

Mentoring Program Suggestions	Administrative Assistants	Agents	County Directors	State Specialists	Department Heads
Accountability/Plan of Action	•				
Buy-In from Supervisors	•				
Convenient Timing	•	•	•		
Established Outcomes		•			•
Naturally Occurring Mentor/Mentee Relationships	•				•
Mentor Incentives	•	•	•		•
Mentor Job Description				•	•
Mentor/Mentee from Similar Counties		•			
Mentor/Mentee in Geographic Proximity	•	•			•
Multiple Mentors			•		
Required for All New Hires	•	•	•	•	
Travel Funds	•				•
Use of Video Conference	•		•		
Voluntary for Mentors	•				

Conclusions and Discussion

Participants identified the administrative assistant role as critically important due to administrative assistants being the "face of Extension" as the first person with whom Extension clients interact (Sneed et al., 2016). All employee groups identified people skills/customer service as the key competency for administrative assistants. Other major competencies were bookkeeping, technology, and a willingness to learn/adaptability to change. Regarding a willingness to learn/adaptability to change, participants discussed how administrative assistants needed to embrace both technology changes and personnel changes in the office.

Respondents perceived that mentoring is important, and it should be required of all newly-hired administrative assistants. It was even suggested that the expectation to serve as a mentor be part of every administrative assistant job description. It is interesting to note that every group identified staff development (especially online learning modules) that administrative assistants needed prior to a mentoring program. While the literature indicates that orientation is needed before a formal mentoring program (Bearman, Blake-Bear, Hunt, & Crosby, 2007), respondents discussed information aspects of the job (such as organizational policies and procedures) rather than the mentor/mentee relationship or the mentees' career and educational goals.

While a number of incentives were discussed for encouraging mentoring program participation, administrative assistants viewed counting mentoring time as part of their required annual staff development time as a valuable incentive. In contrast to findings from Place and Bailey (2010), administrative assistants and department heads felt that administrators should not match mentors and mentees but rather allow the "naturally occurring" mentoring relationships, corresponding to Dougherty et al.'s (2007) recommendations. Naturally occurring mentoring relationships are developmental relationships in the workplace. A developmental relationship is one where a mentor is actively interested in contributing to a mentee's personal and professional development (Higgins & Thomas, 2001). Organizations may encourage these relationships by promoting opportunities for employees and managers to interact (Kram, 1985) and a reward system that encourages employees to provide mentoring (Aryee, Chay, & Chew, 1996).

Limitations

The moderators were former employees, and the participants were current employees of the same organization, which may have introduced social bias. For example, participants may have provided answers that were less accurate but more socially acceptable. However, like the Donaldson and Franck study (2019), care was taken in this study so that moderators were not conducting focus groups with individuals they had supervised. Another limitation is the social nature of focus groups. The ideas discussed were those participants felt comfortable discussing with their peers. However, different ideas may have been shared in individual surveys or other anonymous forms of research. When individuals are nominated for focus groups, a strong potential limitation is that the participants do not fully represent the population. In this study, regional and state Extension directors made nominations. To some extent, selection bias was controlled since a total of six individuals (three regional and three state Extension directors) made nominations. However, participants were not randomly selected, and the results cannot be generalized to the entire Extension organization, although they do represent a cross-section of the organization. Finally, the participants' previous awareness and understanding regarding administrative assistants' competencies and mentoring is unknown.

Recommendations

It is recommended that UT Extension establishes stronger professional learning for administrative assistants, including online instruction and a reference handbook. Likewise, it is recommended that the organization establishes a mentoring program, but care must be taken to ensure that the mentoring program supports trusting relationships as well as academic, career, and personal goals (Cohen, 1995) rather than just transmitting organizational policies and procedures. The need for mentors and mentees to have similar personalities was recommended by the administrative assistants and county directors, and this was also recommended by Place and Bailey (2007). Therefore, additional research is recommended to understand the phenomena

of personalities in mentoring relationships, including how personalities may be studied, and knowledge of personalities may be used to positively impact mentoring relationships.

Technology was a common theme in the discussion, and it was discussed as a key competency for administrative assistants, a way to provide staff development for newly hired administrative assistants, and a way to support effective mentoring with reduced travel costs. Consistent with Kinsey, Carleo, O'Neill, and Polanin (2010), it is recommended that a mentoring program utilize wikis and other technologies to improve collaboration and reduce travel costs. Therefore, e-mentoring (Scandura & Pellegrini, 2007) is recommended as an approach that could encourage administrative assistants to stay current with technology, be open and adaptable to change, and successfully pursue mentoring relationships.

Finally, since the administrative assistants did not necessarily have the same views on competencies and professional development when compared to other employee groups, it is recommended that Extension administrators strive to understand administrative assistants' job competencies and professional development needs from multiple viewpoints rather than only considering the perceptions of the administrative assistants' supervisors.

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A Brief Report on a Facilitated Approach to Connect Cooperative Extension Southern Region State-Level Health Specialists

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Improving the nation's health will require collaboration among many stakeholders and systems, including representatives from Cooperative Extension Services (CES). This paper describes the process of establishing a multistate collaboration and discusses initial outcomes of a third-party facilitated participatory planning meeting. State-level specialists with expertise and responsibilities in "health" promotion participated. Satisfaction with meeting format; feasibility, acceptability, and appropriateness of the proposed approach to public health impact; and general meeting feedback were collected through a survey and cultural artifacts (e.g., notes, worksheets). Preparation and attendance costs were captured. Seventeen of the 20 attendees (85%) responded to the survey and reported the process was satisfactory and the proposed plan for moving forward was feasible, acceptable, and appropriate. The meeting cost was $1,011 per attendee. The process mobilized a multistate Extension collaborative to promote health but revealed potential cost-benefit challenges. Leveraging resources is necessary to plan, implement, and measure collaborative public health efforts. Future data on outcomes will show if the process leads to intended objectives. If successful, this approach can be replicated across CES for stronger impacts.

Keywords: capacity building, outcome and process assessment, preventive medicine

Background

To improve the health of the nation, multistate collaboration in Extension is necessary to share expertise, knowledge, and resources (NIFA, 2014). These collaborative efforts are especially needed to address the escalating prevalence of chronic disease in the Southern Region of the United States (Cooper et al., 2000; Jacobson, Gange, Rose, & Graham, 1997; Mokdad et al., 1999). Within Extension, university-based specialists typically work in content areas centered on their academic background, the academic unit in which they are housed (e.g., human environmental sciences vs. public health vs. exercise science), and personal program/research interests. Specialists identify, implement, and evaluate interventions as well as provide training and resources to community-based educators and volunteers. Thus, they are a bridge from research to community members. However, time and resource constraints and efforts to attain tenure and promotion in their respective units may limit specialists' scopes of work. Engaging in strong dissemination strategies among health specialists may speed awareness of available interventions, test the adaptations of interventions in the field, and impact public health (de Montigny, Desjardins, & Bouchard, 2017; Hiatt et al., 2018; Janecka, 2017).

The value-added of such work on professional networks (Franz et al., 2010; Manteiga et al., 2017), in-person think tanks (Shaw, Russell, Greenhalgh, & Korica, 2014), and other participatory approaches (Nicolaidis et al., 2011; Rosales et al., 2017) for addressing complicated problems is well reported in the literature. It is recommended that the forming, storming, and norming (Tuckman, 1965) of these groups may be best established through a third-party facilitator who can serve as an intermediary (Wastchak, 2013), provide structure and external leadership, and avoid biasing discussion.

These participatory approaches are positively perceived due to their focus on equity, capacity building, and public health impact. However, information on the resources required to engage in participatory approaches is less understood (Bergeron et al., 2017; De Las Nueces, Hacker, DiGirolamo, & Hicks, 2012; Grills, Robinson, & Phillip, 2012; Harden, Johnson, Almeida, & Estabrooks, 2017). Furthermore, limited information exists on the process and outcomes of a professional network for health promotion specialists.

This paper describes the two-year process, preliminary outcomes including costs, and lessons learned in establishing a Collaborative network of health specialists in the Southern Region of Extension. This process can be used in other pragmatic settings to organize, goal set, and evaluate health promotion efforts and serve as a model for replication in other Extension regions.

Historical Context for the Collaborative

Year 1

State leaders of the Southern Region invited health specialists to organize themselves and meet face-to-face at the Extension Southern Region Program Leader Network meeting in Nashville, Tennessee, in August 2016. The goal of convening was to meet other individuals with similar positions within their state, promote regional grant writing, and engage in other professional activities, such as the pursuit of tenure track with Extension position, publications, enhanced scholarship. Fifteen participants across eight states and eleven institutions met for approximately 3.5 hours. Several *Liberating Structures* (Lipmanowicz & McCandless, 2014) activities facilitated networking and idea generation to guide work moving forward: Impromptu Networking, Lightning Talks, Exploring Purpose, Generating and Sifting Ideas (please see citation for more details on how to conduct these activities). At the end of this session, five main areas for collaboration were generated related to curriculum, evaluation, training, marketing/communication, and new approaches (Table 1).

Table 1. Summary of Topic Areas from First Meeting of Southern Region Health Specialists

| Curriculum	• Need to identify common curricula for implementation; consistent data collection and evaluation and reduce redundancy across state lines
Evaluation	• Need to establish the impact (and strength of evidence) for current health promotion efforts
Training	• Community-based educators have competency gaps
	• Public health approach is new for Extension. Need community-based educators to understand and address social determinants of health
	• Need for community-based educators to have cultural competence and apply social justice across program areas
Marketing/ Communication	• Focus of work may be unclear without consistent language/terminology
New approaches	• Leverage a number of opportunities to collaborate with Extension community development as well as other partners

The group collectively agreed that to move forward: (a) It is important to organize the group and facilitate collaboration; (b) Gaps in expertise represented in the initial group need to be identified, and (c) The group should continue to convene (web and face-to-face). Attendees had the opportunity to participate in a brief presentation to highlight programmatic work and collaboration opportunities, but only two participants presented their specific work (e.g., information was not representative of health promotion across entire states or the region).

Year 2

In year 2, a planning committee ($n = 5$) was established in May 2017 to develop an agenda for a 1.5-day (Day 1: 7.5 hours, Day 2: 6 hours) workgroup meeting. The third-party facilitator was

informed of the history and goals of the group (see Table 1) and was hired to apply the adapted version of the Vision to Action Planning[TM] (Andress, 1991) approach. The committee met virtually six times and established a meeting location, agenda, and objectives. Meeting agenda and printable materials are available from the corresponding author upon request. Thirty-four individuals were identified through a health specialist listserv and personal invitation by national Extension leaders; 20 attended, representing 10 of the 13 Southern Region states (see Figure 1). The objectives of the meeting were to (a) increase knowledge of health education programming and applied research in the Southern Region, (b) determine the future of the group through strategic planning, (c) foster regional collaboration by forming workgroups to address priority issues, and (d) develop action plans to address priority issues.

Figure 1. State Participation Status within the Collaborative across the Southern Region of the Cooperative Extension System
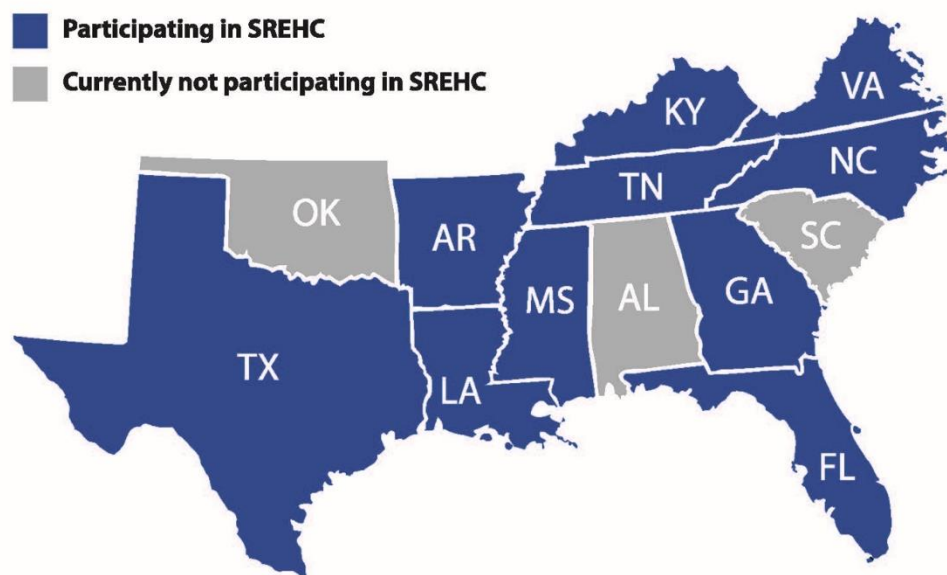
Facilitated Planning Meeting Process and Outcomes

The facilitated planning approach was based on an adapted version of the Vision to Action Planning[TM] (Andress, 1991). This is an approach where a third-party facilitator guides key stakeholders through five stages: (1) agreements, (2) preparation, (3) workshop (including information, vision), (4) action, and (5) evaluation. The work has evolved to meet Extension professionals' needs for 25 years; however, the elements remain the same.

Stage 1: Agreements

To establish an agreement regarding the purpose of the meeting, the facilitated session started with attendees writing three reasons for "Why are you here?" and "What do you like about the group?" on sticky notes. Using a rapid inductive approach (Beebe, 2001; Hamilton, 2013;

McMullen et al., 2011), the facilitator clustered the notes into similar responses to identify emergent categories and themes to propose mission and value statements. The resultant mission statement was: "To provide a venue to network, collaborate, and learn by sharing, growing, and finding the path forward for collective impact of Extension programming." An initial values statement was crafted from "What do you like about this group?" to reflect: "We value collegiality, common understanding, openness and diversity, connections, productivity, and idea building."

Stage 2: Preparation

The next stage was related to preparing to work together. Participants reflected on strengths and concerns for the group to open discussions on expectations and role clarity. Table 2 summarizes major categories and themes for strengths and concerns of developing a specialist network, informed by participant responses.

Table 2. Emergent Themes from Mission, Values, and Workgroup Building Sessions

Item	%
Why did you come? (Mission) (*n* = 57 MU*)	
Collaboration	21%
Networking	19%
Ideas	7%
Impact potential	5%
Sharing	5%
What do you like about the group? (Values) (*n* = 58 MU)	
Collegiality	10%
Shared focus on health	9%
Networking	7%
Enthusiasm	7%
Openness	7%
Strengths (*n* = 124 MU)	
Diverse experiences	19%
Willingness to collaborate	11%
Impact potential	9%
Common interests	5%
Enthusiasm	5%
Concerns (*n* = 106 MU)	
Undefined focus	12%
Time	9%
Funding	8%
Competing interests	7%
Group cohesion	6%

Stage 3: Workshop

The workshop portion of the process was to generate ideas, potential solutions, and finalize a vision. Using a handout provided by the facilitator, each attendee created a written vision for the Collaborative's work in the next three years. Three individuals collapsed the vision statements into seven themes: collaboration, impact, focus-fit, sustainability, innovation, programming, and support/resources. Then, attendees were asked to cast four votes for the visions they perceived as most important. The four themes selected were collaboration, impact, sustainability, and focus/fit (receiving 17, 12, 11, and 8 votes, respectively); innovation, programming, and support/resources received, 6, 4, and 2 votes.

Stage 4: Action

Based on the results of the workshop, the group moved into taking action. The four major themes were used to develop four working groups: (1) *Impact*, (2) *Fit/Focus*, (3) *Collaboration*, and (4) *Sustainability of the Collaboration.* All attendees self-selected into a working group. For the remainder of the session, the working groups set goals, outcomes, and action strategies to address their group's vision. This stage also included a break from workgroup tasks. In this "break" time, each state Extension system provided a 5-15 minute update respective to their state system. On day 2, workgroup members reconvened to finalize strategies and share with the overall group. Workgroup planning session results are summarized in Table 3.

Table 3. Summary of Workgroup Goals, Outcomes, and Strategies

Workgroup	Goal	Outcomes	Strategies
Impact	Collaborative clearly articulates its impact on improving health outcomes in Extension programs	50% of Extension institutions use common indicators to document health outcomes	• Within first 6 months, a definition of health indicators will be established • By end of year 2, an environmental scan of existing health indicators will be conducted • Within 6 months of completed scan, identify key health indicators that have value to stakeholders and institutions • By end of year 3, findings about common health indicators will be disseminated to the Southern Region Extension Health Collaborative for review • By end of year 3, Southern Region Institutions will identify a common indicator(s) that has value to stakeholders and their institution to include as a pilot in evaluation efforts

Workgroup	Goal	Outcomes	Strategies
Fit/Focus	Increased recognition and value of health programming in Extension in the Southern Region	Provide Southern Region strategic plan/logic model	• Partner with the Collaborative to determine the health program priorities in other states • Analyze environmental scan results • Conduct one-on-one interviews with individuals doing unique programs to gain input from partners • Share results of survey and interviews (potentially via webinar) • Hold a face-to-face meeting in 2019 to create strategic plan for logic model
		Increased support for health specialists to succeed	• Create materials with mission and vision to share with new health specialists who join • Create a webinar series to share programs • Quarterly zoom meetings of the Collaborative • Create a listserv for group communication • Hold annual in-person meetings
Collaboration	To improve the efficiency and effectiveness of Extension health programs through collaboration	Increased number/adoption of collaborative health programs	• Training to help community-based educators conduct health programs • Benchmark via survey of current collaborative programs to compare over every two years
		Increased resources (monetary, FTE, volunteers) for health promotion	• Share opportunities/information about certifications that provide monetary resources • Benchmark current health indicators, such as monetary resources, FTEs, volunteers, and compare every two years to determine change
		Increased number of collaborations at regional and national level as a result of this collaboration	• Benchmark what currently exists • Assessment to help determine what collaborations are needed—specifically from this group (monetary resources, program evaluation, implementation) • Research best practices in collaboration and share to help increase collaboration • Census/survey of Collaborative projects every 2 years • Submit proposal for multistate grant with members of this Collaborative

Workgroup	Goal	Outcomes	Strategies
Sustainability of Collaborative	The Collaborative is recognized as leaders in Extension health programming	Increase number of active participants in the Collaborative	• Finalize the name of the group • Create a sustainable organizational structure • Have representation from all Land Grants within the 13 states • Define "active" participation in the Collaborative • Collect responses regarding suggestions for structure and frequency of meeting via survey
		Increase use of evidence-based health promotion programs available through the collaborative repository	• Each state will compile a list of all health programs/ activities/ curricula that are currently being implemented • Develop a repository for evidence-based Extension health programs • Define evidence-based program
		Increase support for collaborative from stakeholders (admin, program leaders, department, constituents)	• Define stakeholders • Clarification of participants' roles in collaboration (to include value to development and to state) • Disseminate outcomes of collaborations' activities • Market/publicize activities of the collaboration

Stage 5: Evaluation

An electronic post-meeting survey was distributed via email in the form of a Qualtrics survey to obtain preliminary feedback on whether the planning meeting met its purpose. Seventeen responses (85%) were received within the first week. A reminder email was distributed, and no additional responses were recorded.

Ten items were adapted from the Training Satisfaction Scale related to the content and usefulness of the meeting, all on a 5-point Likert scale (1 = *completely agree* to 5 = *completely disagree*; Beidas, Edmunds, Marcus, & Kendall, 2012). Example items included, "The processes were realistic and practical" and "The processes used enabled us to take an active part in the meeting." The training satisfaction sum score indicated that participants strongly agreed or agreed (1.45 $\pm$.57) that the training was satisfactory. In response to the additional item added to the scale for this work (i.e., "The workgroup meeting merits a good overall rating"), participants strongly agreed (1.35 $\pm$.49).

The survey also included an adapted version of a validated feasibility, acceptability, and appropriateness scale, with four items per construct on a 5-point Likert scale (1 = *completely disagree* to 5 = *completely agree*; Weiner et al., 2017). Example items include "The 4-

workgroup approach seems feasible" and "The 4-workgroup approach seems fitting." Participants agreed or completely agreed that the 4-workgroup approach was acceptable (4.41$\pm$.039), appropriate (4.56$\pm$.039), and feasible (4.30$\pm$.036).

To gauge initial perceptions of the proposed Collaborative structure, additional items were developed for this work. On a 5-point Likert scale, individuals were asked to state their level of agreement that they could engage in the Workgroup structure as proposed. For example, "I can meet annually in person" and "It is important to me that I am an active member of this workgroup." Most respondents agreed or completely agreed that they could meet in person annually (94%), that they could meet quarterly online (88%), that it is important to be an active member of their workgroup (94%), that this work was important and they could actively contribute (82%), and that it is important to be an active member of the Collaborative (94%).

Open-ended responses were gathered related to three challenges and three strengths of the working group meeting, and any other feedback. The top four challenges of both the in-person planning meeting and resultant Collaborative were concern for time commitments/lack of time to keep this work moving forward, lack of facilitator on day 2, need for role clarity and to finalize scope of work, and need for clear structure of the group. Strengths were related to values including, but not limited to, organization, networking, diversity, and enthusiasm. As one participant noted, "Learning about what other states are doing was extremely helpful. It seems that the group has a more defined identity as a result of [the facilitator's] activities. Meeting in person forced me to be more engaged in group conversations." Additional feedback was that having a third-party facilitator was imperative and that the group needs a "fast, easy win to show that these efforts have a return on investment."

Costs of This Approach

Cost data were captured for meeting planning personnel time, participant registration fees, facilitator fees, meeting materials (printing, markers, etc.), and participants' flight and lodging. Participants' time was not included in cost estimates; all specialists had FTE for Extension, and the sessions were held within the workweek. Meeting supply costs were included in participant registration fees. Funding sources for registration and travel costs varied by university and included university administrative support and specialists' overhead/grant dollars. Financial support for year 1 and year 2 meetings was solely provided at the university level; no regional-level funding was provided. Registration ($190) and lodging ($353.36) were fixed costs for all participants, whereas transportation costs were variable with some members driving or flying— approximately $350 per attendee. For the facilitator, expenses accrued were airfare ($485.00), lodging ($353.36), meals ($69.66), mileage ($36.12), and parking ($30). Facilitation expenses of $100 per hour were incurred for planning and facilitation before and during the meeting, respectively, for a total of $1,050. In addition, $335.16 covered an administrative assistant's personnel time to coordinate the event (collect and monitor registration, payment processing,

printing, collating, etc.). This cost was based on 24 hours of time at a rate of $10.50 per hour plus a 33% fringe rate. In total, the regional planning meeting cost was estimated to be $20,226.50, or approximately $1,011 per attendee ($N = 20$ attendees).

Lessons Learned

Satisfaction with and Feasibility of the Facilitated Process

Process data reported here indicate the facilitated approach was well received; the proposed working groups seemed feasible, acceptable, and appropriate to move this group forward; and concerns remain for the Collaborative structure and impact. Notably, the top concern before and after the meeting was time. This is unsurprising given the demands of community and academic work. However, to be responsive and improve real-world translation, protected time is needed to collaborate, deliver, and evaluate the impact of health interventions in an empirical way. All four workgroups can address this need. As seen in Table 3, the workgroups independently developed specific and measurable goals. For example, the *Fit* workgroup aims to develop a clear definition of health to which specialists and health educators may align their efforts. The *Impact* workgroup will identify measurable impacts on health (e.g., standardizing health behavior measures in Extension programming) as well as evaluate the degree to which the workgroup structure is sustainable.

Remaining Concerns for Impacting Health Across the Nation

Participants also mentioned that Extension administration needs to be aware of these efforts, the time invested, and the outcomes produced. This is, in part, due to the financial investment that underpins support for in-person meetings. In fact, an in-person meeting may have been cost-prohibitive for some health specialists to participate in this work in the first place. This cost-benefit challenge may remain as the Collaborative moves forward to promote health in a systematic way. These barriers—time, cost, competing interests—were reflected as the top three challenges attendees shared related to continued quarterly web-based meetings and annual in-person meetings. To demonstrate return-on-investment, the Collaborative needs to track outcomes and outputs and disseminate benefits of the working group to multiple stakeholder levels. This will be calculated through increased peer-reviewed manuscript submissions, funded grant applications, and translated health promotion programs.

Replication of this Process for Other Collaborative Efforts is Warranted

Strengths of this work include details from process, funds, and participant perceptions. There is a dearth in the literature related to process and specifics of *how* and *why* an approach (in this case, a facilitated meeting) may impact dissemination and implementation outcomes (Proctor et al., 2011). For example, many manuscripts refer to "full-day" trainings, with limited information on the facilitation process. However, the nuanced details of this report and the materials

available (agenda, worksheets) may aid in replication for faster public health impact (Glasgow, Vogt, & Boles, 1999; Wilson, Strayer, Davis, & Harden, 2018). Future work is needed to determine the degree to which the plan proposed by the Collaborative is followed, any adaptations to the plan, and if this plan produces outcomes of interest such as increased use of evidence-based interventions across Extension and/or increased number of collaborations across the states in the region.

Limitations

This brief report is not without limitations. First, aside from the facilitator, all authors and respondents were members of the Collaborative. Another limitation was the post hoc collection of cost data, so no results related to participant perceptions of the cost-benefit of attending were collected. In addition, the cost of each specialists' time was not included in the cost description. However, these data may be a useful inclusion to understand the full costs of an in-person planning meeting in future efforts both for this Collaborative as well as a cost to be captured a priori in other work. Another limitation of this work is the potential lack of generalizability outside of the Southern Region. While previous research suggests that this region, and the Extension professionals working within it, value this type of approach (Franz et al., 2010), this process may not be feasible within other regions or other systems. As recommended by Damschroder et al. (2009), future work is needed to explore the context of Extension, the professionals within the system, the processes by which health promotion interventions are adopted, and characteristics of health promotion interventions that are deemed appropriate for implementation.

The Facilitated Process Should be Generalized to Other Regions

As representatives of the Southern Region, we acknowledge that future collaborations (either by region or for the nation) may undergo the same process, but develop different visions, missions, and working groups. For example, in stage 3, when writing individual vision statements, a different region may land on different priorities. Ownership and buy-in are vital for the success of this work. Therefore, new collaborations should undergo a similar process but not necessarily buy-in to the same outcomes and visions that we established. Indeed, the group will meet again in August of 2019, and the working groups may be reordered depending on productivity and progress related to outcomes described in Table 3. The pieces of this work that we deem generalizable are related to incorporating a third-party facilitator, capturing cultural artifacts from the meeting, and developing working groups to ensure that the "work" continues outside of the planning meetings.

Conclusion

Extension is poised to address health through evidence- and practice-based interventions, but efforts could be improved through collaboration among state representatives who can

complement strengths and expertise, leverage human and monetary resources, and systematically measure impact. This participatory approach to determine a path forward for health in Extension in the Southern Region was determined to be feasible, acceptable, and appropriate to begin visioning this effort. Future data on outcomes will determine if the process leads to intended goals. With the data presented here, other systems and settings may replicate this approach for a collaborative effort for health promotion.

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Comparing Social Media and Postal Mailings in Forestry Extension Program Marketing

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This report describes a project that tested social media versus traditional postal mailing advertising for a series of forestry Extension educational programs. Forestry Extension clientele have diverse backgrounds and include landowners, urban tree owners, communities, agencies, and others, and vary widely by sociodemographic and ownership characteristics. Such diversity creates challenges for technology transfer, including initial client contact, participation in educational programming, and realization of learning objectives. The Mississippi State University Forestry Extension program has attempted to address these challenges through social media marketing and in-person impact evaluation. An online marketing strategy resulted in 39% of clients becoming aware of and registering for programs through social media and email compared with 45% from postal mailings. Still, social media marketing resulted in more clients registering earlier, and in registration of clients who had not previously attended Extension programming, compared with postal marketing. Given the many diverse communication methods used by Extension clientele, social media, and traditional forms of marketing should be integrated into successful marketing campaigns. Implications for future educational efforts are discussed.

Keywords: social media, advertising, forestry, marketing, advertising, Facebook

Introduction

This Brief Report addresses a social media program marketing strategy developed in response to the need for multiple methods of contacting diverse clientele. Extension educators understand the importance of social media. Social media benefits in Extension were described by Gharis, Bardon, Evans, Hubbard, and Taylor (2014), but perhaps most importantly, social media leads to

visibility, connectedness, and ability to reach diverse new clientele. Despite its growing popularity, many Extension professionals are not fully employing social media in educational efforts (Newbury, Humphreys, & Fuess, 2014). Extension professionals have cited concerns about time management, control of privacy, and lack of knowledge about how to most effectively post information and develop targeted marketing (Newbury et al., 2014).

In the case of Mississippi State University Forestry Extension, social media use was limited to sporadic blog postings coupled with Facebook postings via WordPress. Twitter was a separate activity and employed only occasionally. In all cases, postings consisted of programmatic announcements – social media platforms were not used in technology transfer. Besides this narrow use of social media, Mississippi State University Forestry Extension has distributed event marketing material using a mail list developed from county tax rolls, which has been the primary marketing strategy for over twenty years (Londo, Kushla, & Smallidge, 2008). While costs vary based on bulk printing and material rates, a typical mailout to market a single program would cost between $2,000 and $4,000 with a return of thirty (or less) to fifty participants attending the program. Many of these participants were regular clients as members of county forest landowner associations and would have become aware of the program through county Extension agent email lists regardless of a specific mailout.

With increasingly limited resources and a desire to have more impact on a demographically diverse clientele group, Extension programs cannot afford inefficient use of funds or time on ineffective marketing. In this study, we compared the effectiveness of social media vs. paper mailing approaches to advertise an "Introduction to Forest Management" educational series held at several county Extension offices in the state and conducted by state Extension specialists.

Methods

Approach

An external grant funded this educational series and its marketing; however, we acknowledge that funding for social media advertising using the methods described here is not always available. The educational programs were held in three Mississippi cities during summer 2018. Meeting advertising consisted of using Facebook, email, and mailed letters via the U.S. Postal Service. Because we wanted to optimize effectiveness and compare marketing approaches, we contracted a marketing firm to design an event Facebook page and a Facebook business page as well as to manage the marketing activities. Both business and event Facebook pages were developed to encourage high rankings (i.e., viewer contact) for the advertising reach (i.e., the total audience). Advertising began three weeks prior to the workshop. Facebook advertising consisted of purchasing 100,000 impressions (i.e., views of the popup ads that appear in a feed) based on the users' profiles, which consisted of web browser cookies and sociodemographic characteristics. Impact of the advertising was measured using Facebook's Insights tool by monitoring the frequency of shares, reach, likes, and follows, which all lead to clicks to the event

page. The most important statistical measure is the click; everything is geared toward making the click happen because it can lead viewers to the program's Facebook page and registration. Reach is also important as it is the number of unique people who saw the content and affects every other tracking metric.

Advertising targeted a broad spectrum of middle-class forest landowners, defined by project personnel as over 30 years of age and earning between $50,000 to $200,000 household incomes, although advertising was not limited only to those Facebook users. Popups, or single image ads, were retargeted (i.e., linked to users' frequently visited websites, including email accounts) within a 60-mile radius of the program sites (a larger radius required greater investment). Costs paid to Facebook increase with retargeting, but a reasonable estimate is $2,500 to $4,000, including impressions. Single image ads included a simple single image with a headline, one to two sentences (known as "copy" in the advertising world), and a link to the program's Facebook page. Such ads are appropriate for most marketing objectives (Hochman, 2020). From the program's Facebook page, users could see course information (date, time, fees, and agenda). The page also contained a link to an Eventbrite registration page.

In addition to the social media marketing, 5,300 landowners per program for the first two programs and 1,500 landowners for the third program (due to budget limitations) received bulk-rate mail marketing materials consisting of an invitation letter and a program agenda. Mailouts cost around $2,500 per program, including returns for incorrect addresses.

Programs occurred from 6:00 to 8:00 in the evening, were free of charge, and included a light snack, an educational presentation, and literature for further information. Workshops addressed basic forestry concepts such as regeneration, thinning, and timber markets. A post-session evaluation of eight questions measured marketing effectiveness. The first question addressed how clients first became aware (AWARE) of the program (Facebook, letter in the mail, word-of-mouth, email, blog/website, other (specify)). Additional questions asked respondents for their best guess as to when (WHEN) they became aware of the program (open-ended), if they shared (SHARE) the announcement (yes/no), and how they prefer (PREFER) to become aware of a program (Facebook, letter, email, other (specify)). A multiple response background question asked for a self-description of client type (TYPE). The respondent could identify as a forest landowner with little prior knowledge, as somewhat knowledgeable, or as very knowledgeable about forestry. The respondent could also identify as a landowner association member or other (and define other). Another question provided four categories (none, 1-5, 6-10, >10) to indicate the frequency (TIMES) with which the client had attended a Forestry Extension meeting in the last five years. Participants also reported race (RACE; white, African American, Other with specification) and age (AGE), an interval scale.

Analysis

All questions were analyzed for frequencies presented in Tables 1 and 2. In addition, crosstabs were used to observe response distributions between variables. Due to inadequate cell counts, responses for some questions were combined to compare distributions using Chi-square. AWARE and PREFER were each combined into three categories (1 = *Facebook*, 2 = *Letter*, 3 = *Other*). TYPE was transformed from five to two categories (1 = *forest landowner with little knowledge and those somewhat knowledgeable*, 2 = *very knowledgeable, landowner association member, and others*). TIMES was transformed from four to two categories (1 = *none*, 2 = *one or more*). RACE was changed from three to two categories (1 = *white*, 2 = *nonwhite*). AGE was recoded into two categories (1 = *under 60*, 2 = *60 and over*).

Results

Facebook Insights

On average, the three programs resulted in 122,854 impressions, 27,458 reach, 842 clicks, 694 unique link clicks (the number of unique people who clicked), 75 shares, 47 comments, and 172 likes. This amounted to just under $1.50 per click to the registration page with a click-through rate of 2.4%. This beats the industry average of $2.14 and 1.16% click-through rate (Hochman, 2020). Attendance was 98, 69, and 68 for each program.

Evaluation

A total of 163 (69%) post-session evaluations were completed. Overall, attendees indicated they first became aware of the meeting through Facebook (35%), letter (45%), friend (13%), email (4%), or other ways (3%) (see Table 1). Based on evaluation respondents alone, postal mailing advertising cost $102 per person, while social media cost about $.03 per person. Two-thirds of participants (66%) shared the announcement with others. Landowners indicated they preferred to receive meeting announcements via letter (41%), email (38%), Facebook (18%), or other ways (2%). The majority (89%) classified themselves as having little knowledge or being somewhat knowledgeable about forest management. During the last five years, 71% had not attended a Forestry Extension meeting, while 24% had attended one to five meetings. Attendees tended to be over 40 years old (median = 61 years) and self-identified as White/Caucasian (81%).

Table 1 demonstrates an almost even split between those who first became aware of the program via Facebook or letter and sharing the information ($p < 0.05$). More respondents with little knowledge about forest management became aware of these meetings through Facebook advertising (38%), compared to the mailed letter (33%). In contrast, those who were somewhat or very knowledgeable were first aware via the mailed letter. When cells were combined for statistical comparison, there was no significant difference between those with little or somewhat little knowledge versus those with much knowledge and how they became aware of the program.

Table 1. Awareness of Meetings

Question	Response	First Aware*			
		Facebook	**Letter**	**Other**	**Total**
SHARE	Yes	43	48	16	107
	No	14	25	17	56
	Total	57	73	33	163
TYPE*	Little Knowledge	38	33	17	88
	Somewhat Knowledgeable	14	30	12	56
	Very Knowledgeable	0	6	0	6
	CFA Member	1	2	0	3
	Other	4	1	3	8
	Total	57	72	32	161
TIMES	None	52	36	27	115
	1 to 5 meetings	5	29	5	39
	6 to 10 meetings	0	5	0	5
	10+ meetings	0	3	1	4
	Total	57	73	33	163
RACE	White/Caucasian	41	65	26	132
	African American	11	8	5	24
	Other	2	0	0	2
	Total	54	73	31	158
AGE	Under 40	2	2	2	6
	40-49	13	3	10	26
	50-59	19	13	8	40
	60-69	20	27	8	55
	70+	3	28	3	34
	Total	57	73	31	161

*Totals vary because participants did not always respond to each question or provided multiple responses to the same question.

Individuals not attending a meeting in the last five years more often learned about these meetings using Facebook (52%) versus letter (36%). There was a significant difference ($p < 0.05$) when participants who had not attended were compared with those who had attended at least once. Although we did not reach as many minority clients as desired, 11 of the 24 participating African American participants indicated they first became aware of the meetings via Facebook. When race was combined into white and nonwhite categories, there was no statistical difference in awareness. As expected, the majority of respondents over age 70 became aware of the meetings through the mailed letter, those aged 60 to 69 were split fairly equally between Facebook and the letter, and the younger age classes tended to become aware via Facebook. When AGE was combined into two categories, a highly significant ($p < 0.05$) difference emerged between participants under 60 and those 60 and over based on how they became aware of the program.

Table 2 depicts respondents' communication preferences. Those who shared information about the program tended to prefer the letter announcement, but there was no significant difference in the distributions of the PREFER categories. Landowners with little forest management knowledge preferred to receive announcements through email (62%), letter (38%), and Facebook (28%). When TYPE of landowner categories was combined, there was no significant difference between those who had little knowledge or were somewhat knowledgeable versus their counterparts. Similarly, individuals that had not attended a meeting in the previous five years tended to prefer other forms of announcement (46%), although this was closely followed by letter (42%). When categories were combined, there was a significant ($p < 0.05$) difference between preferences of those who had attended versus had not attended a program.

Table 2. Contact Preference

| Question | Response | Preference* | | | |
		Facebook	Letter	Other	Total
SHARE	Yes	20	49	38	107
	No	10	18	27	55
	Total	30	67	65	162
TYPE	Little Knowledge	20	29	39	88
	Somewhat Knowledgeable	8	28	19	55
	Very Knowledgeable	0	5	1	6
	CFA Member	0	1	2	3
	Other	2	2	4	8
	Total	30	65	65	160
TIMES	None	28	41	46	115
	1 to 5 meetings	2	19	17	38
	6 to 10 meetings	0	3	2	5
	10+ meetings	0	4	0	4
	Total	30	67	65	162
RACE	White/Caucasian	20	61	50	131
	African American	7	6	11	24
	Other	0	0	2	2
	Total	27	67	63	157
AGE	Under 40	3	1	2	6
	40-49	6	7	13	26
	50-59	11	13	16	40
	60-69	8	23	24	55
	70+	2	21	10	33
	Total	30	65	65	160

*Totals vary because participants did not always respond to each question or provided multiple responses to the same question.

The distribution of announcement preference was slightly more balanced for non-whites than whites. However, there was no significant difference between preferences of the two groups. As expected, older participants preferred mailed letters. Younger age groups, however, preferred other announcement formats (e.g., email). There was a significant ($p < 0.05$) difference between participants under 60 and their counterparts 60 and over.

Discussion and Implications

Social media marketing – in addition to social media educational platforms – is important for creating awareness about Extension activities and the value of Extension. In Mississippi, a largely rural state, social media enabled us to reach a new audience, including younger clients who typically do not attend forestry meetings and clients not linked to traditional forestry communication networks. Social media may have an even greater impact in more urbanized states due to a larger concentration of population and broader social networks than typically found in rural communities. We also found that email continues to be a vital communication tool, highlighting the importance of developing and updating client email lists. Because it is free, email is probably the most cost-effective means of communicating (in two directions) regularly with clients.

We were surprised that Facebook did not have a greater impact overall than other methods given the prevalence of Facebook usage and the reach of the marketing as reported through Facebook Insights. However, Facebook Insight metrics demonstrate that advertising introduced potential clients to Extension even if they did not participate in a program. In turn, this exposure may pay dividends down the road. In addition, results suggest that once clients become aware of Forestry Extension through Facebook, communication of upcoming programs through email was preferred over Facebook. While we can only speculate on an underlying cause for this shift, we suspect this pattern may have been driven by a reluctance of individuals to rely on Facebook as a reliable medium for communication. The traditional postal mailing continued to be important for announcing Extension programs (particularly among those with some forestry knowledge, who were probably repeat clients); however, our results demonstrate that postal mailings must be employed in conjunction with other methods. In short, through the combination of methods, audiences were diversified compared to historic participation, which, like many forestry outreach programs, tended to consist of Caucasian males over 50 years old. Benefits of letter communication must be weighed against the investment in postage and printing.

One extenuating circumstance we were unable to control was that for one program, the county Extension agent distributed postcards separate from the mailings distributed by the program leaders. This probably affected the number of participants aware of the program through a letter (indeed, excluding this county from the analysis results in a majority becoming aware through Facebook). They may also prefer to receive a personalized mailing from their county agent as opposed to a bulk postal mailing from Forestry Extension (i.e., campus mailouts). A second

limitation of our assessment was not using Twitter, Instagram, and LinkedIn. We chose to focus on the reported methods because they reach a broad, diverse audience, and due to budgetary constraints of the grant.

The methods in this report can easily be replicated. After gaining proficiency using the Facebook advertising processes, Extension personnel should be able to manage marketing campaigns without a professional marketing firm (although an added benefit to utilizing a marketing firm is creative design). The key to successful social media marketing is continuous and regular activity. In part, this contributes to branding, which increases clients' familiarity and trust in a product. Even if regular marketing cannot occur, due to time, personnel, and budgetary constraints, such marketing two to three times per year can result in a number of new clients as well as a growing email database, which important for sustaining contact with clients.

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Acknowledgment

Aims and Scope

The **Journal of Human Sciences and Extension** is a peer-reviewed, open-access, online journal focused on disseminating knowledge and information to academicians, educators, and practitioners. Topics addressed include human development (e.g., early care and education, youth development); family studies; agricultural education; leadership development; extension; health and wellness; apparel, textiles, and merchandising; agricultural economics; nutrition and dietetics; family resource management; and program planning and evaluation. The journal seeks to bridge research and practice, thus all manuscripts must give attention to practical implications of the work. The journal is sponsored by the School of Human Sciences at Mississippi State University.

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ISSN

ISSN 2325-5226

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