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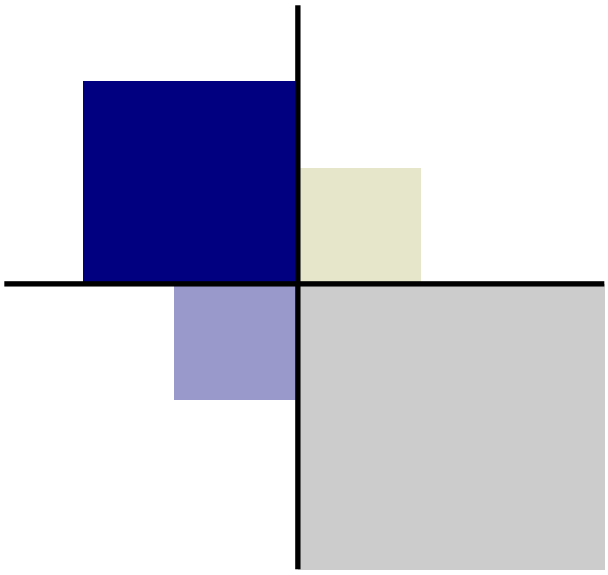

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Original Research:

Evaluation Champions: What They Do, Why They Do It, and Why It Matters to Organizations

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Evaluation champions are individuals who serve as catalysts for building evaluation capacity within an organization. They advocate for the importance of program evaluation, model good evaluation behaviors, and mentor their peers in program evaluation skills and competencies. Interviews with 40 peer-nominated champions in four purposively-sampled Extension organizations identified the roles, contexts, and motivations of staff who act as evaluation champions. Findings underline the importance—and the limits—of mentors and project teams in building evaluation capacity in complex organizations. Implications for practice, research, and policy are discussed.

Keywords: program evaluation, evaluation capacity, evaluation capacity building, organizational learning, evaluation champions

Introduction

To be effective in diverse, complex, and rapidly-changing environments, individuals and organizations must be able to gather and utilize data on stakeholder needs and program contexts, resources, processes, and outcomes (King & Stevahn, 2012; Leuci, 2012; Patton, 2008; Rowe, 2010; Torres & Preskill, 2001). Thus, evaluation capacity building (ECB), including training staff to think about and do evaluation and structuring systems to facilitate organizational learning and change, is a priority for organizational effectiveness (Bourgeois & Cousins, 2013; King, 2007; Labin, Duffy, Meyers, Wandersman, & Lesesne, 2012; Preskill & Boyle, 2008). However, ECB represents a significant conceptual and logistical challenge in complex organizations (Franz & Townson, 2008; Rennekamp & Arnold, 2009). A key element in the capacity-building process is the emergence of *evaluation champions* (King, 2007; Preskill & Boyle, 2008; Taylor-Powell & Boyd, 2008). Champions are supervisors or peers who act as advocates, facilitators, and role models for evaluation process, with influence ranging from

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encouraging individuals to guiding teams to changing organizational resources and policies. This report describes exploratory research on the experiences of peer-identified evaluation champions in four state Cooperative Extension systems and describes their roles, contexts, and motivations for evaluation practice. The report concludes with discussion of implications for practice, research, and policy.

Community-based government and non-profit programs face increasing demands from funders, clients, and other stakeholders to evaluate the quality and outcomes of their work (Carman, Fredericks, & Introcaso, 2008; Rennekamp & Engle, 2008). A recent survey by the Innovation Network (Morariu, Athanasiades, & Emery, 2012) found that 90% of nonprofits conduct some type of evaluation (vs. 85% in 2010). Of those responding (N = 440), only 29% reported high evaluation capacity. Among nonprofits (Carman, 2007; Surr, 2012) and government agencies (Lamm & Israel, 2013) that survive accountability demands (nonsurvivors are less well-documented), evaluation often consists of fulfilling performance benchmarks set by funders (e.g., Office of Management and Budget, 1993) rather than a process of building stakeholder support and generating usable data on impact and improvement (Patton, 2008, 2011). Thus, it is not surprising that staff in many nonprofits perceive evaluation as (a) a resource drain and distraction; (b) an external promotional tool; or (c) a strategic tool to manage reporting, regulatory processes, project monitoring, management, and staff performance measurement (Carman et al., 2008; Lamm & Israel, 2013).

Cousins, Goh, Clark, and Lee (2004) observed that organizations cannot sustain the many and varied evaluation activities that support internal effectiveness and external accountability without significant investments in ECB. ECB can address (a) practical use (i.e., design and management of evaluation projects); (b) instrumental use (i.e., accountability and action on recommendations); (c) conceptual use (i.e., education and empowerment of program stakeholders); and (d) process use (i.e., engagement of staff and participants) that may promote broader organizational learning and change (Bourgeois & Cousins, 2013; King, 2007; Patton, 2008; Preskill & Boyle, 2008; Rogers & Williams, 2006; Volkov & King, 2007. Taylor-Powell and Boyd (2008) viewed these tasks as "strengthening and sustaining an organization's capacity to: (a) design, implement, and manage effective evaluation projects; (b) access, build, and use evaluative knowledge and skills; (c) cultivate a spirit of continuous learning, improvement, and accountability, and (d) create awareness and support for program evaluation and self-evaluation as a performance improvement strategy" (p. 56). They argued that in Cooperative Extension, as in other complex systems, ECB involves incidental or serendipitous, as well as intentional goals, processes, context limits and opportunities.

King (2007) identified integration of evaluation process use in everyday activities as the starting point for ECB, with evaluators acting as educators (Cronbach, 1980) facilitating a culture of inquiry and organizational learning. Project teams provide rich contexts for *doing* and *using*

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evaluation process (Bourgeois & Cousins, 2013; Torres, Preskill, & Piontek, 2005). King (2007) also identified four practice-based indicators of readiness for ECB, including (a) organizational capabilities and expectations, (b) emergence of evaluation champions as advocates and role models, (c) administrative leadership, and (d) policies and practices supporting program and evaluation best practice. Evaluation champions, including supervisors or peers, provide the "personal factor" in ECB (Patton, 2008) by mentoring, engaging and guiding program teams, and influencing organizational practices and policies (Llewellyn, 2013; Preskill & Boyle, 2008; Taylor-Powell & Boyd, 2008), especially when supported by an expert and well-connected advisory team (King, 2007). Since academic and organizational training in program evaluation is still more of the exception than the rule in Extension and similar organizations (Carman et al., 2008; Lamm & Israel, 2013; Taylor-Powell & Boyd, 2008) and short-term, knowledge-oriented training is insufficient to promote flexible use of evaluation skills (Arnold, 2006; Dillman, 2013), formal and embedded systems provide the most practical and efficient means for building or expanding evaluation capacity.

Research on organizational change identifies champions as advocates, practitioners, and trainers among leaders or rank-and-file employees who act as catalysts to learning and innovation through (a) knowledge acquisition (development of skills, insights, relationships), (b) knowledge sharing (dissemination, engagement, collaboration), and (c) knowledge utilization or integration into new situations (Argyris & Schön, 1978; Nevis, DiBella, & Gould, 1995; Senge et al., 1999; Warrick, 2009). Although organizations may equip leaders to champion particular practices designed to enhance values such as efficiency or customer-friendliness, it is often front-line staff with passion for their work who learn, share, and use insights from everyday interactions to improve their work and advance the organization. Innovators and facilitators of adaptation and change typically meet with resistance due to system homeostasis (Senge et al., 1999), yet their experiments and even their errors are critical to making an organization relevant and effective in the context of rapid and complex change.

Despite the benefits of ECB, organizations may limit investments in it due to competing demands, inconsistent administrative support, lack of facilitators, or inadequate infrastructure (King, 2007). Under such circumstances, front-line champions may influence a relatively small circle of colleagues, although administrative champions may still make changes in policies and practices such as training, work teams, reporting, and reward systems (Lamm, Israel, & Harder, 2011; Rennekamp & Arnold, 2009). The challenge for many government and non-profit organizations with marginal evaluation resources and declining fiscal support (Franz & Townson, 2008; Lamm & Israel, 2013; Rennekamp & Arnold, 2009) is how to invest strategically in ECB to meet immediate accountability demands while creating a practical and sustainable network for improving staff competencies, programming, and organizational learning.

Organizational learning research (Argyris & Schön, 1978; Nevis et al., 1995; Warrick, 2009) and practice-based observations of evaluation professionals (King, 2007; Taylor-Powell & Boyd, 2008) identify evaluation champions as organizational assets and catalysts to ECB. However, no prior research explores the existence and experience of evaluation champions in Extension or parallel organizations. If such advocates and practitioners of program evaluation could be identified, understanding their motivation, professional growth, roles, and contexts might provide insight on questions of where to invest in ECB, at least within the Cooperative Extension system.

Cooperative Extension systems engaged in community outreach and technology transfer from more than 100 land-grant universities (National Institute of Food and Agriculture, 2014) have worked to improve evaluation and ECB over the past four decades in response to rising expectations for external accountability, internal program quality, and professional scholarship, despite reductions in governmental support (Rennekamp & Engle, 2008; Taylor-Powell & Boyd, 2008). In 2009, evaluation advocates working through the online eXtension network formed an Evaluation Community of Practice (E-CoP) offering web-based training and support to Extension staff at county and state levels. In 2012, an E-CoP team designed a research study to document the work and assess needs of evaluation champions in order to better understand and serve Extension professionals. This research project did not attempt to determine the number and specific competencies of evaluation champions in the system. Rather, for front-line and state program staff identified as advocates and model practitioners of program evaluation by administrators or evaluation specialists, we were interested in two questions:

1. How do evaluation champions promote and practice program evaluation within their organizations?
2. What initiated and maintains evaluation champions' motivation to learn, practice, and promote program evaluation?

Methods

An exploratory, qualitative interview design was selected to capture the breadth of contexts, activities, and roles of county- and state-level evaluation champions. This methodological approach was selected because it is well-aligned with the overarching purposes of this study; qualitative data, especially semistructured qualitative interview data, are well suited for exploratory studies aimed at developing a nuanced understanding of people's experiences with a given phenomenon (Creswell, 1998). This methodological approach is also consistent with the researchers' espoused epistemological stance for this study, which is a pragmatist, constructivist epistemology with elements of critical realism (Creswell, 1998; Miles & Huberman, 1994).

In terms of researcher subjectivity and reflexivity, all three authors are Extension evaluation specialists who work to support ECB, often by working with evaluation champions, in our

respective states. As such, while we seek to better understand evaluation champions, our positionality also predisposes us with a positive bias about them, and we have numerous anecdotes and preconceived notions about the experiences, roles, and needs of evaluation champions. Throughout this study, we have attempted to use this positionality as a productive heuristic guide rather than letting it compromise the trustworthiness of the study.

Sampling

A purposive sampling strategy was used to select one state Extension program in each of four Extension regions (i.e., Northeast, Southern, North Central, and Western). We do not report the names of the states to help ensure the confidentiality of participants in this study. Larger state programs were selected in order to ensure a sufficient number of respondents across a range of disciplines. Either via email or at state-wide in-person Extension events, evaluation specialists, administrators, and agents in each state nominated up to ten champions based on their advocacy, practice, and/or training efforts for program evaluation, continuing the purposive sampling at the level of individuals.

As this was an exploratory study, the selection of individual participants was purposefully open, without predetermined specific criteria for what constitutes an evaluation champion. Respondents were contacted by the authors and recruited into the study consistent with protocols approved by the Human Subjects Boards of the lead institutions. Almost all invited champions elected to participate in the study (five potential participants elected not to participate because of being too busy or being on maternity leave). Overall, the 40 champions, including 15 males and 25 females, had an average of 15 years of experience, with a state average range of 11.8 to 18.8 years, and an individual range of experience from 2 to 35 years. Champions represented all major Extension programs, with 18 having some responsibilities in 4-H; 17 in Agriculture and/or Natural Resources; 12 in Family and Consumer Science, Nutrition, or Health; and 4 in Community Development. The group of champions consisted of specialists and agents, representing various administrative positions within their respective Extension system, though the majority were county-based agents. In total, there were 6 state or county administrators, 6 state specialists/assistants, and 28 field agents in our sample.

Data Collection

During initial phases of the development of this study, five Extension evaluation professionals (all affiliated with the E-CoP) brainstormed items for the semistructured interview protocol used in this study. A list of the 13 items included in the final protocol is included in the Appendix.

Two of the authors (BS and PC) conducted all interviews (with three states' interviews conducted by BS and one by PC). As longstanding evaluation practitioners, the researchers have

extensive experience conducting interviews. The interviewers built rapport with interviewees through their shared participation in the same professional system, the Cooperative Extension system. In some cases, the interviewer knew the interviewee personally. Across the four states, 40 semistructured interviews were conducted by phone between July 2013 and May 2014. Interviews lasted 30 to 45 minutes.

In most cases, to balance feasibility and precision, interviews were not audiorecorded, but extensive notes (including verbatim quotes) were typed by the interviewer during the interviews (Kvale & Brinkmann, 2008; Tessier, 2012). In one state, interviews were audiorecorded. In order to improve accuracy of interview notes, interviewers conducted immediate member checks with participants by paraphrasing their responses during the interviews. In addition, completed and edited interview notes were shared with interviewees for formal member checking, with roughly 20% of participants suggesting minor changes to the interview notes.

Analysis

All three authors conducted the analysis of the data. A general inductive approach was used. This approach is an "easily used and systematic set of procedures for analyzing qualitative data that can produce reliable and valid findings" (Thomas, 2006, p. 237). It serves to:

> (a) condense raw textual data into a brief, summary format; (b) establish clear links between the evaluation or research objectives and the summary findings derived from the raw data; and (c) develop a framework of the underlying structure of experiences or processes that are evident in the raw data. (Thomas, 2006, p. 237)

First, an initial coding dictionary was created as a separate Word document with a priori codes based on the objectives of the study and the items in the interview protocol. This coding dictionary included the code's name, identification number (for quick reference while coding), and a brief description or definition. Data were managed by entering each discreet phrase or sentence into an Excel database, where each phrase or sentence occupied a row, and potential codes were represented in the columns. In any analysis of interview data, there is a decision to be made between proceeding horizontally complete interview by interview, or vertically by variable or item. In this study, data management and analysis proceeded item by item, rather than interviewee by interviewee. This approach, discussed by Kvale and Brinkmann (2008), offers the advantage of allowing the coder to become immersed in the codes associated with a given item, thus increasing the likelihood for consistency in coding. This approach does, however, have the limitation that the narrative nature of the individual interviewee's data can be disrupted. Given the objectives of this study and its underlying epistemological and methodological framing, the item by item analysis was the most appropriate option.

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The three authors assigned items for analysis between them such that each of the 13 items was coded by two researchers, with different permutations of paired researchers working to analyze each item. The coders first coded assigned items on their own by reading each interviewee response to that item and then assigning it with one or more of the established codes. Emergent codes were also identified during coding; in such instances, the code book for the affected item was updated, and like with the constant comparison method of grounded theory (Charmaz, 2014), data which had already been coded before the addition of the new emergent code were reread and if required, recoded to include the new code.

The pairs of coders then met to discuss any discrepancies and to ultimately come to consensus. In most cases, this co-coding activity led to changes in the coding of one coder only if she or he had omitted a code which was later deemed pertinent and appropriate. In very few cases, the two coders disagreed slightly and dialogued until consensus was reached. Finally, all three researchers met repeatedly to identify typical and distinctive themes in each item, noting illustrative quotations, examples, and contexts. As a pragmatic constructivist study, positivist notions of validity and reliability are not applicable. Rather, we endeavored to ensure the quality (i.e., credibility and provisional transferability) of our inquiry through feedback (including technical and reflexive member checks), "rich" (highly detailed) data, peer debriefing, and constant comparison (Maxwell, 1996; Mertens, 2005).

Results

Qualitative content analysis enabled us to identify themes related to each research question, as described below, with key quotations and themes summarized in tables.

Question 1: Champions' Promotion and Practice of Evaluation

Program evaluation roles. Consistent with practice observations (King, 2007; Taylor-Powell & Boyd, 2008), champions served at all organizational levels and varied in experience, academic discipline(s), and practice networks. Most engaged in roles as advocates, practitioners, and trainers with varying frequency, with specific activities reflecting the responsibilities, contexts, and experience as recalled in the open-ended question format.

Advocacy. "Speaking up for the cause" was perhaps the best-recognized role of a champion, evident in respondents' *talk* about evaluation and more frequent *actions* as monitors, models, and mentors, as illustrated by their statements in Table 1. Relatively few respondents described themselves as vocal "cheerleaders," yet most persistently reminded administrators, advisory groups, project teams, professional groups, individual coworkers or supervisees to invest time, resources, and gain rewards from skill-building and practice in evaluation. Reasons for advocating evaluation most often focused on funding or accountability, helping clients and

others see program impact, improving program quality, and learning about program subject matter. Both the few with "official" roles in evaluation (e.g., administrators, specialists) and peer advocates emphasized "improving practice" and "making a difference" in clients' lives over simply meeting organizational expectations.

Talk and action most often took place in practical contexts, such as project teams, where champions demonstrated the value of evaluation in program process by leading needs assessment, planning, monitoring, and reporting activities. Concurrently, they used these processes to engage and educate target audiences, staff, and funders about a program's purpose, potential, and impact. Although the quality and effects of advocacy were not a focus of this study, respondents' comments suggested that talking about evaluation helped sustain awareness, training priorities, and to a lesser extent, organizational practices in evaluation. Advocacy actions, perhaps because they were focused in project teams, were more often connected to changes in individual and project group practice than large-scale organizational change.

Table 1. Advocacy for Evaluation Comments by Theme

Question	Quotation	Theme
Advocacy/Talking	*I meet with other supervisors and remind them of the importance of evaluation and advocate for evaluation when we choose staff training priorities.—county director*	Supervisor/peer influence, importance, training decisions
	I wanted the funder to see what we were accomplishing. —county director	Stakeholder influence, demonstrating accountability
	To motivate myself and others, I remind them that it is important to show impact to retain funding or receive promotions and awards.—county director	Self/peer influence, importance for funding, promotion, recognition
	As the statewide community development coordinator…[I] encourage professional development in evaluation.—county agent	Peer/organizational influence, program role, training decisions
Advocacy/Action	*Last year I helped a staff member gain evaluation data from youth and adults in a livestock program.—county director*	Peer influence, program context
	I tend to be the one who develops the evaluation for multi-county efforts.—county agent	Peer influence, active contribution, project team context

Practice. Champions gained experience and credibility with peers and clients by practicing what they advocated. As indicated above, advocacy and practice roles were conjoint but distinctive themes. Practice descriptions more often focused on process, *how evaluation was practiced*, than how many reports were produced or how many years were invested. Practice emphasis incorporated thinking, initiating, measuring, and using data to add value to peers' or clients' learning. Comments illustrating these processes are featured in Table 2.

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Several champions described *evaluative thinking* as an extension of their personality, training, and/or programming experience. Consistent with Douglah (1998), they viewed action-and-reflection as consistent with Extension practice and inquiry in their discipline. They viewed systematic, utilization-focused evaluation as enhancing program practice. Evaluative thinking was also evident in guidance offered to others for (a) developing logic or pathway models, (b) assessing needs and focusing evaluation questions, or (c) examining measurement effectiveness.

Champions *managed* evaluation by engaging campus experts, community partners, and funders, and by working in project teams. They also maximized efficiency by focusing evaluation on priority programs, using reliable common measures, and adapting technology to enhance data collection and analysis. Consistent with, and perhaps as a consequence of, rigorous thinking and management, they gave careful attention to *measuring outcomes* rather than simply counting participants. Many also documented program quality or fidelity. Relatively few developed tools, but most mastered existing evaluation tools, especially surveys, but also used checklists, journals or log-books, interviews and focus groups, concept maps, observations, and testimonials. Several respondents used follow-up or longitudinal methods in addition to pre/post measures. A few developed or used cost-benefit measures. Those who worked intensively (e.g., singular focus for three months or more) and/or extensively (e.g., consistent priority over time) were most likely to report that they created, extended, or enhanced evaluation tools. Those who moved from project-to-project most often searched for and utilized existing instruments. In general, the wider the diversity of projects in which champions were involved, the greater the diversity of methods they mentioned and the more often evaluative thinking was evident in questions such as, "Which method fits what we want to know about this program?"

Evaluation champions were intentional in designing evaluation and in *using* evaluation data. Although keenly attuned to organizational reporting requirements and procedures, champions were principally self-motivated. Their priorities focused on using evaluation process and data to improve programs, improve their own program delivery skills, help program staff and clients succeed, and effectively interpret program goals and results for stakeholders. In the process of improving how they practiced evaluation, champions developed a greater understanding of the purpose of evaluation, the programs, and subject areas to which evaluation was applied. For many respondents, evaluation practice led to a deeper understanding of organizational mission, stakeholders, and the evaluation process itself, as reflected in this comment:

> Looking at evaluation from a broader perspective I could see that it was not just 'bean counting' but could help me, my supervisor, and the system to understand stakeholder needs and Extension impacts better and decide what programs should be continued or modified. (County agent)

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Table 2. Evaluation Practice Comments by Theme

Question	Quotation	Theme
Practice/ Thinking	*I tend to be a science person and think about how and why things work, so evaluation is a natural part of science and Extension.—county agent*	Identity/training, evaluative thinking, programming process, organizational strategies
	I have a background in ethnography which I use to design group interviews.—county director	Identity/training, evaluative tools, program process
	Significant insight for [4-H] agents is that they are already doing evaluation as part of their youth program interactions.—state program assistant	Observation from training, programming process
Practice/ Managing	*I have partnered with faculty and their students in applied research fields at the university on several projects.—community development agent*	Engaging experts, working in teams
	I don't do evaluation in all my programs, but do apply it to my priority programs.—county agent	Efficiency-via-program priorities
	I have talked [with team partners] about techniques for using my cell phone to keep track of numbers and reporting.—county agent	Engaging peers, working in project teams, efficiency-via-technology
Practice/ Measuring	*I am always trying to design tools that capture the right information.—county agent*	Measurement-focused, stakeholder-focused
	I developed a calculator that shows the dollar value for benefits of IPM training used by Ag agents statewide.—county agent	Measurement-focused, stakeholder-focused, common measure-focused
	In 4-H livestock with novice learners, I evaluated what they knew before, during, and after…then tracked 3-10 years and measured.—county agent	Measurement-focused, longitudinal focus
Practice/ Using	*I implement evaluations to determine how to improve learning experiences for participants.—county agent*	Stakeholder-focused, quality (and presumably outcome)-focused
	That [program] value is recognized in the individual stories, testimonies, quotes, and capturing themes from focus groups.—county agent	Measurement-focused, stakeholder [esp. participant]-focused, interpreting program value
	I like putting information into chart form for others to better understand how we did.—county agent	Stakeholder-focused, interpreting program value

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Mentoring and training. For many champions, a reputation for evaluation practice opened opportunities for short- or long-term *mentoring* and *training* with peers, including supervisees or coworkers, most often in the context of project teams (see Table 3). Mentoring or team coaching typically utilized "teachable moments" in contexts of professional development (e.g., career start or promotion), project evolution (e.g., transition from output to outcome to reporting), and organizational learning (e.g., generating, training, and archiving logic models, measures, and reporting templates). Champions also advocated for and contributed to professional (discipline-based) organizations at local, state, and national levels through online or conference workshops. Many training events addressed multiple areas, but topics most often cited were planning, methods, and evaluation use, with design, data collection, and reporting cited less often. Many champions had been mentored by or worked closely with evaluation specialists or faculty as part of a formal or informal training team. In settings with more limited expertise, champions facilitated training events themselves. The most enduring theme across advocacy, practice, and training experiences was champions' *passion* for evaluative thinking and making a difference with people.

Table 3. Training-Related Comments by Theme

Question	Quotation	Theme
Training/ Mentoring	*I supervise and mentor staff and require them to do projects. We start with logic models and identify appropriate points in a program to conduct evaluation.—county director*	Supervisor influence, evaluation skills in program context, program process
	I am mentoring three others preparing their promotion papers. —county agent	Peer influence through mentoring, promotion help
	I involved 4-H volunteers in developing [a measure] and imagining where and how it could be implemented.—county agent	Professional influence with volunteers, measurement-focused, program process and context
Training/ Leading Workshops	*At our state conferences, I offer workshops on evaluation and model our practice with agents.—state program assistant*	Peer influence through training workshops, state level
	Taught [multiple evaluation topics] in a few webinars at the state and national level.—state program assistant	Peer influence through training workshops, national level

Question 2: Champions' Initial and Sustained Motivation to Evaluate

The journey toward becoming an evaluation champion began in graduate school for a few and inspired a return to formal coursework for a few others. More typically, champions learned evaluation skills through mentoring and project team experiences, then gradually accumulated

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more skills through additional projects and professional development. For all respondents, much skill practice was self-taught, trial-and-error, and punctuated by peer learning or working with an expert or mentor.

Accountability requirements may have served to "get their attention" but did not inspire sustained interest, nor did the study of evaluation for its own sake. Rather, interest in evaluation grew from intense interest in a discipline, whether livestock or crop production, nutrition or food safety, and in clientele—producers, youth, or citizens of their county. Many expressed strong commitment to the ideals and institution of Cooperative Extension and viewed evaluation as a means to "tell the Extension story," improve programs, and make a difference in the community.

Sustained motivation was strongly related to early and intensive training, reinforced by rewarding practice. Positive evaluation experiences decreased resistance, reinforced evaluative routines, and increased relevance of evaluation work; as one respondent noted, "[Evaluation] is crucial to the ultimate success of what we do…funding, public relations, building the program for the future." Committed champions' motivation was self-generated and reinforced by new learning, additional funding support, and the rewards of making a difference in the lives of mentees and clients. Not surprisingly, positive feedback from stakeholders sustained motivation, whether it came from meeting a participant at the grocery store or after a presentation to Congress. One agent observed, "I read those statements when I complete my monthly report and it reinvigorates me in terms of what difference my work makes." He added, "finding ways to show impacts of helping…if you can't do that, you're out of business."

Evaluation that seemed irrelevant or was unused was demotivating, as was inadequate time to report or funding cuts despite good evaluation. However, many champions affirmed the value of negative feedback as a way to improve programs and track community needs. Champions sustained motivation by viewing the extra efforts or setbacks of each project in a long-term perspective of improving program and evaluation capacity.

The most enduring theme across advocacy, practice, and training experiences was champions' *passion* for evaluative thinking and making a difference with people, as illustrated by responses below. For many, evaluation was an integral part of the subject taught and extension of relationships with peers or clients: "I teach crop producers pest management strategies, challenging them to explore for insect pests to reduce losses or reduce pesticide application costs" (County agent). Evaluation champions saw the effects of their passion in responses of colleagues: "A light bulb comes on for colleagues when I talk about follow-up tools" (County agent). Finally, evaluative thinking contributed to both focus and broader perspective on the purpose and value of their work: "The reason I work with Extension is that I want to have an impact on my community and improve it, so measuring it and knowing that I have an impact is important to me" (County agent).

Discussion

This study, the first describing evaluation champions from their own point of view, explored their roles, activities, and initial and sustaining motivations in four diverse Extension systems.

Champions' Promotion and Practice of Evaluation

Consistent with prior organizational learning and ECB research and practice (Cousins et al., 2004; King, 2007; Warrick, 2009), champions engaged three complementary roles as advocates, practitioner-models, and mentor-trainers. Advocacy included "speaking up" in policy groups but more often—and perhaps more effectively—interpreting the value of and opportunities for evaluation to peers, especially in mentoring, project teams, and professional settings. Although sustained funding was the most often cited rationale for evaluating, as expected in the current economic climate, advocacy for client or peer learning and program improvement pointed to champions' influence on building deeper, longer-term foundations for program development.

Project teams and professional groups serve as valuable contexts for give-and-take in skill learning, practice, and mutual support (Bourgeois & Cousins, 2013; Torres et al., 2005), building on basic knowledge gained in formal settings (Arnold, 2006; Cousins et al., 2004; Dillman, 2013; King, 2007). Based on their reputation and enthusiasm for doing evaluation well, champions offered assistance or long-term mentoring to coworkers or supervisees; shared tools; helped with planning, problem-solving, or reporting, as they had been—or wished they had been—mentored. In addition, many champions promoted or provided training for statewide, regional, or national events. As advocates, mentors, trainers, and liaisons to professional evaluators, champions represent both the "personal factor" for peers (Patton, 2008) and organizational catalyst (Preskill & Boyle, 2008; Taylor-Powell & Boyd, 2008), roles critical to ECB and unique to change agents embedded in organizational systems (Warrick, 2009).

Champions perform above organizational norms in evaluative thinking (e.g., routine reporting, evaluation as "necessary evil") and evaluation use (e.g., "paperwork") (Baughman, Boyd, & Franz, 2012; Lamm & Israel, 2013). They prioritized evaluation instrumental use for accountability and funding support but also offered examples of process use to engage clients and partners, practical use to manage projects, and conceptual use of evaluation to educate stakeholders, consistent with Cousins et al. (2004). Simultaneously, doing and using the evaluation process seemed to enhance champions' identity as educators and leaders and their understanding of evaluation as a means to improve programs and make a difference in the lives of peers and program participants. Champions' own role descriptions more often fit the pattern of *indirect influence* which complements expert evaluators' more *direct and intentional* use of process in intensive training and consulting (Kirkhart, 2000, cited in King, 2007). Both roles are critical to ECB readiness (King, 2007) but are expressed differently in different organizations.

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Champions' Initial and Sustained Motivation

Champions' interest in evaluation was shaped by internal passion for their field and clientele, as well as commitment to Extension organization and mission, yet evaluation was viewed as a competency, not an identity. Initially, motivation came from external requirements, perhaps reinforced by academic training or professional orientation. Later, relationships with mentors, early successes with self-directed or team projects, and problem solving with clients led to deeper commitments to *do* and *use* evaluation (Bourgeois & Cousins, 2013; Torres et al., 2005). Organizational investments in cultivating or engaging their skills reinforced champions' motivation, as did practice benefits such as program improvement, sustained or increased funding, and seeing the rewards of mentoring or organizational change. In sum, motivation was anchored in professional practice and reinforced by cognitive and affective rewards.

ECB in Perspective: Why Evaluation Champions Matter

Taylor-Powell and Boyd's (2008) description of Extension ECB offers a useful framework for reflecting on champions' experiences. Study results illustrate how *professional development* (PD), including training and technical assistance, mentoring, working in project teams, and sharing in multistate communities of practice serves as a watershed for ECB. What stands out in evaluation champions' narratives was their initiative in seeking PD resources, applying lessons, and urging others to pursue meaningful thinking and doing. Where budget cuts or competing training priorities limit formal training, champions connected with experienced practitioners within and beyond Extension. Where training was available, champions achieved higher levels of competence and confidence more rapidly, then applied skills to more of their plan of work. In either case, informal PD networks and self-directed learning contributed more to quantity and quality of growth than formal structures.

Evaluation champions represented critical ECB *resources and supports*, especially via informal networks. However, their effectiveness was limited when expertise, time, technology, and other organizational assets were less available. Champions were much more effective and energized when connected to support systems over an extended time period.

Finally, an *organizational environment* with clear, consistent leadership, policies, and structures that removed barriers and provided support for ECB enabled champions to grow and contribute much more than an organization with shifting priorities, high turnover, or unstable finances. Since much of champions' work and ECB generally is informal, such losses may be invisible but are, nonetheless, profound. In fact, as resources shrink, engaging champions as leaders is more critical for ECB and PD in all areas.

Limitations

As a one-time, purposive, and qualitative study, applications of the findings of this study to other settings should be made with caution. The peer nomination process may have introduced biases towards certain types of individuals, which may have been controlled through other sampling methods. The open-ended interview format captured a breadth of experience in this diverse group but lacked the continuity and detail of a fixed-choice instrument. Data collection in the interviews involved using written notation, paraphrasing, and in-process and follow-up processes that proved efficient and thorough but may have been improved with audiorecording and full verbatim transcription. Coders found more variation by context and respondent experience than initially identified by interviewers, but differences among coders were not analyzed systematically. Diverse perspectives and negotiated consensus of multiple coders aided accuracy and thoroughness of content analysis, yet different coders or processes may have generated different conclusions.

Respondents' descriptions were accepted at face value and not corroborated by alternative methods or explored for all relevant details. The same limitation applies to determining the quality of programs, evaluations, or capacity-building efforts. The study was able to document motivations, activities, and to some extent effects of champions' efforts, but unable to determine the impact of programs or quality of evaluation efforts which they described. Given the exploratory nature of the research and status of most Extension ECB efforts (e.g., consistent effort vs. rigor), attention to these details was not critical to this study but should be investigated in further research.

Recommendations for Practice, Research, and Policy

As an exploratory qualitative study, results may not generalize to all settings, but insights may be useful to some for future practice, research, and policy.

Practice. Competent professionals who are passionate about their discipline and people they serve will be most likely to ask, "How can I make (and measure) quality and impact?" First, hire people with these skills. Next, train in basic concepts of planning, implementing, and reporting to help new staff grasp the lingo and logic of programming and evaluation. Then, orient them. Skill mastery requires mentoring and applied practice in real-world settings (e.g., project teams, professional groups). Regularly nurture them. Careful planning and rehearsal of evaluation protocols optimizes effectiveness, as does the use of validated tools and templates. Continuously support them. Evaluation is a skill-set developed over time, not mastered overnight.

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Encourage small beginnings (e.g., one project, audience, or tool), providing adequate support (e.g., time, tools, and expertise) to promote steady growth. Exhaustive or isolated efforts promote burnout. Help novice evaluators focus, succeed, and use the process and products of evaluations. Integrate evaluation into experiential learning to facilitate evaluative thinking and doing for clients, peers, partners, and the larger organization. Offer insight on where to target programming, how to connect with clients and evaluate impact, and how to interpret results and improve programs, as these will lead staff to advocate for evaluation. Affirm and engage emerging champions. The slow pace of organizational change may frustrate some. Engage them as contributors where positive change comes more quickly: as a mentor, trainer, advisor, reporter, or partner in multistate efforts. Never stop looking for ways to enhance capacity, use or create resources, or build an evaluation culture. Many narratives in this study illustrate this gradual, practical, personalized process in the emergence of evaluation champions.

Research. A more systematic examination is needed to trace the learning pathways and roles of champions, including external evidence for competency, activity, and effects. Research should also address broader and deeper description of contexts that empower or impede champions' emergence and influence. Such studies should include smaller as well as larger organizations and track organizational as well as personal ECB strategies and effects over time. Specifically, research should focus on benefits of basic and intensive training, mentoring, and project teamwork on champions' professional development and subsequent influence across diverse settings and roles.

Policy and procedures. Especially in times of retrenchment and rapid change, strategic investments in hiring, training, and supporting (aspiring) evaluation champions are critical to organizational capacity and flexibility in programming, learning, and morale, as well as evaluation (Franz & Townson, 2008). Engaging the insight and enthusiasm of champions in policy and procedure decisions will help administrators build evaluation capacity and morale.

King (2007) noted that front-line champions reach only a small circle of colleagues relative to large-scale policies or training investments. However, this study illustrates that relatively small investments in even a small cadre of motivated professionals can reach more staff more consistently over time and space and at a deeper level (e.g., skill and practice) than might be achieved by a single expert evaluator. Moreover, these champions can bridge evaluation and subject experts, interpret organizational goals and methods for peers, and provide leadership and mentoring at the street level.

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Appendix

Evaluation Champions Interview Protocol

1. Please describe some examples of things you have done to promote evaluation of Extension programs. *Probe, if needed for examples of:*
    - *specific program evaluation methods/tools developed*
    - *reminding colleagues who are developing a program that they need to create an evaluation*
    - *mentoring new staff to help them evaluate their program efforts*
    - *involvement in professional development opportunities related to evaluation*
2. What stimulated your interest in promoting and supporting evaluation of Extension programs?
3. What keeps you motivated to promote and support evaluation of Extension programs?
4. What resources related to evaluation development and implementation have you found to be useful? Please describe them.
5. What resources (type or content) are needed to increase your skills and those of your colleagues in evaluating Extension programs?
6. What technical support would be helpful related to accessing and using technology or accessing expertise in areas such as research design, statistics, data interpretation, and communicating results/report preparation?
7. What changes in the Extension organizational environment would help support your evaluation efforts?
8. What else would be important to encourage and support your evaluation efforts?
9. Can you name some other people in Extension that you consider to be evaluation champions? What do they do?
10. **Note:** *The following is an optional question to be used if you have checked the membership list of Evaluation CoP members and the individual is not on the list.*
    Are you familiar with or been in contact with the eXtension Evaluation Community of Practice members or website? (If not, interviewers share the following brief description of the Evaluation CoP membership and resources:
    "eXtension is the virtual venue through which the Evaluation Community of Practice (CoP) is accessible. The CoP serves as an evaluation resource for the entire Extension system. Since its beginning in 2010, CoP leaders and core members continue to develop, identify, review and post frequently asked questions and answers (FAQs) about evaluation, Moodles (online courses), appropriate fact sheets that support evaluation efforts among Extension personnel. The CoP uses eXtension features to make these resources available.")
11. Is there anything else you'd like to know or share?
12. How many years have you been employed with Extension?
13. What is your position program/area of expertise?

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Evaluation Champions: What They Need and Where They Fit in Organizational Learning

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Evaluation champions in four state Extension systems described needs for training and support and perspectives on building evaluation capacity in their organization as part of a larger interview study exploring their roles, growth, and motivations. These 40 evaluation leaders identified needs for basic and advanced evaluation skills training, technical assistance, and practical learning via mentoring and project teams. Recommendations for organizational change in evaluation capacity included "top-down" investments in communication, training, and practical support, as well as increased "bottom-up" efforts by champions like themselves to advocate, model best practice, and contribute to training and mentoring peers. Implications for professional development and evaluation capacity building in Extension and other community-based organizations are discussed.

Keywords: program evaluation, evaluation capacity, evaluation capacity building, organizational learning, evaluation champions

Introduction

In an era of rapid change, complexity, and accountability, evaluation is critical to both program and organizational effectiveness (Argryis & Schön, 1978; Russ-Eft & Preskill, 2009). Scholars of evaluation practice frequently identify "evaluation champions" as catalysts for organizational accountability, learning, and innovation in Extension (Taylor-Powell & Boyd, 2008) and in other organizations (King, 2007; Preskill & Boyle, 2008; Scheirer, 2005). Champions include line supervisors and rank-and-file coworkers who actively advocate, model good practice, conduct training, and mentor peers in program evaluation. However, there is a lack of primary research aimed at understanding the perspectives of evaluation champions. Thus, we interviewed peer-nominated champions about their experiences and roles (Silliman, Crinion, & Archibald,

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2016). As part of the same study, this paper reports champions' perceptions of their own and their peers' training and organizational evaluation capacity building (ECB) needs. Champions' "insider" positions and practical experience make them valuable informants on individual and organization needs for ECB (King, 2007). Equipping and engaging champions promises to be an efficient and effective means of building capacity.

Individuals and organizations in government and nonprofit sectors, including the Extension system, face increasing demands to document program quality and effectiveness (Carman, 2007; Carman, Fredericks, & Introcaso, 2008; Rennekamp & Engle, 2008). Consequently, these organizations are giving increased attention to professional competencies and organizational capacities that support staff performance and learning from programming, evaluation, and interaction processes with stakeholders (Lamm & Israel, 2011; McClure, Fuhrman, & Morgan, 2012; Rodgers, Hillaker, Haas, & Peters, 2012; Stevahn, King, Ghere, & Minnema, 2005; Taylor-Powell & Boyd, 2008). Evaluation skills are regarded as core competencies and training priorities for Extension professionals (Arnold et al., 2008; Diem, 2009; Kluchinski, 2014; Lekies & Bennett, 2011; National Professional Development Task Force, 2004; Schwartz & Gibson, 2010). Radhakrishna and Martin (1999) identified a strong demand for program evaluation training in a variety of formats (e.g., workshops, short courses, videos, seminars, or newsletters). More recently, studies have noted important differences in needs for and uses of evaluation skills across Extension disciplines (Garst, Baughman, & Franz, 2014; Ghimire & Martin, 2013). McClure et al. (2012) identified two major skill priorities overall (analyzing data and disseminating findings) as well as differences in needs across disciplines and experience groups. Even within a centralized program management model, evaluative thinking and implementation require significant insight and competence for professionals (Arnold, 2015; Buckley, Archibald, Hargraves, & Trochim, 2015) and systemic capacity for organizations (Preskill & Boyle, 2008).

Research on individual competency building points to the importance of mentoring, skill practice, and evaluation use as critical steps for staff to move beyond knowledge acquisition to skill mastery in evaluation (Arnold, 2006; Baughman et al., 2010; Baughman, Boyd, & Franz, 2012; Dillman, 2013; McClure et al., 2012; Morford, Kozak, Suvedi, & Innes, 2006;). Early career training (Baker & Hadley, 2014; Brodeur, Higgins, Galindo-Gonzalez, Craig, & Haile, 2011; Harder, Place, & Scheer, 2010; Llewellyn, 2013) as well as continuous learning (Taylor-Powell & Boyd, 2008; Silliman & Guin, 2012) enhance professional coping as well as program management, accountability, and improvement efforts. However, program evaluation is but one of many training needs, often considered less interesting, accessible, or urgent unless required by a sponsor organization (Lakai, Jayaratne, Moore, & Kistler, 2012; Lamm & Israel, 2011; Lekies & Bennett, 2011; Morford et al., 2006).

Growing out of research and practice in organizational change (Argyris & Schön, 1978; Nevis, DiBella, & Gould, 1995; Senge et al., 1999), the concept of ECB is more complex than

completing evaluation projects or training and motivating individuals at one moment in time (Compton, Baizerman, & Hueftle-Stockdill, 2002; Taylor-Powell & Boyd, 2008; Torres & Preskill, 2001). Continuous investments in training, mentoring, and sustained practice with relevant projects are essential for individuals to achieve skill mastery (Arnold, 2006; Dillman, 2013). Yet, cultivating independent evaluation practitioners is but one element in building organizations that effectively navigate and learn from complex and changing dynamics of the organization and larger social environment (Franz & Townson, 2008; Taylor-Powell & Boyd, 2008).

Although ECB includes *doing* evaluation projects, it extends to building and using knowledge and skills to learn, improve, and demonstrate accountability, and engage program staff and partners in a culture of continuous improvement (King, 2007). Taylor-Powell and Boyd (2008) explained that organizations build the skills and culture of evaluation through (a) professional development (formal and informal training and technical assistance, collaborative projects, mentoring and coaching, and communities of practice); (b) resources and supports (expert consultants or networks; technology; materials such as examples, guides, and metrics; evaluation champions; assets such as partnerships, networks, expertise, or infrastructure; financing; technology for evaluation and training delivery; and time allowances for learning and doing evaluation); and (c) organizational environment (leadership vision and goals; internal or external accountability expectations; incentives to evaluation performance; structures for communication, teamwork, and management; and policies and procedures guiding all phases and applications).

Preskill and Boyle (2008) have proposed a more detailed multidisciplinary model for organizational ECB that focuses on reciprocal processes of training and application of knowledge, attitudes, and skills in evaluation. Training process goals are grounded in motivations, assumptions, and expectations about the organization and context and expressed through teaching and learning strategies tailored to specific staff and settings. Training is adapted and informed by sustainable practice that includes commitments to policies, plans, processes, and structures that promote continuous learning and evaluation use. Organizational leadership, culture, structures, and communication provide a context and catalyst for training and practice and facilitate transfer of learning between the spheres of *knowing* and *doing* evaluation.

More recently, Labin, Duffy, Meyers, Wandersman, and Lesesne (2012) proposed an Integrative Model focusing ECB on three elements: (a) need, including motivations, objectives, context, and resources; (b) activities, incorporating strategies, implementation, and evaluation efforts; and (c) outcomes at the individual and organizational level, including positive and negative implications for programs sponsored by the organization. Although not all elements need to be in place to build capacity, leaders of complex organizations in changing environments are often challenged to know *which* strategic and sustained investments may advance evaluative thinking and doing at a given point in time (Franz & Townson, 2008).

King (2007) identified four practice-based indicators of *readiness* for ECB, including (a) organizational capabilities and expectations, (b) emergence of evaluation champions as advocates and role models, (c) administrative leadership, and (d) policies and practices supporting program and evaluation best practice. King (2007) identified process use, or integration of evaluative thinking and follow-up in the everyday activities of an organization, as a starting point for ECB. Taken together, these observations suggest that evaluation champions, whether administrators or coworkers, may be pivotal leaders in ECB through their advocacy and engagement, modeling of sound evaluation practices, and mentoring of individuals or program teams in the context of everyday programming.

Despite the benefits of ECB, organizations may limit investments due to competing demands in other areas, limited or unsustained administrative support, lack of knowledgeable facilitators, or inadequate infrastructure (King, 2007). Constraints that influence evaluation decisions such as money, time, personnel, context, constraints, and politics (Mertens, 2005) likely also affect capacity building. Under such circumstances, front-line champions may influence a relatively small circle of colleagues, while administrative champions may reshape policies and practices such as training, work teams, reporting, and reward systems (Lamm & Israel, 2011; Rennekamp & Arnold, 2009). However, champions' influences are likely to be more accessible, profound, and sustained (rather than periodic workshops or reporting guides), and especially as that small circle grows, more impactful than superficial or shifting emphasis on ECB typical of most organizations. However, there has been little empirical research on the activities and development of evaluation champions in government and nonprofit organizations.

This article describes exploratory research on the perceptions of Extension evaluation champions regarding individual (their own and coworkers) and organizational needs for growth and change to improve evaluation capacity. The article concludes with a discussion of implications for practice, research, and policy.

Extension Community of Practice Focus on Champions

A professional evaluation community of practice (E-CoP) within the eXtension online network of the multistate Cooperative Extension system identified research on the work of evaluation champions as a priority for assessing the status of and needs for ECB among Extension professionals. A report on evaluation champions' roles and motivations is available separately (Silliman et al., 2016). Based on research and practice cited above and E-CoP interest in the experiences and needs of champions to be served by an electronic ECB network, we focused on the following questions:

1. What do evaluation champions and their colleagues need to improve their understanding and practice of evaluation?

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2. What technologies would evaluation champions find helpful for their evaluation work, especially in areas such as planning, data collection and analysis, and communicating results?
3. What changes do evaluation champions recommend to improve evaluation and capacity building in Extension systems?

Methods

An exploratory, qualitative interview design was selected to capture the breadth of contexts, activities, and roles of county- and state-level evaluation champions. This methodological approach was selected because it is well-aligned with the overarching purposes of this study; qualitative data, especially semistructured qualitative interview data, are well suited for exploratory studies aimed at developing a nuanced understanding of people's experiences with a given phenomenon (Creswell, 1998). This methodological approach is also consistent with the researchers' espoused epistemological stance for this study, which is a pragmatist, constructivist epistemology with elements of critical realism (Creswell, 1998; Miles & Huberman, 1994).

In terms of researcher subjectivity and reflexivity, all three authors are Extension evaluation specialists who work to support ECB, often by working with evaluation champions, in our respective states. As such, while we seek to better understand evaluation champions, our positionality also predisposes us with a positive bias about them, and we have numerous anecdotes and preconceived notions about the experiences, roles, and needs of evaluation champions. Throughout this study, we have attempted to use this positionality as a productive heuristic guide rather than letting it compromise the trustworthiness of the study.

Sampling

A purposive sampling strategy was used to select one state Extension program in each of four Extension regions (i.e., Northeast, Southern, North Central, and Western). We do not report the names of the states to help ensure the confidentiality of participants in this study. Larger state programs were selected in order to ensure a sufficient number of respondents across a range of disciplines. Either via email or at statewide in-person Extension events, evaluation specialists, administrators, and agents in each state nominated up to ten champions based on their advocacy, practice, and/or training efforts for program evaluation, continuing the purposive sampling at the level of individuals.

As this was an exploratory study, the selection of individual participants was purposefully open, without predetermined specific criteria for what constitutes an evaluation champion. Respondents were contacted by the authors and recruited into the study consistent with protocols approved by the Human Subjects Boards of the lead institutions. Almost all invited champions

elected to participate in the study (five potential participants elected not to participate because of being too busy or being on maternity leave). Overall, the 40 champions, including 15 males and 25 females, had an average of 15 years of experience, with a state average range of 11.8 to 18.8 years, and an individual range of experience from 2 to 35 years. Champions represented all major Extension programs, with 18 having some responsibilities in 4-H; 17 in Agriculture and/or Natural Resources; 12 in Family and Consumer Science, Nutrition, or Health; and 4 in Community Development. The group of champions consisted of specialists and agents representing various administrative positions within their respective Extension system, though the majority were county-based agents. In total, there were 6 state or county administrators, 6 state specialists/assistants, and 28 field agents in our sample.

Data Collection

During initial phases of the development of this study, five Extension evaluation professionals (all affiliated with the E-CoP) brainstormed items for the semistructured interview protocol used in this study. A list of the 13 items included in the final protocol is included in the Appendix.

Two of the authors (BS and PC) conducted all of the interviews (with three states' interviews conducted by BS and one by PC). As longstanding evaluation practitioners, the researchers have extensive experience conducting interviews. The interviewers built rapport with the interviewees through their shared participation in the same professional system, the Cooperative Extension system. In some cases, the interviewer knew the interviewee personally. Across the four states, in the months between July 2013 and May 2014, 40 semistructured interviews were conducted by phone. Interviews lasted 30 to 45 minutes.

In most cases, to balance feasibility and precision, interviews were not audiorecorded, but extensive notes (including verbatim quotes) were typed by the interviewer during the interviews (Kvale & Brinkmann, 2008; Tessier, 2012). In one state, interviews were audiorecorded. To improve accuracy of interview notes, interviewers conducted immediate member checks with participants by paraphrasing their responses during the interviews. In addition, completed and edited interview notes were shared with interviewees for formal member checking, with roughly 20% of participants suggesting minor changes to the interview notes.

Analysis

All three authors conducted the analysis of the data. A general inductive approach was used. This approach is an "easily used and systematic set of procedures for analyzing qualitative data that can produce reliable and valid findings" (Thomas, 2006, p. 237). It serves to:

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> (a) condense raw textual data into a brief, summary format; (b) establish clear links between the evaluation or research objectives and the summary findings derived from the raw data; and (c) develop a framework of the underlying structure of experiences or processes that are evident in the raw data. (Thomas, 2006, p. 237)

First, an initial coding dictionary was created as a separate Word document with a priori codes based on the objectives of the study and the items in the interview protocol. This coding dictionary included the code's name, identification number (for quick reference while coding), and a brief description or definition. Data were managed by entering each discreet phrase or sentence into an Excel database, where each phrase or sentence occupied a row, and potential codes were represented in the columns. In any analysis of interview data, there is a decision to be made between proceeding horizontally, complete interview by interview, or vertically by variable or item. In this study, data management and analysis proceeded item by item, rather than interviewee by interviewee. This approach, discussed by Kvale and Brinkmann (2008), offers the advantage of allowing the coder to become immersed in the codes associated with a given item, thus increasing the likelihood for consistency in coding. This approach does, however, have the limitation that the narrative nature of the individual interviewee's data can be disrupted. Given the objectives of this study and its underlying epistemological and methodological framing, the item by item analysis was the most appropriate option.

The three authors assigned items for analysis between them such that each of the 13 items was coded by two researchers, with different permutations of paired researchers working to analyze each item. The coders first coded their assigned items on their own, by reading each interviewee response to that item and then assigning it with one or more of the established codes. Emergent codes were also identified during coding; in such instances, the code book for the affected item was updated, and like with the constant comparison method of grounded theory (Charmaz, 2014), data which had already been coded before the addition of the new emergent code were reread and, if required, recoded to include the new code where applicable.

The pairs of coders then met to discuss any discrepancies and to ultimately come to consensus. In most cases, this co-coding activity led to changes in the coding of one coder only if she or he had omitted a code which was later deemed pertinent and appropriate. In very few cases, the two coders disagreed slightly and then dialogued until consensus was reached. Finally, all three researchers met repeatedly to identify typical and distinctive themes in each item, noting illustrative quotations, examples, and contexts. As a pragmatic constructivist study, positivist notions of validity and reliability are not applicable. Rather, we endeavored to ensure the quality (i.e., credibility and provisional transferability) of our inquiry through feedback (including member checks, both technical and reflexive), "rich" (highly detailed) data, peer debriefing, and constant comparison (Maxwell, 1996; Mertens, 2005).

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Results

Qualitative content analysis identified core themes in the data for two study objectives on champions' perceptions of needs for ECB and one objective on perceptions of organizational changes related to ECB.

Objective 1: Extension Professionals' Needs to Improve Understanding and Practice

With respect to the resources needed by champions and their Extension peers, nearly three-fourths of respondents expressed a need for training, including general (e.g., planning-to-reporting process), specialized by method (e.g., survey, focus group), or context (e.g., animal science, pest management, 4-H clubs). Training on "basic skills" for new staff or evaluation novices was emphasized as a need across several states. Although technical skills such as developing logic models or writing evaluation questions and reports were mentioned, "basics" most often cited included broader principles such as "planning evaluation at the beginning of a project" and grasping the evaluation process from planning through reporting.

Motivations to evaluate, including valuing accountability and continued support and program improvement, were also cited as "basics." Half of the 40 respondents cited a need for resources, including mentoring and evaluation tools such as project-specific measures and exemplars. Respondents in several states desired practical examples from all phases of the evaluation cycle. One suggested, "I think examples of what has been used and the kind of impact reports that have been written would be great." At the same time, champions often mentioned that ECB is more than "gadgets," as suggested by this comment: "People are always saying, 'Why don't you just give us some tools?'… [but] they need to understand evaluation as more than just a tool."

Many[1] champions perceived needs for additional "basic skills" training for themselves, but most sought specialized skills, including guidance on asking questions, completing Institutional Review Board applications, mastering statistics, content analysis and related software, interpreting quantitative or qualitative data, and communicating results, especially when tailored to specific programs. For instance, one respondent noted, "The biggest challenge is transforming results into something I can report…including economic impact." A county agent with graduate training in quantitative analysis expressed a need to better understand qualitative methods in order to track professional growth of interns. Others cited writing grants and journal articles as training priorities.

[1] Respondent proportions are given for more specific comments and general labels applied to broader comments (e.g., specific comments on "basic skills" and mention of specific skills such as planning or statistics on an introductory level). Thus "most" indicates a large majority, "many" indicates a large minority, "several" indicates a small minority, and "a few" indicates less than ten respondents.

Only one state provided extensive (lasting two years) professional development in evaluation. Champions who participated in that program as well as those with extensive graduate training or mentoring experience in other states were least likely to indicate a need for "basic skills" review and most likely to desire more specialized assistance. This pattern was consistent across disciplines (i.e., agriculture, 4-H, family and consumer sciences, and natural resources). More highly trained respondents also expressed the most confidence about where to find resources for emerging needs of trainers or agent-leaders. Regardless of prior training and experience, respondents consistently recognized the importance of refreshing prior knowledge and skills as well as building new skills.

Specialized training needs were typically related to a particular program and most effectively learned through doing evaluation of that program (Silliman et al., 2016). One agent summed up this need for learning in context as follows: "…on-going communication with experts…training, consulting, encouragement to learn…[and] building on capacity." Especially in those settings where formal training and expert consultation were limited, respondents cited the importance of peer-to-peer idea-exchange and resource-exchange through mentoring, online and face-to-face conferences, and project groups. Most champions served as informal mentors for individuals and project teams; thus, expressed needs often included tools and strategies for engaging less-experienced peers in evaluation.

Beyond the need for training resources, respondents desired specific and clear guidelines on when, what, and to what degree to evaluate, as one indicated, "Would like to see more structure embodied in policies, regulations, and recommendations for conducting evaluations." Respondents were especially frustrated when policies, including those affecting reporting and promotion, were stated in one way and (in their view) enforced inconsistently. Since interviewees were champions for evaluation, less rigorous standards and support by administrators was often viewed negatively. Midcourse changes in program priorities, evaluation goals or tools, or funding cuts despite promising results, were especially frustrating. Inadequate resources for evaluation was a frequent theme. Resource deficits in time to complete evaluations, organizational support (e.g., technical and administrative), and recognition (e.g., affirmation more than awards) were more often cited than money as critical for effective evaluation. A youth agent suggested job realignment as one way to increase efficiency: "I spend a lot of my time on marketing, human resources, budgeting…those could be done more efficiently by others so that youth development staff could focus on programming and evaluation." In one state with quite limited training resources, an evaluation champion said, "staff needs the permission to make this [in-depth evaluation study] a one- to two-year goal and then have administration allow time for its development."

Champions in more than one state wanted to know more about how their data were used at the state level. Although several offered examples of their own evaluation use (e.g., program

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improvement, staff training, evidence for funders, professional promotion), they were uncertain how data submitted to state data sets were used. Despite citing constraints on training, support, and time, champions consistently emphasized commitment to their work and desire to make a difference.

Objective 2: Extension Professionals' Needs Related to Technology and Online Resources

Evaluation champions were also asked about professional needs for support in evaluation via technology. Champions reported website use and needs for more and better online tools for data collection, social media, analysis and reporting software, as well as online access to experts. Identified needs included established tools such as data entry and analysis software (e.g., Excel, Survey Monkey) and recent technologies such as Moodle training, clickers, Twitter, and web-based and smart phone applications for data collection and data entry. Not surprisingly, champions who were more experienced with technology generally expressed greater need for technology-related training and evaluation tools. Respondents also valued web tools and remote consultation for preparing reports, including templates and exemplars, fit to specific programs (e.g., health, STEM). Finally, the need to better understand stakeholder (grantor) expectations was a prominent theme in all sites and across disciplines.

Training needs emphasized availability of synchronous (e.g., webinars, live consulting) and asynchronous (e.g., web-based videos, fact sheets, Q&A, blogs) tools, as suggested:

> Maybe a video that discusses a specific topic like how to analyze data in Excel and then how to effectively present the results…We need to do a better job in thinking about how to include evaluation before we begin a program. If there was a tool that helped us do that, it would be a great help.

One respondent recommended scrapping the current state reporting system in favor of a more dynamic, improvement-oriented approach. Recognizing the rise of a more technology-savvy generation of Extension workers, one champion quipped, "With changes in organizational culture and demographics of Extension organizations [e.g., more tech-savvy employees], new possibilities in technology are emerging."

One state in the study had initiated an extensive web-based system with information, tools, and access to experts and received multiple compliments from its champions, who saw possibilities for adding topics and audiences. Based on their experience, that state's respondents suggested tiered opportunities for mentoring based on evaluation experience, as suggested by this comment: "Additional opportunities for learning-by-doing and mentoring would help, especially with emphasis on the bigger picture of why and how we do evaluation and interpretation." Others in the same state recommended "just-in-time" access to experts, including working with

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design, statistics, and communications experts at proposal/program development, then receiving coaching as the project moved forward.

Peer and expert sharing of expertise was another advantage seen in technology: "It would be nice to consult with other peers across the country and have access to experts in certain areas." In fact, at least a few respondents in each state had participated in and desired more multistate webcasts and virtual projects. In the two states with the most online resources and interaction, champions reported consistent use and recommended expansion of resources. Needs for technology expertise were diverse and included evaluation innovations, as illustrated by one respondent: "Last year I hired a videographer to capture the message in a way that stakeholders get excited about."

Objective 3: Recommended Organizational Changes

Evaluation champions responded to one item on organizational change. Overall, they expressed the need to foster a culture of evaluation in Extension. This theme was associated with making evaluation a priority and having clear, consistent messages about the importance and use of evaluation within the organization. In all states, respondents perceived unclear or inequitable expectations, fluctuating priorities, support, and accountability relative to program evaluation.

Respondents offered diverse views on the most appropriate source of change. Some champions recommended *administrative* changes while others emphasized *personal* and *team* initiative as a catalyst for organizational change. Similarly, some expressed the need for additional extrinsic rewards, while others advocated increased intrinsic motivation. Many champions urged more proactive administrative leadership: "A culture shift is needed in Extension so that evaluation is not seen as an afterthought or tack-on, but embraced for what it is and has the capacity to do." Another added, "The first thing is how important evaluation is to managers in the system. If an administrator doesn't need or request it, evaluation won't become a priority at the local level." Echoing comments about organizational needs, a few respondents in all states expressed skepticism about the priority of evaluation among state leaders, as follows: "Lip service is given to the need for evaluation…" but "…it is not truly 'on the radar' for those responsible for staff performance appraisal and raises." By contrast, one champion described how evaluation might become a more significant part of the culture: "Creating a norm or expectation for doing good evaluation—a culture for evaluation—among professional educators is an important part of making it part of our programming routine."

Greater communication, especially about evaluation use, was a significant theme, evident in this comment: "I would like to know and understand when and how my evaluation efforts were being put to use by the state office and communicated to others." Strengthening Extension plan-of-work priorities and rewards that are already in place were perceived as concrete steps that all

Extension administrators could take to make evaluation a "do-able" job: "As an educator, there is a lot on my plate, and I don't think that evaluation is something that is given time or given as a priority part of my job."

Comments also reflected an increased emphasis on individual agency, as this illustrates:

> The 'evaluation champions' idea is intriguing, and several of us in the state could do that informally, advocating and improving practice. One of us is good at the qualitative side, and I could provide expertise on the quantitative. It is a matter of time and administrative 'blessing' or encouragement.

One respondent saw the solution as a "both/and" rather than "either/or" responsibility: "Maybe it's a matter of changing perceptions that it's everybody's job and everybody can do it." Even when acknowledging a need, champions emphasized initiative: "What I would like to learn more about is tools and analysis so I am trying to talk to people about that more."

Most recommendations echoed answers to prior questions, including statewide and multistate training systems with access to diverse learning and consulting venues, data entry, analysis, and reporting tools. However, one experienced champion noted that perhaps training was not the only approach to organizational change: "Recruitment and hiring of people with high expectations for performance and evaluation skills is critical. Practices in recruitment, program evaluation, and performance evaluation must match stated standards for things to get better."

Several experienced evaluation champions urged greater attention to meaning in evaluation, with more in-depth "telling the story," including context, activity, value, and quality of programming. Likewise, efforts to integrate evaluation with programming, marketing, and resource development were recommended as needed improvements in all states. In addition to a plethora of self-directed learning and application efforts described on prior items, evaluation champions provided these examples: "In the past, it was hit-or-miss for me until I started looking for the evaluation track at conferences…and will continue to do so" and "[state-level intensive training] helps people develop tools they are going to use all the time…I will maintain [that] relationship to get continued guidance." Another respondent recommended more coordinated work: "It seems like we could do more multiple-county work, but are not quite there yet. So at least we need more sharing across counties." Others noted the need for a more systemic, longitudinal approach such as, "…having a more coordinated system of data collection and sharing so that multiple programs could track a youth's experience at several points of contact with Extension."

This study did not include items on the traits or dynamics of the Extension organizations or their larger ecosystems. Thus, findings cannot be fully contextualized. Nevertheless, many comments described and implied elements of those contexts that influence evaluation and ECB in

Extension, and many themes were common to all systems. These included increasing expectations for accountability and decreasing resources, and need for clear communication about program purposes and benefits both within organizations and to broader communities. Each of the four Extension systems responded differently to this "squeeze," although efforts to train and resource new staff with reporting tools and skills were common to all. One system, building on a federally-funded evaluation innovation model, focused substantial human and fiscal resources in a two-year training program with selected staff. "Graduates" of this training maintained a community of practice and applied skills as *resource and support* experts for local, regional, and state program teams and local units.

Discussion

This is the first empirical study with evaluation champions, exploring perceptions of needs for training, technology resources, and evaluation capacity in four state Extension systems. Qualitative research serves to highlight themes rather than generalize results. Nevertheless, study themes related to training, technical assistance (e.g., evaluation tools, expert consultation), and practical experience corroborate major theoretical and empirical models describing evaluation competencies (Russ-Eft et al., 2008; Stevahn et al., 2005;) and capacity building (Arnold, 2006; Labin et al., 2012; Preskill & Boyle, 2008; Stevenson, Florin, Mills, & Andrade, 2002; Taylor-Powell & Boyd, 2008).

Champions' recommendations echoed prior studies on training needs for novices, including basic knowledge and skills learned in formal settings, together with practical skills gained through mentoring, project team learning, and expert consultation (Arnold, 2006; Baughman et al., 2010; Dillman, 2013; Harder et al., 2010: McClure et al., 2012; Stevenson et al., 2002). This pattern is also consistent with champions' own learning, as reported earlier (Silliman et al., 2016). Champions, averaging 15 years of service, self-identified needs highlighting data analysis, interpreting data for meaning, and effective reporting, consistent with higher-order needs of experienced staff surveyed by others (McClure et al., 2012; Stevenson et al., 2002). However, needs across the evaluation cycle and specific program areas were also mentioned, reflecting both the breadth of competencies (e.g., Stevahn et al., 2005; Taylor-Ritzler, Suarez-Balcazar, Garcia-Iriarte, Henry, & Balcazar, 2013) and tiers of understanding or mastery (Arnold et al., 2008; McClure et al., 2012) required for independent practice.

New knowledge enabled by open-ended interviews included champions' interest in revisiting basic skills as well as exploring more advanced topics (e.g., IRB, statistics, content analysis, interpreting data), desire for social networks and access to experts, value on rehearsing skills through practice and mentoring, and pursuit of new methods and technologies, characteristic of effective and resilient professionals and organizations (Argryis & Schön, 1978; Taylor-Powell & Boyd, 2008). Needs for practical support (e.g., time allowances, additional expertise, explicit

rules and procedures) and emotional support (encouragement, recognition) were also mentioned and are discussed in relation to organizational changes below.

Interest in technology to enhance evaluation practice, delivery of training, and professional networking fits a growing trend (McClure et al., 2012) and may represent a viable alternative to declines in training and support resources and heavier workloads (Diem, Hino, Martin, & Meisenbach, 2011; Lakai et al., 2012; Seger, 2011).

Champions in all locations were resourceful in seeking, developing, and sharing resources electronically. However, those aided by organizational investments in training and resource systems (online and face-to-face) were better able to integrate evaluation into their work and build innovative applications such as cost-benefit calculators and communities of practice (Silliman et al., 2016). Success with e-learning (e.g., social media, webinars, networked project groups) and evaluation technologies (e.g., planning templates, online surveys, Excel spreadsheets), and multimedia dissemination (e.g., online newsletters, blogs, evaluation or instructional videos) may have increased interest in new technologies. However, such experiences may not be typical for Extension staff (Diem et al., 2011; Xu & Kelsey, 2012). Tech-savvy younger workers are accelerating these trends (Seger, 2011) and might be engaged as peer leaders in demonstrating applications, training, and infrastructure changes that exploit technologies. Also, champions' experience pointed to the value of technology for connecting with evaluation and content experts in state and national networks. Significantly, high tech and high-touch supports were viewed as complementary, with technology seen as extending access to and reach of peers and experts.

Themes related to organizational capacity building emphasized needs for both system-initiated (e.g., leader roles and communication, policies, infrastructure) and staff-initiated (e.g., self-motivated learning, experimenting, networking) are broadly consistent with existing models (Labin et al., 2012; Preskill & Boyle, 2008; Taylor-Powell & Boyd, 2008), with unique challenges in each Extension context. Administrative leadership is best positioned to direct formal changes to structures and investments in training and support, identified as critical foundations for ECB (Taylor-Powell & Boyd, 2008). Administrators also exercise substantial informal influence through mentoring promising champions and supporting established champions advancing evaluation practice (King, 2007; Silliman et al., 2016).

Across the four systems studied, King's (2007) indicators of readiness for ECB were evident in administrative decisions to hire, listen to, train, support, and recognize, thus motivate, evaluation champions on both local and state settings. Use of project-based teams supported by experienced mentors and campus experts, enabled champions to learn from and contribute to evaluation processes (King, 2007; Silliman et al., 2016). However, champions also noted that formal policies and organizational expectations for outcome-based performance were not

consistently supported by ECB investments or performance standards and rewards. Champions attributed these trends in varying degrees to shifting administrative priorities, lack of clarity and consistency of communication, or lack of a systematic strategy for planning and evaluation use. Changing fiscal and human resources (e.g., budget cuts, attrition) significantly impacted policies, priorities, and program support.

Evaluation champions collaborated with "top-down" policies (e.g., evidence-based, outcome-focused), practices (e.g., project teams, mentoring), and resources (e.g., tools, experts) but initiated "bottom-up" *learning* and *doing* networks to "bridge the gap" or "lead the way" where organizational capacity was limited or lacking. Starting with a belief that "evaluation was everyone's job" because it was integral to program processes (e.g., action and reflection) and accountability, champions engaged clients, co-workers, and funders in improving programs, appreciating impacts, and learning to evaluate better (Silliman et al., 2016). Their recommendations for ECB collaboration between leaders "at the helm" and champions "in the trenches" emerged from participation in "top-down" investments emphasizing rigorous training, as well as in resourceful "bottom-up" efforts to develop tools or find training through campus, community, or national networks.

In either paradigm, organizational leaders must articulate clear and consistent expectations, supported by realistic assumptions about stakeholder needs and training, and they must give consistent attention to infrastructure and practice that promote evaluation quality and use (e.g., Preskill & Boyle, 2008). Champions can facilitate small-scale changes as advocates, model practitioners, mentors or trainers even without strong leadership (Arnold, 2006; Baughman et al., 2010), but have the potential, often untapped, to facilitate system change when empowered by innovative leadership. Their influence will likely be magnified by engagement with project teams and in-state or multistate online networks (Arnold, 2006; McClure et al., 2012; Baughman, et al., 2010). Champions' insight and "insider" experience might be engaged in determining ECB needs and monitoring progress, since novice staff are less likely to know their own needs. Champions can also help shape policies, lead training and mentoring, and help evaluate ECB and practice systems.

Limitations

This study yielded insights consistent with current practice wisdom, but findings should be applied with caution, recognizing that this is a one-time, qualitative study conducted with a purposive sample. More systematic sampling of diverse organizations, more detailed examination of contexts and conditions over time, and use of a mixed-methods design to capture both depth and breadth would generate richer data and enhance transferability. Sample selection through peer nomination, relative to random sampling, may have introduced bias toward certain types of individuals unrelated to their championing of evaluation. Finally, qualitative interviews

provided in-depth, in-context information (Stevenson et al., 2002) but might have produced a richer data set if complemented by a survey addressing a broad range of topics (Taylor-Ritzler et al., 2013).

Interviews utilized written notation, paraphrasing, and in-process and follow-up processes that were efficient and thorough but might have been enhanced with audio recording and full verbatim transcription. Coders found more variation by context and respondent experience than initially identified by interviewers, but differences among coders were not analyzed systematically. Diverse perspectives and negotiated consensus of multiple coders aided accuracy and thoroughness of content analysis, yet different coders or processes may have generated different conclusions.

Recommendations for Practice, Research, and Policy

Emergence of evaluation champions indicates readiness for ECB (King, 2007). This study suggests that champions represent a strategic asset for building capacity, influencing leaders, policies, and practices. Recommendations for engaging champions and further investigating their work follow. Those implementing recommendations should "handle with care," remembering that evaluation champions' insights emerged from and must be applied in complex and changing contexts (Franz & Townson, 2008).

Practice. Trends toward lean management, rapid and relevant learning, and social networking recommend investments in champions that are positioned to identify needs and integrate new ideas and technologies at strategic points (e.g., projects, mentoring, and conferencing) more efficiently than a single evaluation expert. Cultivating champions through early career "basics" training, mentoring, and networking builds a culture for high expectations and performance. Engaging champions as partners with experts and administrators, supporting their continued growth (e.g., basic and specialized skills), and empowering their contributions (e.g., training, mentoring, developing tools and exemplars, peer assessment, and influence) compounds early training. Clearly, an important way to continuously cultivate champions is to offer formal or informal recognition and appreciation of their evaluation efforts. Finally, investments in high-tech online tools for training, cross-state networking, and managing evaluation (e.g., planning, data entry, analysis, reporting) complement high-touch mentoring and project team work, promoting high performance, efficiency, and growth in capacity.

Champions serve as catalysts for professional and program growth across disciplines, regions, and generations. Champions need different kinds of support because they have differing gifts, positions, challenges, and opportunities. Champions need to grow, connect, reflect, and do creative work in balance with contributing to organizational needs.

Research. Exploratory research typically raises more questions than it answers, so in expanding practice wisdom on roles and contexts of champions (King, 2007; Warrick, 2009) this study identifies promising lines of research on professional practice and development, evaluation use, and evaluation capacity building. Going forward, more systematic and in-depth examination of champions' needs, contexts, and organizational dynamics from champions' own and others' perspectives (e.g., peers, clients, administrators, expert evaluators) is needed. Such research would enhance understanding of when, where, and how training, resources, and supports, formal and informal, might improve their effectiveness. Research within organizations or teams of all sizes and purposes would expand focus beyond larger Extension systems.

Research should explore assets and limitations of champions as monitors of individual and organizational needs or as interpreters of organizational goals (whether as supervisor or peer), elements identified with building evaluation knowledge and skills (Dillman, 2013; King, Stevahn, Ghere, & Minnema, 2001). Investigation of separate and conjoint work and impact of front-line champions and evaluation or subject matter experts would provide a better view to staffing and training patterns that promote ECB.

The study invites further research on effectiveness of online learning, networking, and needs assessment as "just-in-time" tools for project development, management, and organizational capacity. Likewise, roles and effects of technology throughout the evaluation cycle deserve further investigation. Given the expressed value on exemplars, process-oriented research should focus on ways in which champions and their peers learn and share evaluation knowledge and skills gained in project team experiences.

Research on organizational investments and policies regarding evaluation and capacity building might contribute to more effective management and professional development. Finally, the process of investigating champions' roles, needs, and effects can be refined and expanded by more rigorous and longitudinal research.

Policy and procedures. Champions' perceptions of organizational dynamics and leader roles invite further research into the importance of expectations and supports for evaluation quality, consistency, and capacity in building a culture of evaluative thinking and doing. Additionally, research might focus on the relative importance of hiring, professional development, or promotion decisions relative to training and support in building evaluation capacity.

Strategic and program plans should incorporate evaluation champions as advocates, mentors, and trainers alongside evaluation and subject matter experts in all dimensions of evaluation training and management (Preskill & Boyle, 2008). Additional training and support resources, dedicated time, and recognition will significantly enhance champions' effectiveness and resilience in these demanding roles.

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Appendix

Evaluation Champions Interview Protocol

1. Please describe some examples of things you have done to promote evaluation of Extension programs. *Probe, if needed for examples of:*
    - *specific program evaluation methods/tools developed*
    - *reminding colleagues who are developing a program that they need to create an evaluation*
    - *mentoring new staff to help them evaluate their program efforts*
    - *involvement in professional development opportunities related to evaluation*
2. What stimulated your interest in promoting and supporting evaluation of Extension programs?
3. What keeps you motivated to promote and support evaluation of Extension programs?
4. What resources related to evaluation development and implementation have you found to be useful? Please describe them.
5. What resources (type or content) are needed to increase your skills and those of your colleagues in evaluating Extension programs?
6. What technical support would be helpful related to accessing and using technology or accessing expertise in areas such as research design, statistics, data interpretation, and communicating results/report preparation?
7. What changes in the Extension organizational environment would help support your evaluation efforts?
8. What else would be important to encourage and support your evaluation efforts?
9. Can you name some other people in Extension that you consider to be evaluation champions? What do they do?
10. **Note:** *The following is an optional question to be used if you have checked the membership list of Evaluation CoP members and the individual is not on the list.*
    Are you familiar with or been in contact with the eXtension Evaluation Community of Practice members or website? (If not, interviewers share the following brief description of the Evaluation CoP membership and resources:
    "eXtension is the virtual venue through which the Evaluation Community of Practice (CoP) is accessible. The CoP serves as an evaluation resource for the entire Extension system. Since its beginning in 2010, CoP leaders and core members continue to develop, identify, review and post frequently asked questions and answers (FAQs) about evaluation, Moodles (online courses), appropriate fact sheets that support evaluation efforts among Extension personnel. The CoP uses eXtension features to make these resources available.")
11. Is there anything else you'd like to know or share?
12. How many years have you been employed with Extension?
13. What is your position program/area of expertise?

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Surviving the Recession: Implications for Practitioners to Better Support Pre-Retiree Housing Counseling Clientele

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The Great Recession resulted in significant job loss, producing a decrease in income for many families. Others struggled with unaffordable loans and underwater home mortgages. As a result of the multiple challenges after the recession, housing instability was prevalent. To offer support, local agencies provided education and assistance. Existing research provides an understanding of the economic influence of foreclosure and counseling services on communities, yet little is known about the experience of families during and after crisis. Using Seidman's (2012) three-stage interview process, a series of phenomenological, semistructured qualitative interviews were completed to give voice to a sample of participants, aged 50-64, who sought housing counseling services at a midwestern university Extension housing counseling office and identify practice implications for counselors. Findings revealed the importance of understanding the unique experience of housing instability and a need to provide information and support to aid coping efforts. Implications for Extension educators and human service professionals, employers, lenders, and policymakers are provided.

Keywords: family, housing, recession, instability, qualitative

Introduction

From December 2007 through June 2009, U.S. families experienced what has been referred to as the "Great Recession" (Economic Policy Institute, n.d.). During this time, families witnessed significant job loss and faced difficulty seeking quality re-employment. Subprime lending became a concern and housing values plummeted, creating an increase of underwater mortgages. Due to the persistent challenges in the economy, housing instability (defined as a difficulty maintaining adequate housing) increased, prompting family stress. In some instances, households sought foreclosure prevention services for support. This article explores the in-depth experiences of four families, aged 50-64, who participated in housing counseling services at a local Extension office located in a financially challenged, midwestern community.

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The Financial Crisis and the Family

Since the recession, unemployment has been a pervasive problem in the U.S. As defined by the Bureau of Labor Statistics (U.S. Bureau of Labor Statistics, n.d.), an individual is classified as unemployed if he/she is not currently working, actively seeking work, and available to work, if given the opportunity. According to the U.S. Bureau of Labor Statistics (2010), *Mass Layoffs in June 2009*, midwestern states experienced 76,301 initial claims for unemployment insurance. This same report revealed that much of the job loss nationally was related to the manufacturing industry, accounting for "27 percent of all mass layoff events and 33 percent of initial claims filed" that month (U.S. Bureau of Labor Statistics, 2010, pp. 2–3).

Prior to this period, some limited resource homeowners received unaffordable mortgages, known as subprime loans. Schloemer, Li, Ernst, and Keest (2006) found that between 1998 and 2006, 2.2 million subprime loans had or were projected to result in foreclosure. Underwater mortgages (occurring when a loan balance is higher than a home's fair market value) also became a significant concern, with some midwestern states ranking as high as fifth in residential home negative equity in 2012 (Core Logic as cited in Fannie Mae, n.d.)

Additional research suggests that an influx of unsecured debt can lead to family financial instability. According to Traub and Ruetschlin (2012), 40% of U.S. households relied on credit cards to pay for basic living expenses, with average debt totaling $7,145 in 2012. Increase in medical debt and health concerns also have been found. Robertson, Egelhof, and Hoke (2008) found that approximately half of study respondents indicated a foreclosure filing due to medical concerns, suggesting that "off-time," or nonnormative life cycle health situations, can influence the financial stability of a family. Elimination of health insurance was a major concern related to job loss, prior to the implementation of the Affordable Care Act (ACA). Supporting this claim, Fairlie and London (2009) found that unemployed individuals prior to the ACA were the most at risk for loss of health insurance.

Role of Housing Counseling Assistance in Providing Foreclosure Prevention Programming

Due to the circumstances resulting from the Great Recession, some midwestern households experienced difficulty in meeting and maintaining their monthly mortgage expenses. In response, housing counseling services were made available to support struggling homeowners. Established in 1937 by the U.S. Housing Act (U.S. HUD, n.d.a), the U.S. Department of Housing and Urban Development - Office of Housing Counseling has historically provided funds to local agencies to offer housing counseling services. As of August 2014, over 1,700 agencies had counseled 1.8 million U.S. households in foreclosure prevention programming (NeighborWorks America, 2014), providing support regarding buying a home, mortgage defaults, and navigating the foreclosure process (U.S. Housing and Urban Development, n.d.b). Other programs have

been established at the federal level, such as the Home Affordable Modification Program (HAMP), to help families obtain loan modifications and remain in their homes (U.S. Housing and Urban Development, n.d.c). Serving as a mediator, local counselors work jointly with families and loan servicers to assist families in avoiding foreclosure.

Needs of Families in Crisis

While programs were available to offer support, often total family needs were not met. Van Horn and Zukin (2011) identified depleted financial resources, limited re-employment options, increased family stress, and a distrust of government assistance as concerns for families during financial crisis. However, the needs of families go beyond financial challenges. The potential loss of a home can severely influence a family's physical and emotional state. Foundational research by Kantor and Lehr (1975) found that space regulates the physical, mental, and emotional dimensions of a family. Using a community development approach, Fullilove's "Root Shock" theory suggests that those experiencing home loss can have a traumatic reaction, producing an emotional loss to one's ecosystem (Su & Jagninski, 2013). Thus, when a family experiences the threat of housing loss, both a physical and emotional disruption can occur, negating the ability to retain memories and create traditions.

Theoretical Framework and Research Questions

The purpose of this study was to identify implications for Extension educators and other professionals to better support households coping with housing instability. The primary research question was, "What was the experience of families who coped with a housing crisis?" A secondary question addressed the role of information/support for families in crisis.

The theoretical model that has been used to explain the needs of families is an integration of life course and family stress theories. According to Lerner (2002), life course theory illustrates the interconnections between our lives and significant events occurring at distinct times and places. During financial crisis, especially during a recession, families experience "off-time" events, such as unexpected job loss, that for some, may result in financial and housing instability and prompt need for service. When this occurs, the social timing within one's life becomes altered, producing strain on the family. For some mature homeowners, those aged 50 -64, the "off-time" nature of housing instability may be a larger concern. Johnson and Butrica (2012) found that families often drain their savings and/or retirement funds to survive during job loss. When homeowners of pre-retirement age experience financial distress, greater financial challenges may arise. Smallen (1995) found that social timing, or the normative age for events within the life cycle, needs to be considered. This is especially true when developing intervention strategies for families in crisis. Family stress theory, as explained by Patterson's (2002) Family Adjustment and Adaptation Response (FAAR) Model, examines a family's ability to adjust or adapt during

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crisis. By providing appropriate support and understanding the stress endured, strain can be managed appropriately.

Methods

This study emerged as a result of a mixed methods analysis of a local county Extension housing counseling program in a midwestern urban community. Between 2008 and 2013, Extension staff conducting foreclosure prevention services at this office counseled 3,085 households. First, a quantitative study provided baseline data for 300 clients who sought foreclosure prevention and counseling services at the Extension office between June 2010 and November 2010. Second, a series of qualitative interviews conducted three years after counseling services assessed a sample of families from the quantitative study and identified the resilient coping behaviors and information and support needs identified after services ended. This qualitative study included four participants, 50-64 years of age, who were interviewed three times, and two former housing counselors, serving as key informants, who were each interviewed once. Study participants were recruited through purposive sampling from the full quantitative data set. They were contacted by university Extension staff to determine if they fit the criteria of having received foreclosure counseling services between June 2010 and November 2010 and were willing to participate in the study. A three-stage interview protocol utilizing three distinct 30-45 minute semi-structured interviews was completed. The two former housing counselors also were interviewed, and each completed one 45-60 minute interview. This manuscript highlights the results from the qualitative study and provides insight into the experience of households and their respective needs for information and support.

A phenomenological approach shaped this study and gave voice to participants' lived experience. Often with the researcher as the study instrument (Lincoln & Guba, 1985), data are collected through informant interactions to understand and develop a topical knowledge base (Matthews, 2005). A series of semi-structured interviews explored the economic circumstances of research study participants after services were completed. Two past housing counselors helped to identify family needs and practice implications. This study was a collaboration between a midwestern public university and a local Extension HUD certified agency.

Interview Site Demographics

Community demographics included a total county population of 841,000, comprised primarily of Caucasians (84%) and African Americans (9.9%) (U.S. Census Bureau, n.d.). As of June 2010, the community unemployment rate was 17.3%, significantly higher than the state average of 13.9% (Federal Reserve Bank of St. Louis, n.d.). This community led the state in completed home foreclosures, with one in twenty-two units foreclosed on, twice the national average (RealtyTrac, 2010). Consistent with the community population, sixty percent of the overall

quantitative data set participants were male (n = 180), 61% were married (n = 183), and 84.7% reported race as white (n = 254). Mean (with standard deviation) monthly gross income for the full sample was $3,879 ($2214.69).

Interview Design and Protocol

The study protocol used Seidman's (2012) three-interview study design. In this approach, content from the interview took into account the meaning, intent, and nonverbal cues expressed by participants. First, the *focused life interview* was used to understand the participant's experience during crisis and after receiving counseling services. Participants identified emerging needs and examined the stress endured throughout the process. Second, the *detail of the experience interview* was used to identify coping strategies. Participants were asked to describe the services received and identify the supports and barriers experienced in coping with their current housing situation. Last, the *reflection on the meanings and themes interview* included member checks to ensure the researcher portrayed an adequate interpretation of the phenomenon of interest (Seidman, 2012). Member checking allows the researcher to "share data and interpretations with participants" (Marshall & Rossman, 2011) so researchers can incorporate findings from previous interviews to glean deeper knowledge of the participant experience. All interviews took place within a one-month time period to reduce attrition, and participants received one $50 gift card for participation. The first interview was conducted face-to-face; the other interviews were completed by phone. Two former housing counselors completed one in-person interview to provide a deeper context and better understanding of the counseling experience. All interviews were digitally recorded and included participant informed consent. Study participants were assigned pseudonyms to protect their anonymity. The University Institutional Review Board approved the study.

Data Analysis Procedures

Data analysis in phenomenological research focuses on the development of themes to help convey the experience. Creswell (2007) described an approach that uses transcription of the recorded interviews to understand the phenomenon of interest. Each statement is treated equally to develop the overall description (Everhardt, 2009). Within this study, the principal investigator completed an initial code of the transcripts, which revealed key phrases and quotes. The data were then grouped into themes to inform the study codebook. The codebook provided organization and oversight to ensure trustworthiness of the data. Marshall and Rossman (2011) define trustworthiness as the "goodness" of qualitative research drawn from the natural environment. Throughout the process, an audit trail documented study procedures. Both former housing counselors and past clientele confirmed the appropriateness of the findings. The three-interview series design (Seidman, 2012) ensured accurate data were collected, with the third interview used as a member check to ensure appropriate interpretation of the data.

Results

Study participants experienced significant instability prior to accessing services in 2010. When interviewed three years later, participants, 50-64 years of age, revealed a changed financial condition, new housing arrangements, and new employment. Although participants received a similar intervention and were of similar age range, the specific needs for services varied. Understanding each unique experience provides insight into the phenomenon.

Description of the Study Participants

Amy is a 59-year old, white female, married to Alan. Alan lost his federal position, prompting the need for counseling. After working with the local Extension office, the family received a loan modification to remain in the home. During crisis, the couple amassed $15,000 in credit card debt. In the first interview, Amy revealed that the couple had recently paid off the debt. When asked about their situation, Amy shared, "we don't have the debt we had before and we don't have the income we had before, but we don't spend the money like we used to."

Bob is a 51-year old, white male, married to Brenda. Brenda and Bob have one son, who has a chronic health condition. Bob and Brenda sought housing counseling services after Brenda was forced to leave her job due to her own chronic health issue. The couple experienced difficulty in meeting their monthly obligations and entered the foreclosure process. After working with the local Extension office, the family received a loan modification to remain living in their condominium. Although still struggling with meeting monthly obligations, Bob revealed, "we're not starving, but we're paying our bills…we're not going crazy…we're getting by."

Carl is a 64-year old, white male with four children, married to Cindy. Carl, an insurance salesman, experienced income loss during the economic downturn. Exacerbating the situation, Cindy had a health condition that further stressed family finances. After working with the Extension office, they received a loan modification from their lender to remain in their home. Carl is partially retired and relying on his pension for support. He shared, "we are able to make ends meet. We aren't driving the latest cars…but I get her health insurance…and the mortgage paid on time."

Deb is a 51-year old, white, single mother of two, who experienced job loss due to the economic downturn. After counseling, Deb completed a short sale, and with her parents' help, purchased a new home [A short sale is an alternative to the home foreclosure process and occurs when the sale of a home results in less than what a seller owes on his/her home mortgage [U.S. Consumer Financial Protection Bureau, n.d.).] Deb has since started her own business, and although struggling, the family is financially rebuilding. Deb revealed, "We still live very meek…but the stress…is subsiding."

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Findings

During the interview process, participants reflected on the crisis experience. The interview design provided the opportunity to revisit statements and better understand the phenomenon of interest. This paper explores the overall experience of households during and after receiving services and identifies the role of education for family support.

The Experience of Families in Crisis. The crisis experience revealed participant economic stress and strain. One participant comment revealed, "When you are losing your house…it's just the final straw." For some, this experience resulted in a changed reality for families. Subthemes focused on the changed experience, the importance of time, and the roles of lenders and policy in family support.

Navigating a new reality. The experience of housing instability required a changed perspective and led to the recognition that new habits needed to be formed. Participants revealed, "I've downsized everything…if…shopping, it's for necessities" and "[I] no longer worry about material things." Participants needed to adjust to this new financial situation. Confirming this difference, one participant shared, "what's normal anymore? You…lose a sense of what normal is. This becomes the normal."

Recognition of the element of time. The salience of housing instability as an "off-time" event emerged. A former housing counselor, shared, "when people come in…they want an answer...they've already been having sleepless nights." This research reaffirms that families who experience instability had not expected to be in crisis at this time in their lives.

Participants also learned about the importance of time in working with lenders. A housing counselor shared, "don't take so much time to get back with the client…It shouldn't take six months." As a result, participants learned the importance of being patient. Comments included, "[it is important to] deal with events as they are, not as you wish they might be" and "when I reflect on things, [I understand that] you can't control everything." This reaffirms the fact that sometimes the decisions that will affect one's life are beyond the family's control and the family needs to adapt to the situation presented.

Concern about the experience was another finding related to time conveyed by participants. Some families expressed their concern of leaving their home after years of being a stable homeowner. One participant shared, "It's the idea of walking away with nothing [that is really difficult]." However, maintaining hope for an improved outcome was sometimes challenging. Another participant shared, "[after experiencing foreclosure myself,] now my parents are…about to lose their house." Although markedly improved, families are still feeling the effects of instability.

The role of the lender. Participants conveyed both positive and negative sentiments towards lenders as a result of the experience. Negative responses included, "you…rely on your broker… you just hope that what [they are] saying to you isn't just…because they want to make money" and "I always grew up to trust people...I found out…that you can't." Feelings of distrust and resentment were voiced in this research. A former housing counselor shared, "remember you are talking to human[s]…people…who came on hard times." This suggests that the personal nature of crisis should be considered.

Although many participants felt frustration towards the lending institutions, one participant conveyed a sense of appreciation in his acknowledgement of receiving a loan modification. He added, "they didn't have to do it at all [referencing the fact that the lender could have refused to provide assistance]." Consequently, mixed emotions were expressed.

Perceptions of policy. Participants discussed their perceived role of policy in coping with the crisis experience. Comments from former counselors included, "laws [should be available] to protect [families]" and "[the laws are] still not in place…these big banks are too…overpowering for the average person." This suggests that there are policy voids, and although existing policies aim to be supportive, economic and political barriers that affect access are prevalent.

The inability to access effective programs also was an identified barrier. One former counselor shared, "[in reference to federal programs] we couldn't get at the money…[It] made people even angrier 'cause nothing is worse…than to raise the hopes and not to deliver." Some felt that there was an absence of effective policies. One participant supported this claim stating, "There was nothing in place for anybody to take advantage of anything to get them through tough times.…" She suggested an "affordable buyback program. Why force people onto the streets…[if] you're just going to give my condo [away], to someone else [for a fraction of what we paid], that was very frustrating."

Meeting the unique needs of families requires flexibility. Housing counselors' comments included, "policies...don't necessarily cover the...people," policymakers would do well to talk to the people who work in the field so that they can understand what laws need to be passed," and "If it was your mother, your brother…would you be doing these policies?" This suggests that policymakers should consider the concerns of families.

Importance of Information and Support for Families. Findings revealed a need for targeted, situation-appropriate resources to be offered to families to aid coping efforts during crisis. Comments from housing counselors included, "do people understand what happened to them?" and "people when they are in the midst of crisis…they don't know how to handle it." Therefore, providing situation appropriate information and support services focused on supporting families during and after foreclosure is critical. Findings revealed the importance of a financial check-up,

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identification of family goals, improvement in credit and debt management, access to resources, and a need for post-transition support.

Importance of a financial check-up. Participants identified the importance of a financial check-up. Comments included, "to make sure that we never got that way again," "everything needs to be evaluated," and "people did not understand what they were getting into." Thus, understanding key financial management principles, such as developing a budget, may be useful. Participants affirmed this notion stating, "[you need to learn to] live below your means…" and "so you are earning money up here, and you are spending money up here, but then…your income drops." As a result, conducting an analysis of a family's financial health after crisis is critical. One participant added, "We are still…real careful about how we spend our money. We really learned our lesson." Thus, applying lessons learned is critical to ensuring future stability.

Identification of family goals. Understanding family goals is important. One counselor shared:

> "The clientele has changed; [in the past] a lot of people were holding on…for their homes but with people having shrinking incomes…we are seeing a different…group of people… unmoved by the situation…because…[the] house is just not worth anything."

This finding suggests that understanding one's audience is critical to applying strategies to meet participant needs. In addition to changing demographics, housing counselors noted the need for client engagement, adding, "there has to be a certain amount of engagement [by the homeowner]…this is your home…you have to participate." This sentiment suggests that families need to be ready to change their financial practices if home retention is the goal. Participants supported this claim sharing, "we felt like if…[we] aren't willing to sell…[our] toys…[we] aren't willing to get rid of debt." This reaffirms the belief that surviving a crisis can be difficult, but changing financial practices may help build financial stability. One strategy recommended in the interviews was helping families during counseling to acknowledge the crisis experience, reflect on why the crisis occurred, and apply the relevant knowledge to seek a positive outcome for the future. "[Families] have to understand what happened…understand what the situation is now...How can we create an alternative future?" This approach to helping families reassess their situation may be effective.

Improvement in credit and debt management. Education directed towards improving a family's credit history and learning effective debt management practices was identified as a critical need. A former housing counselor shared, "Ok, we got the mortgage settled, but you have…credit card debt…and once you help…[the client] see that if we don't get a rein on this, you're going to be right back here [in financial distress]." One participant confirmed this notion sharing, "we had $15,000 in credit card debt…we sold everything and paid the credit card…we wouldn't get in credit card debt again…[we would have] bought a [cheaper] house." Another agreed, suggesting

his credit difficulties were a result of "allowing [me] to get talked into easier credit which had me greatly overextended." Finally, one participant revealed, "I've never had bad credit before…now all of a sudden, I have bad credit…it's like a boomerang effect." When asked about solutions to avoid future instability, one participant shared, "sell all your toys."

Provide access to resources for families. Participants voiced the need for access to appropriate community resources to meet diverse family needs. Comments included, "not enough people know about…[housing counseling services]" and "there's no one you can just call up and say this is my situation…[what help can you provide?]." Thus, helping families access a network of resources for support is critical. One participant suggested the creation of specialized assistance for families, adding "what services are out there for me?"

Housing counselors voiced additional sentiments regarding the role of the lender in informing clients of available resources. One counselor shared, "monies…are available but we need you to help direct the people…it's frustrating when I have to educate…[the lender] who is making the decision of whether or not my client gets to keep their home. Therefore, helping lenders understand their role may be beneficial in helping a family cope during crisis.

Finally, employers were identified as a potential connection to community resources. Responses from counselors included, "before you take a reduction, call everybody together and say you are facing a problem and [consider] solutions" and offering families the opportunity to "learn…how to budget…[and] understand [their] finances" can be useful. However, sensitivity is needed with this population. Consulting a network of community partners to provide information to employees could be considered.

Need for post-transition support. Feelings of lack of support after housing counseling ended were voiced by participants. Comments from counselors included, "[there are] really no other supports…that help… [clients] transition [post experience]" and "[we need] to follow up with families to find out what happened." This recommendation reflects the importance of the reciprocal relationship between human service professionals and clients. Helping the family develop goals and plan for the future can assist them in their transition after services. Participants agreed stating, "maybe a month afterward…[ask] ok, how did everything go?" "Knowledge is Power!" and as one participant suggested, "[clients] should have a choice to go…to a counselor…and…[identify available] programs." Providing assistance in navigating resources could bolster family resilience efforts after services end.

Finally, helping a family enjoy the success of surviving after crisis is critical. One counselor revealed, "People go through these things and they are in such disarray that sometimes the family unit needs to be [put] back together." This research suggests the need for applying strategies that incorporate positive family development. For example, one participant added, "after [the loan

modification] was completely done and after we save[d] enough money, we took a vacation… [It] was a good time." Thus, recognizing the toll the crisis takes on the family and making efforts to re-build the family after crisis is important.

Discussion

This study gives voice to two former housing counselors and four foreclosure counseling participants. Key themes described the experience of families and identified the role of information and support as a coping mechanism. This study reinforces the need to address the unique experience of families who cope with instability and complete counseling services. For many, this experience results in lifestyle changes and altered financial practices.

Consistent with life course theory and the concept of social timing (Neugarten, 1977, as cited in Schlossberg & Leibowitz, 1980), the experience of using community resources, such as foreclosure prevention services, can be uncomfortable. This is especially true for older homeowners who have never used such services and should be normalized. Jefferson, Spader, Turnham, and Moulton (2012) found that 99% of the participants assessed in a national sample of housing counseling agencies were first time clients of their respective organizations. Thus, special approaches are needed to aid families not accustomed to seeking services, especially concerning foreclosure issues. Additionally, providing support services that address the needs of clientele aged 50-64 should be considered so that content-appropriate support can be provided pertinent to pre-retirees.

Human service professionals, including local Extension professionals, can play a critical role in providing situation-appropriate information and support. Consistent with this study's findings, Rothwell and Han (2010) found that intervention strategies and policies that promote family asset development positively influence family functioning. Discussing topics such as basic budgeting, managing credit and debt, and building a financial foundation may assist families in their return to financial stability. Cooperative Extension has a long history of providing pre-purchase homebuyer education and financial education courses to meet the needs of families (Battelle, 2015). Promoting existing courses to clientele who are struggling to maintain their monthly mortgage payments could provide important information to households. Practitioners could provide information to key policymakers and employers on the difficulties faced by families when "off-time" financial crisis events occur. Consistent with research by Johnson and Butrica (2012), financial education that addresses preserving retirement investments and addressing debt management needs for pre-retirement aged homeowners may be critical. Hosting educational events that highlight the various dimensions of loss when the threat of foreclosure occurs could be important for decision makers and inform future policy efforts.

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The experience of housing instability creates a new and often difficult financial reality. Helping families understand that successful financial planning takes time is an important concept to be offered in Extension pre-purchase education. Practitioners, including housing counselors and Extension educators working with foreclosure clientele, could conduct one-on-one follow up assessments three to six months after crisis to ensure needs are met and the family stays on the path to success. Orthner, Jones-Sanpei, and Williamson (2004) found that helping families identify and use local resources positively influenced resilience and could provide support during the transition period. Incorporating key information on community resources could be beneficial to families. Thus, promoting pre-purchase financial education classes to past foreclosure prevention participants could aid in ensuring that households receive the best information for support after crisis.

Consistent with prior research, human service professionals need to understand their clientele and apply intervention and prevention strategies to meet the unique coping mechanisms of the family (Benzies & Mychasiuk, 2009). Extension educators and other practitioners could offer additional support to families by helping to acknowledge the experience, reflect on the instability, and apply new knowledge to seek a more successful future outcome for their household. Helping families understand why the crisis occurred is important. Supporting families with a network of resources, such as income supports and social networks, is needed for family resilience (Orthner et al., 2004). Offering informative support programs for prevention also is recommended. Pre-purchase housing education, budgeting, and credit and debt management can help families avoid crises. Lenders still can play a pivotal role in helping families renegotiate loans, if financially appropriate, to be able to help a family remain in a home. Patterson (2002) found that financial instability produces major obstacles, often pushing the household into crisis mode. Extension educators could support lenders by providing professional development opportunities and educational support programs for their staff, including explaining the role of foreclosure prevention services and the role of the counselling agency as a mediator for the family. By providing this education, more transparency between lenders and housing staff members could occur.

Employers also can play a powerful role in aiding families. Schlossberg and Leibowitz (1980) found that the presence of a formal support system introduced by the employer was the most effective buffer to decrease trauma during the job loss experience. Communicating with employees can be important if wage or work reductions occur. O'Neill and Xiao (2011) found that providing families with opportunities for situation-appropriate content during "teachable moments" is essential during crisis. Extension educators could work collaboratively with community partners, such as religious leaders, government, and nonprofit assistance programs to help to disseminate best-practice strategies for employers in an inviting and informative way. Working with key community leaders can foster an atmosphere of support, which is crucial during "off-time" events, such as income loss during an economic downturn.

Policies aimed at helping families experiencing housing instability are essential. Wenger and Walters (2006) found that policies developed for families need to be flexible and adapt to their unique situations. Bogenschneider (2006) added that broad-based policies are needed in health, housing, and income security to provide a buffer for families. Therefore, a "one-size fits all" approach will not suffice. This is especially critical when identifying the unique needs of families in crisis. Also, recognition of the unintended consequences and barriers that exist within policies is integral to the design of future policies.

Limitations

Several limitations exist within this study. Consistent with qualitative research, the findings represent a deep but narrow perspective of the experience of all households who have experienced housing instability. Further research is needed to explore racially and ethnically diverse populations and communities that differ in characteristics such as population size and geographic location. More research is needed to understand the particular interventions and strategies that normalize the experience and help households' weather housing crisis. Thus, the interventions that have been identified need to be evaluated.

Conclusion

This paper resulted from a larger mixed methods study to assess the general experience of families who live through housing instability. A phenomenological approach was used to examine the "off-time" instability during the recession. Extension staff from this community played a significant role in the education and support of families during this critical and difficult time. Learning from the families that participated in services may help practitioners better understand the education and support needs of families who may face this challenge in the future. Life course and family stress theories, within a resilience framework, were used as the theoretical framework and provided insight into the unique "off-time" and often new experience for families. Incorporating foundational human development theories helped to portray the experience of households within this midwestern community supported by counselors within a local Extension office. As one participant revealed in her final interview, "I just really felt like a survivor…I survived another life experience…that I didn't have any control over. And I'm still here to talk about it." Learning the critical lessons from participants who lived through economic crisis can help to inform future educational services and outreach efforts to support this sense of control and ultimate survival.

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From Resistance to Receptiveness: Farmer Willingness to Participate in Extension Discussions About Climate Variability and Climate Change

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Identifying what Extension professionals believe are the critical elements of a communication strategy that is most likely to encourage agricultural producers to participate in discussions of climate variability and climate change is pivotal to providing timely solutions to issues facing farmers. The current study involved interviews with 50 Extension professionals from four southeastern states (Alabama, Florida, Georgia, and South Carolina) who were engaged in ongoing work related to climate and agriculture. Respondents were asked to assess how best to engage farmers in conversations related to climate variability and climate change. Qualitative analysis showed that Extension professionals recommended avoiding content related to politics, attribution of climate change to human causes, and telling farmers what to do. Respondents recommended emphasizing adaptation strategies, climate variability over climate change, evidence that climate change exists, and the financial benefits for farmers. In addition, Extension professionals proposed several delivery methods they thought would be most effective with farmers, including delivery tailored to the characteristics of the audience, a positive overall tone, and an understanding that engagement should be viewed as a long-term process based on building relationships with farmers. The findings suggest that farmers are a potentially receptive audience on climate issues when properly approached.

Keywords: communication, producers, farming, adaptation, Southeast, climate variability, climate change

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Introduction

Climate variability and climate change pose substantial risks to agricultural production. Rising temperatures, changing precipitation patterns, and more frequent extreme weather events significantly alter the distribution of crop yields, the reliance on dryland and irrigated production systems, and the geographic range and severity of pest outbreaks (Malcolm et al., 2012). Increasing variability in climate conditions intensifies both the management and economic risks facing farmers, who must then adapt to address climate risks such as flooding, drought, pest and disease pressures, and heat stress (Arbuckle, Hobbs, Morton, Prokopy, & Tyndall, 2014). Although agricultural producers have developed strategies for responding to local weather variability, Extension and outreach strategies are needed to build a deeper understanding of what motivates farmers to take action (Bartels et al., 2013; Malcolm et al., 2012).

Climate change science is inherently complex and rather challenging to convey to a variety of public audiences. In the broader context of climate science communication, Moser (2010) has summarized a variety of factors that contribute to this challenge, including:

> Invisibility of causes, distant impacts, lack of immediacy and direct experience of the impacts, lack of gratification for taking mitigative actions, disbelief in humans' global influence, complexity and uncertainty, inadequate signals indicating the need for change, perceptual limits, and self-interests. (p. 31)

As it relates to agricultural producers, communicating climate science is especially challenging because agricultural Extension professionals tend to be more skeptical that climate change is occurring or is influenced by human activities. Wojcik and her colleagues (2014) found that agricultural Extension agents are more likely than other Extension agents to be "dismissive" of climate change (i.e., convinced that climate change is not happening) and "doubtful" of climate change (i.e., unsure that climate change is happening). This skepticism makes agricultural Extension agents less likely to engage in outreach activities related to climate and agriculture, and less likely to engage farmers in meaningful discussions of how they can react to climate variability and climate change: "If it [climate change] is not happening, there is no need to do something" (Prokopy, Morton, Arbuckle, Mase, & Wilke, 2015, p. 187).

In response to the challenges of communicating climate science to agricultural audiences, researchers and outreach professionals are modifying previously used Extension outreach approaches and developing new models to engage Extension agents and farmers in discussions about climate. Prokopy et al. (2015) identified two factors that can increase willingness to learn about, understand, and adapt to climate both globally and locally: "1) reduce the threat to individual worldviews of believing in climate change and 2) increase opportunities for dialogue among scientists, intermediaries, farmers, and the voluntary organizations to which farmers belong" (p. 187). Several researchers have noted the success of using outreach approaches that

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form relationships between researchers, Extension professionals, and farmers of differing beliefs, knowledge, and skills (Arbuckle et al., 2014; Leeuwis, 2013; Morton & Brown, 2010). These evolving delivery methods focus on nurturing a respectful relationship with clientele through carefully building trust and delivering trainings in accessible language and in a positive tone.

The current study was carried out in the context of a larger project which was designed to advance the use of climate information for agricultural management in the southeastern United States. The project, Southeast Climate Extension, emphasizes engagement with farmers as the foundation for education and outreach and cultivates conversations with farmers about the ways in which climate variability and change affect agricultural production and how farmers can increase their resiliency in the face of these changes. The primary research question for the present study was, "What do Extension professionals believe are the critical elements of a communication strategy that is most likely to engage agricultural producers in discussions of climate variability and climate change?"

Methods

Fifty Extension professionals engaged in ongoing work related to climate and agriculture were interviewed to determine their perceptions and opinions on topics related to climate variability and climate change. The interview sample was drawn from existing networks and contacts within four southeastern states (Alabama, Florida, Georgia, and South Carolina), and snowball sampling was used to identify additional contacts. Interviewees included individuals who identified themselves as county Extension agents, state Extension faculty, researchers, and administrators. Sample characteristics are presented in Table 1.

Table 1. Sample Characteristics

Characteristic	***N***	***%***	**Characteristic**	***N***	***%***	
Gender			*State*			
Male	39	78	Alabama	11	22	
Female	11	22	Florida	18	36	
Ethnicity			Georgia	11	22	
Caucasian	40	80	South Carolina	10	20	
African-American	5	10	*Provide Climate Information*			
Hispanic	5	10	Yes	28	56	
Education			No	22	44	
Bachelor's Degree	2	4	*Target Audience for Climate Information*			
Master's Degree	17	34	Farmers	25	50	
Doctoral Degree	31	62	Ranchers	8	16	
Extension Role			Other Extension Faculty	17	34	
County Faculty/Extension Agent	13	26		***M***	***Min***	***Max***
State Extension Faculty	17	34	*Age (years)*	49	29	69
Researcher	10	20	*Extension Experience (years)*	15	1	37
Administrator/Director	10	20				

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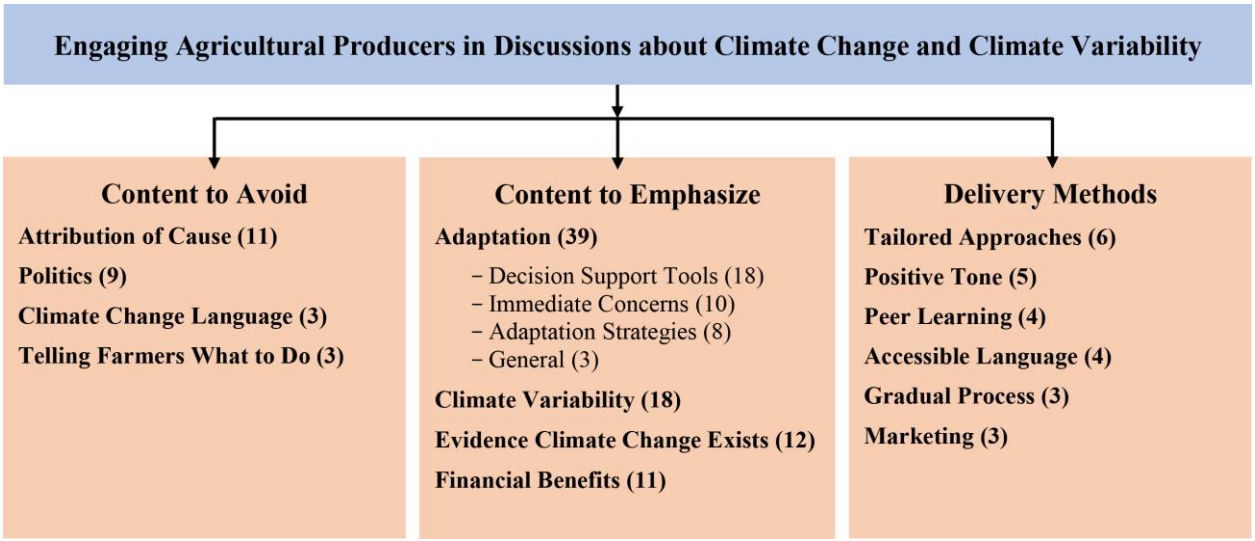
The interviews were semistructured, and the specific question being analyzed for this study was, *If we want to engage producers in conversation about climate and agriculture, how do you think we should go about approaching them on the issue of climate variability and change?* Interviews were carried out via phone and were recorded and transcribed for analysis. Qualitative analysis was conducted using an inductive framework (Thomas, 2006) in which major codes were generated based on an initial reading of the text. A team of two researchers generated initial codes and definitions and also identified possible tensions and sources of disagreement. All codes were finalized using a consensus process of a three-person research team (the original two coders plus one additional researcher). The original codes were further organized into larger categories as presented in the Results section.

Results

Three major categories of responses emerged from the data: *content to avoid*, *content to emphasize*, and *delivery methods*, with corresponding codes falling under each category. These categories and codes (including number of mentions for each) are presented in Figure 1 and are discussed in greater detail below.

Figure 1. Responses Organized by Category



Note: Visual overview of concepts mentioned (with number of mentions in parentheses) in response to how to engage agricultural producers in discussions about climate variability and climate change.

Content to Avoid

There were 26 total mentions of content areas to avoid when discussing climate issues with farmers: *attribution of cause*, *politics*, *language of climate change*, and *telling farmers what to do*.

Attribution of cause. Eleven individuals suggested that when discussing climate change with farmers, Extension professionals should avoid attributing climate change to humans. One professional said, "We should avoid stressing anthropogenic climate change explicitly," and another suggested, "We just need to let them know that this is something that has been going on, and it's not necessarily because of humans." The primary reason for avoiding discussions of human-caused climate change is that it gives rise to controversy and disagreement, which leads farmers to be less enthusiastic about becoming engaged in discussions related to climate variability and climate change.

Politics. Nine Extension professionals mentioned that discussions of climate should be separated from politics and instead be focused on the relevant science and practical implications for farmers. For example, one researcher said, "I think we just need to get the politics out of it, and I think once we do that, people won't think you're there to try and force something on them as kind of a social program or something." A state Extension specialist added:

> I think most farmers are conservative in their political stance, and I think that whoever is doing it [training] needs to be careful to make sure that it's clearly based in science and cognizant of the fact that growers may be uneasy with a perception that a political agenda or view is being put forth.

Climate change language. Three individuals suggested that the terms *climate* and *climate change* carry negative connotations for many farmers and should be avoided. One state Extension specialist said, "We have to be very cautious of using the *climate change* term because people might...walk away and what you want to do is to capture their attention." Another state Extension specialist added, "People tend to put a wall up when they hear the word *climate* because it has been politicized so much. Once emotion comes into play, no amount of science is going to change someone's mind." He also suggested to "find a way of not using the word *climate*, and just talk about weather patterns and patterns of drought and what we're seeing and what we're forecasting by learning from the past." It is interesting to note that, in contrast, one individual (not counted in these three) commented that the term *global warming* should be avoided in favor of *climate change* and *climate variability*.

Telling farmers what to do. Three Extension professionals expressed that farmers become less engaged when the conversation focuses on regulations or telling farmers to change their practices. For example, a researcher mentioned that:

> Farmers feel like they're going to be regulated, and they feel like their opportunities are going to be taken away from them...and I think regulation is something that people are not so interested in talking about.

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One county faculty said:

> They don't want you coming in and telling them, "This is what you should be doing to avoid that from happening." I was telling someone that there are still a lot of people who are of the belief that "I own my property; I don't want you telling me what to do with it."

Content to Emphasize

Eighty mentions received codes that were organized under *content to emphasize* during climate communications and workshops: *adaptation* (i.e., *decision support tools*, *address immediate concerns*, and *provide adaptation strategies*), *climate variability*, *scientific evidence that climate change exists*, and the possible *financial benefits* farmers would realize as a result of increasing their adaptive capacity.

Adaptation. Thirty-nine respondents focused on climate adaptation and the immediate ways in which farmers could benefit by adapting their farming practices to possible increases in climate variability and extremes. In essence, these individuals suggested that farmers will pay attention to climate information when it has immediate and practical use to inform their practices and increase their resilience.

Decision support tools (18 mentions). The first code under adaptation was decision support tools which refers to the information and tools that can be used to guide farm management decisions. One researcher said:

> We always should keep in mind that we need to put information together for farmers that track weather conditions, monitor weather now, and talk about the forecasting for the season in a single package...That is based on my experience with the beginning of this whole story, in terms of AgroClimate and seasonal climate variability. The tools that have more success in our system are the ones like disease forecasting which is very much driven by weather and short-term forecasts the next three days. So because of that success, I can approach those producers now and talk about seasonal forecasting because they know that we can do something for them, and they think this information is useful.

Within the category of decision support tools, there were several specific references to the importance of weather forecasting and seasonal forecasting. One state Extension professional stated, "In the climate office, they put out maps and stuff of the next thirty days of what they think it is going to happen. And I think that helps farmers kind of plan a little bit on when to plant, when to do field operations and stuff like that." An administrator also said that farmers are interested in the "temperature and rainfall for the year, by the month...they love all that kind of stuff, they love looking at that kind of data."

Immediate concerns (10 mentions). In a related code, respondents focused on the broader idea that presentations should address issues and concerns of immediate interest to farmers, including a strong emphasis on drought and issues related to water access. A researcher said discussions:

> Should be linked to concerns that the farmers currently have, or have for the future, that motivate them, like groundwater depletions...everybody is concerned about water, so I think water is the key element to focus on.

Another researcher said that climate change is:

> Still kind of far off, and my immediate concern right now is how to run my farm tomorrow. And that's a whole group of people that say, "Yeah, climate change is important," but they don't see the immediacy of learning about it.

Adaptation strategies (8 mentions). Respondents also suggested that farmers will be more engaged when presentations focus on specific adaptation strategies or technologies that farmers can use to become more resilient and adaptive in the face of climate variability. A state Extension professional said:

> You should be focusing on best management practices. So let's call it adaptive farming, how are you going to adapt your practices, or give them the ability to respond to whatever climate comes in...so you provide them with some way of responding to whatever climate is present at the time.

A county Extension professional said that you "can present different techniques for decreasing your vulnerability to drought by increasing your water storage capacity in your soil through no-till, through methods that incorporate more organics into the soil, whether they be green manures, cover crops, et cetera."

General (3 mentions). Other respondents mentioned the concept of adaptation, but in very general terms. For example, a state Extension professional said, "The emphasis should be more on just being adaptable and resilient in the face of climate variability because that will help with shorter and long-term." An administrator also said, "I think that we've got to approach it from the perspective of, 'if in fact there is climate change, how can you as a producer be in a better position to adapt to it?'"

Climate variability. In specific contrast to the idea of *climate change*, eighteen respondents suggested that farmers would be more receptive to the idea of *climate variability*, in part because they are personally familiar with the idea that weather conditions can vary widely from year to year and that these variations may be increasing. For example, a researcher suggested that:

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> Climate variability is something that producers connect to. Starting with [discussions of] variability before you go to change can be effective...They might not say climate variability, but they know what climate variability is...just changes in rainfall or a dry year or a wet year, or whatever.

An administrator also said, "Climate variability to a producer is much more important than climate change. Climate change is long-term. If you can give a producer heads up 12 months in advance that we're entering a drought period or rainy period that would be very, very useful to them." A state Extension professional specifically tied seasonal climate variability to the El Niño Southern Oscillation (ENSO), a leading driver of year-to-year and seasonal climate variability, saying:

> We will be successful if we link the climate variability with production...If we can say, for example during La Niña phase, wheat yields are going to be higher, looking at historic records of yields, Niña years have been higher than Niño years. It's very important to make that linkage.

Evidence climate change exists. Twelve respondents suggested that farmers need to be provided with evidence that climate change exists. For example, a state Extension professional said, "I think that for some people you are going to have to convince them that climate change is happening, and it is not a short-term deal." A researcher also emphasized the historic nature of climate change, saying that we need to "let them know that climate is changing, it has always changed. This is nothing new under the sun, and this has always been going on." A state Extension professional said, "I think we can and should use the language of climate change and maybe provide evidence about climate change that will provide more ammunition to help them understand what's really happening." Finally, an administrator said:

> What we do in Extension, what we've always done, what we're known for is...factual, unbiased data, and we've got to keep that in mind when we start to talk about climate change, we've got to be the same...We've got to go in with the numbers and we've got to show them why we, as scientists, think this is something that they need to pay attention to.

Financial benefits. Eleven respondents discussed the idea that farmers will be most receptive to climate information when it is connected to possible financial benefits for farmers. An administrator said, "If it affects their bottom line, they're going to listen. So if we talk about the finances of that, that's the best, that would be the most successful." A researcher also said, "If you could tie it to the economy, about how people could save money, that would be clearly a good idea." An administrator suggested that the most successful approach would be to "give them whatever information is available that they could use that data to make decisions in what

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makes them more profitable." Finally, one respondent, a county faculty member said, "You combine the scarcity of the resource with the overlying or amplified variability with the climate, and you've got an attentive client who's willing to listen to something that has a feasible payback period."

Delivery Methods

In addition to climate content, respondents provided insight into the ways in which they believed Extension educators could deliver climate information that would be most likely to engage farmers. There were 25 mentions of *delivery methods*, with the major codes being *tailored approaches*, *positive tone*, *peer learning*, *accessible language*, engagement as a *gradual process*, and *marketing*.

Tailored approaches. Six Extension professionals mentioned that climate materials and communications should be specifically tailored to the characteristics of the audience. Tailoring can be based on a variety of factors, including farm history, location, size of operation, and type of crop system. As a county Extension professional suggested, "It's important to assess who is coming and if people have different needs." For instance, he emphasized the importance of "understanding their crop production system and not just giving them the theoretical big picture right up front." A researcher also suggested "having people discuss their long history in farming" as this "gets them thinking about their long-term changes and what's happened since their parents and grandparents have been there." Finally, an administrator stated that Extension should not "show a guy from South Carolina data from Alaska and think that they care. People want to know what's going to happen in their backyard, because that's what affects what they grow and produce."

Positive tone of delivery. Five respondents suggested that Extension professionals should focus on the positives and be straightforward and nonaggressive when engaging in climate conversations. For example, an administrator said that Extension should "approach the question from a positive point of view—in terms of potential opportunities in their future." A researcher also mentioned that "We need to make it clear to them that we're not here to criticize how they live or their lifestyle, but to talk about something that is changing very gradually and that it's going to happen regardless." Finally, a county Extension professional added that we need to "be able to talk to these people and engage them in a way that they don't feel like you're talking down to them or telling them what to do, or that you're policing them."

Peer learning. Four Extension professionals suggested that having farmers talk to other farmers about their experiences and successes increases their interest in the topic of climate variability and change. For example, one administrator said that Extension should introduce "peer farmers in their commodity group that can say 'Yes, we see this as happening, and here's what we've

done, and here's some of the ways we've profited by following these best management practices.'" A county Extension professional also mentioned that we have to "show farmers how other growers have been using this information. So once you lay the foundation in terms of concepts and all that, it stays with them." Finally, a researcher emphasized the importance of early adopters, stating that the "best way is to get the lead farmers to accept the modifications in their farming system, and then everyone else is going to follow as they see how they stay profitable."

Accessible language. Four respondents mentioned that Extension professionals should use accessible language when discussing climate information. One county Extension agent said, "Speaking a language which they can relate to can be very, very critical." Another county Extension agent added that because farmers "go out and look at blogs and look at the Internet, they're accessing that information, so it's got to be simple." Finally, an administrator suggested that Extension professionals should present information "in a way that [farmers] can understand."

Gradual process. Three Extension professionals suggested that engagement in climate discussions should be a gradual process. A researcher said to "start with something tangible like weather, which is actually what they care about, and then slowly move the discussion into climate variability which is relatable to their everyday lives." A county Extension professional emphasized the need to:

> Work from the platform of historic weather patterns with particular emphasis on weather extremes, so you create a common reference or set of facts. You know the presenters are talking about events that long-term producers have lived through and remember. And then if you go from that to looking at projections for change in the frequency of extreme events, then hopefully you have established credibility from starting at a point of common agreement on a set of facts, both historical and experiential for the clientele.

Marketing. Three respondents mentioned that Extension professionals should focus on marketing approaches when presenting climate information. For example, a state Extension professional said to "market it [a workshop] as improving your management skills." A county Extension agent also recommended to "advertise having a clinic, workshop, or meeting," adding that "the content of the workshop can focus on climate variability and climate change, but that it shouldn't be in the title." Finally, a state Extension professional said that "marketing has got to be aggressive."

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Discussion

The interviewees in this study were already engaged in climate discussions in Extension, making them uniquely positioned to offer opinions about both content and delivery especially with regard to their less-engaged colleagues. In relation to engaging farmers in climate discussions, Extension professionals suggested avoiding issues related to politics, attribution of climate change to human causes, and telling farmers what to do. The interviews suggest that all of these factors contribute to farmer resistance rather than receptiveness to climate change messages. Overall, interviewees were also cautious about using the explicit language of climate change with farmers. In terms of content to emphasize, Extension professionals specifically recommended focusing on adaptation, climate variability, evidence that climate change exists, and the financial benefits for farmers. A strong focus on tangible solutions to climate challenges, in the form of adaptation strategies, was a central message conveyed in the interviews. More than any other mention in terms of content to emphasize or avoid was to focus on adaptation solutions, meaning particular management strategies that have the potential to reduce the current and projected climate risks. Finally, Extension professionals proposed several delivery methods they thought would be most effective with farmers, including delivery tailored to the characteristics of the audience, a positive overall tone, and an understanding that engagement should be viewed as a long-term process based on building relationships with farmers.

The politically and ideologically contentious nature of climate change research and outreach often evokes strong emotional responses that do not lend themselves to action (Arbuckle et al., 2014; Kahan, Jenkins-Smith, & Braman, 2011; McCright & Dunlap, 2010). Further, agricultural Extension agents are notably resistant to the concept of climate change (Wojcik et al., 2014), making this an especially challenging audience for climate information. This is not to say that current training events are being framed in a political context, but that events must be explicitly separated from politics and that the audience must perceive that the content is nonpolitical and unbiased. In addition, content that focuses on the human causes of climate change is especially problematic for agricultural audiences. As Arbuckle et al. (2014) stated, "Engagement strategies targeting farmers more broadly should not focus overtly on the human role in climate change to avoid alienating the large swath of Corn Belt farmers who do not believe in anthropogenic climate change" (p. 515). Regardless of geographic location, discussions that focus on the causes of climate change rarely contribute to farmer engagement and action. Bartels and colleagues (2013) also suggested that engagement efforts should avoid politics and focus on immediate concerns of farmers.

Currently, many climate outreach models do not focus on the immediate needs of farmers (Prokopy et al., 2015), and our findings are largely consistent with the research of Arbuckle and colleagues (2014), who stated that "the development of extension and outreach strategies that effectively support farmer adaptive action is critically important" (p. 505). Our findings suggest

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that Extension systems will better serve farmers by focusing on adaptation strategies that inform management solutions and improve farmer resilience in the face of climate variability and change. When Extension provides information that tangibly addresses farm productivity and profitability, farmers are more likely to engage in discussions that ultimately touch on issues related to climate, such as extreme weather events; seasonal variability; precipitation patterns; drought, pests and diseases; and extreme temperatures (Bartels et al., 2013; Fraisse, Breuer, Zierden, & Ingram, 2009). Possible adaptation topics of interest to farmers due to their immediacy include available decision support tools, seasonal forecasting, sod-based rotation, conservation tillage, irrigation management and technologies, and varieties adapted to specific growing conditions. Previous research has also suggested that integrating climate adaptation strategies into existing Extension programming is an efficient way to reach farmer audiences without creating additional time burdens for farmers or having to convince farmers to attend a climate-specific training event (Diehl et al., 2015). When delivering content intended to appeal to farmer needs, it is also critical to understand the specific growing conditions and challenges of the region and crops being addressed (Arbuckle et al., 2014; Prokopy et al., 2015).

In describing the successes of their "climate learning network" that brought together farmers, Extension specialists, and researchers for a series of meetings, Bartels et al. (2013) suggested that by beginning with tangible topics such as weather and ENSO, farmers became more engaged in the implications of climate and that "enhanced dialog within this learning community among producers and researchers could lead to the collaborative development of management-relevant options for adaptation over the long-term" (p. 8). Building a learning community of scientists and farmers engaged in ongoing discussions of climate and agriculture requires patience and an understanding that farmer engagement is a long-term process of joint learning.

In addition to the emerging body of research on climate change education in Extension, the current study found that Extension professionals are starting to recognize the value of open and honest conversations that are based on mutual trust and respect. As Arbuckle et al. (2014) stated, "engaging farmers in creative adaptation to their more immediate experiences (e.g., increased weather variability) rather than the causes (climate change) will be a more effective route to resilience" (p. 515). By starting with a common understanding of regional weather conditions, based on both experience and historical data, educators can establish relationships that provide solutions to the immediate concerns of farmers (Bartels et al., 2013). Such solutions have tangible financial benefits for farmers, which further reinforce engagement and participation. Ultimately, discussions of climate in agriculture are best framed in terms of adaptation strategies and resilience.

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Public Opinions of Farmer-Oriented Environmentally Friendly Extension Programs: A Case of Best Management Practices

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Public concern about environmental protection has been developing for decades. However, a knowledge gap exists between farmers and consumers regarding the implementation of environmental protection practices through the use of Best Management Practices (BMPs). Extension can bridge this knowledge gap by developing effective educational programs about BMP use. This study sought to identify consumers' perceptions of BMPs and preferred communication channels to facilitate the development of farmer-oriented Extension programs which assist with direct communication between farmers and consumers. Residents in seven Florida counties (N = 700) were surveyed for this descriptive study. Respondents were asked about their perceptions, beliefs, trust, and attitudes related to BMPs, as well as preferred communication channels for farming practices. The findings indicated the respondents either agreed or were undecided if farmers practice BMPs properly, and the majority perceived farmers' engagement in BMPs as important. Over 60% of the respondents believed farmers practicing BMPs care about the environment and would trust and purchase products from BMP-practicing farmers. The respondents indicated their preferred information sources were mass media and communicating directly with farmers at farmers' markets and local festivals. Therefore, Extension educators should develop educational programs for farmers emphasizing the need to communicate with consumers using consumers' preferred channels.

Keywords: Extension education, environment stewardship, fertilizer application, consumer trust, communication channels

Introduction

The general public has been developing environmental concerns since the 1960s, with concerns about environmental quality and protection growing over time, reaching a peak in the early 1990s (Dunlap, 1991; Schultz, 2001; Wray-Lake, Flanagan, & Osgood, 2010). The importance of agriculture has been acknowledged by the public in providing economic, social, and environmental benefits, such as rural environmental public good, cultural heritage, biodiversity,

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and environmental quality (Hall, McVittie, & Moran, 2004; Salazar-Ordóñez, Rodríguez-Entrena, & Sayadi, 2013). Since food is the primary connection between consumers and agriculture, consumers' concerns about environmental issues has been reflected in their perceptions of agriculture and food purchasing behaviors (Steenkamp, 1997; Yiridoe, Bonti-Ankomah, & Martin, 2005). In order to ensure the sustainability of the environment while enhancing agricultural production, educational programs related to environmental stewardship have been developed by Extension to educate farmers on how to manage their production practices by using more environmentally-friendly practices (Allen, Van Dusen, Lundy, & Gliessman, 1991). By educating farmers about approaches that align with public perception of environmental stewardship, they may be better able to connect with consumers. As such, Extension may improve farmers' businesses by increasing their sales to consumers who appreciate the value of adopting environmentally conscious practices (Abel, Thomson, & Maretzki, 1999).

Best Management Practices (BMPs) are specific approaches that, when followed, have been found to assist in reducing pollution of water resources and maintaining, or even improving, water quality and agricultural production (U.S. Environmental Protection Agency [USEPA], 2013). Programs related to BMPs have been widely developed to improve environmental and agricultural sustainability (USEPA, 2003). A wide range of BMPs have been applied by farmers in the form of farm management, including chemical use control (i.e., pesticides, fertilizers), waste management, water management, soil management, and agroecosystem conservation (USEPA, 2010; Young, 2011). While perception gaps, which can influence farmers' willingness to adopt BMPs, have been found between farmers and the government regarding the need for environmental management (Smith, Peterson, & Leatherman, 2007), farmers who are aware of environmental issues and have positive attitudes toward the environment are more likely to adopt BMPs (Baumgart-Getz, Prokopy, & Floress, 2012).

Farmers' adoption of sustainable practices may also be affected by consumer value (Hall, Dennis, Lopez, & Marshall, 2009) with environmental protection practices used as a marketing strategy to support agricultural businesses (Warner, 2007). Moon, Florkowski, Brückner, and Schonhof (2002) examined consumers' willingness to pay extra for foods labeled as having been produced using environmentally-friendly production techniques. Their findings indicated consumers were willing to pay a premium price for food labeled as eco-friendly, and educational programs were recommended to enhance consumers' awareness of environmental issues related to agricultural production (Moon et al., 2002). Similarly, the respondents of Hawkins, Burnett, and Stack's (2012) study indicated consumers were more willing to purchase vegetables and ornamental plants produced from organic, sustainable, and local farms despite higher prices.

The concept of reflexive modernization (Beck, 1992) has been used to describe the phenomenon of sustainable agriculture, which involves the use of BMPs, gradually replacing conventional modern agriculture (Jordan & Constance, 2008). Jordan and Constance (2008) indicated the

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importance of emphasizing the entire farming system, including the connection between producers and consumers, along with community participation in the sustainable agriculture system, benefiting environmental, economic, and social goods. As a result, to establish a sound and healthy agricultural system, consumer input must be considered (Jordan & Constance, 2008).

Effective communication methods can facilitate knowledge-learning, idea-sharing, and information distribution about farming practices (King & Rollins, 1995; Leeuwis, 2004). Borisova, Racevskis, and Kipp (2012) recommended that farmers should engage the public in understanding their use of BMPs through the use of the Internet, public reports, leaflets, news stories, videos distributed via nongovernmental organizations, Extension, and mass media. Other than these listed channels which are mostly in print, interactive communication channels, such as neighbors, family, and friends, are also widely used as information sources (Gamon & Scofield, 1998). Farmers' markets, as an interactive information access point, have also been identified as a successful consumer-learning environment for farmers to share the practices they have used for food production and as a platform for Extension to distribute information and provide education (Abel et al., 1999). In this process, Extension educators can become involved in the information distribution process to assist with establishing the connection and communication modes farmers need to obtain consumers.

Understanding consumers' perceptions of BMPs is an important step in Extension educators' ability to develop and further promote Extension programs that emphasize local farmers' adoption of BMPs. By identifying consumers' attitudes and perceptions of BMPs, Extension educators can develop programs that increase farmers' awareness of the importance of adopting BMPs (Abel et al., 1999). Extension programs can also emphasize that farmers' sales may be secured or even increased as a result of consumers' willingness to support sustainable agricultural practices. Therefore, this study sought to identify consumers' perceptions, beliefs, trust, attitudes, and information preferences associated with farmers' use of BMPs. The information gathered from this research will benefit Extension educators who work on programs encouraging the adoption of BMPs. The second priority of the National Research Agenda is to enhance "new technologies, practices and products adoption decisions" (Doerfert, 2011, p. 8), which can be accomplished by this study through understanding the connection between consumers and farmers about BMPs. The findings of this study can be used to facilitate future expansion of Extension programs related to sustainable agricultural practices in an effort to enhance agricultural production while ensuring a sustainable environment.

Theoretical Framework

The theoretical framework for this study was Social Exchange Theory (Homans, 1958). Homans (1958) described social behavior as "an exchange of goods, material goods but also non-material ones, such as the symbols of approval or prestige" (p. 606). Cook, Cheshire, Rice, and

Nakagawa (2013) reviewed the theory and indicated exchange behavior "is a function of payoffs, whether the payoffs are provided by the nonhuman environment or by other humans" (p. 62). Exchange is seen as an interaction between two persons or two parties and is associated with cost and value transferring between the subjects (Homans, 1958, 1961). People tend to perceive what they give as a cost and what they get as a reward. Therefore, cost and value transferring can influence the behavior in which an individual is more likely to engage as an exchange if they perceive they can receive the best profit through engagement (Homans, 1958). Homans (1961) also described the mechanism of reinforcement in social exchange behaviors. Reinforcement is the process associated with expectancy and behavior. It emphasizes that if an individual's "expectation is confirmed and when the situation is repeated [similarly], behavior sequences will again be evoked" (Hilgard & Marquis, 1940, p. 88). Therefore, the two individuals, or two parties, involved in a social exchange behavior can reinforce each other's behavior, while the exchange behavior is initiated according to their past experiences of reinforcement (Homans, 1961).

Dolisca, Carter, McDaniel, Shannon, and Jolly (2006) conducted a study to examine Haitian farmers' participation in a forestry management program to improve environmental sustainability. The study found the surveyed farmers who had received benefits from engaging in forestry programs were more likely to participate in similar programs in the future (Dolisca et al., 2006). The findings also indicated farmers' participation in forestry programs could be triggered by a possible income increase which program participation can bring (Dolisca et al., 2006). Additionally, farmers' roles in local groups were found to positively influence their participation due to social, environmental, and economic reasons (Dolisca et al., 2006).

Zabkar and Hosta (2013) studied consumers' environmentally-conscious behavior regarding green marketing. The findings of this study indicated consumers who were concerned about the environment tended to be more willing to engage in environmentally-conscious behaviors and were more likely to actually have behaved in an environmentally-conscious way (Zabkar & Hosta, 2013). Zabkar and Hosta (2013) also indicated the positive association of consumers' willingness to behave in an environmentally-conscious way and their actual environmentally-conscious behaviors increased when consumers had a perception that they would achieve high social status. The findings of Zabkar and Hosta's (2013) study were explained using the social exchange concept that consumers used money in exchange for status.

The concept of social exchange has been used to explain the relationship between Extension educators and clients (Galindo-Gonzalez & Israel, 2010; Israel, 1991). The relationship Extension educators have with their clients is one where clients request services, viewing Extension as an information source (Israel, 1991). Israel (1991) indicated the information Extension clientele receive from Extension educators can be seen as a reward, as well as the social prestige they might gain by becoming recognizable by adopting the BMPs Extension

educators suggested. However, the clientele also had to spend social costs, such as travel expenses, time used to receive services, extra communication effort by contacting other personnel, and further support for the Extension programs.

In Israel's (1991) study, patterns of preferred information channels among small farm operators were explored. The findings indicated the examined small farm operators had different preferences for information channels and suggested that Extension educators should develop sufficient coverage of programs, including information content, information channel, and service location, for the clientele to fulfill their different preferences based on the different cost/reward analysis systems each individual possesses. Moreover, Israel (1991) indicated the importance of trust in the social exchange system of Extension, suggesting trust between Extension educators and clientele should be examined to facilitate the services Extension offers (Israel, 1991). A related study conducted by Galindo-Gonzalez and Israel (2010) focused on Extension client satisfaction. The findings of this study also indicated the importance of trust in the Extension educator and clientele relationship. A recommendation was made that Extension educators should seek to understand clientele's satisfaction in order to establish trust by contacting clientele using their preferred information channels (Galindo-Gonzalez & Israel, 2010).

Based on Social Exchange Theory and past research, consumers who are more environmentally-conscious would be more willing to support actions associated with environmental protection. By supporting environmental protection actions, such as purchasing products from farmers engaged in BMPs, which is seen as an effort that can produce a cost, consumers would receive the perception of high social status, which is considered as a reward.

Purpose and Objectives

The purpose of this study was to identify consumers' perceptions of BMPs used by Florida farmers to facilitate the development of farmer-oriented Extension programs which educate farmers about communicating with consumers to improve consumers' support of environmentally-friendly practices. The objectives of this study were to:

1. Identify consumers' perceptions of BMPs used by Florida farmers;
2. Identify consumers' beliefs, trust, and attitudes toward Florida farmers engaged in BMPs;
3. Identify the information sources and communication channels consumers use to stay informed about farming practices; and
4. Determine if there are differences in perceptions of BMPs used, beliefs, trust, attitudes, preferred information sources, and preferred communication channels based on demographic characteristics.

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Methods

This study was a descriptive study using an online survey research design to accomplish the purpose and objectives. A survey questionnaire was used to collect consumers' perceptions of BMPs used by Florida farmers, perceptions of importance of Florida farmers' engagement in BMPs, belief and trust of farmers using BMPs, information sources used to receive farming information, and participation in public events. The survey was distributed to residents 18 years of age or older in seven counties located in southwest Florida. The seven southwest counties in Florida were chosen because they were the targeted area of the County Alliance for Responsible Environmental Stewardship Program, which is a BMP-related Extension program.

Prior to asking respondents' perceptions of BMPs, the definition of BMPs was provided as specific behaviors that, when followed, have been found to assist in reducing water pollution into water resources and maintaining, or even improving, water quality and agricultural production (USEPA, 2013). Respondents' perceptions of BMPs used by Florida farmers were measured on four items using a five-point Likert-type scale ranging from 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Disagree nor Agree*, 4 = *Agree*, 5 = *Strongly Agree*. A similar scale was used to measure respondents' perceptions of the importance of Florida farmers' engagement in BMPs with four items on a five-point Likert-type scale ranging from 1 = *Not at All Important*, 2 = *Slightly Important*, 3 = *Important*, 4 = *Very Important*, 5 = *Extremely Important*. Respondents' beliefs and trust of farmers using BMPs were measured by three statements using a five-point Likert-type scale also ranging from 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Disagree nor Agree*, 4 = *Agree*, 5 = *Strongly Agree*. The information sources respondents used to receive farming information and their participation in public events were collected by a "select all that apply" question, with eight listed information sources and eight listed public events. Lastly, respondents were asked to answer several demographic questions including sex, race/ethnicity, age, county of residence, area of residence, educational level, annual household income, and political beliefs.

To ensure validity of the researcher-developed instrument, survey questions were reviewed by a panel of experts and then pilot-tested before data collection. The panel of experts included the Associate Dean for Extension at the University of Florida, the assistant director of the UF/IFAS Center for Public Issues Education, the legal advisor of the Florida Farm Bureau Federation, the public affairs manager of the Mosaic Company, the community investment specialist of the Mosaic Company, an assistant professor specializing in agricultural communication, and two assistant professors specializing in Extension education and survey design.

A nonprobability opt-in sampling method was used in collaboration with a public opinion survey research company. A total of 865 individuals were recruited by the public opinion survey research company and entered the survey. However, quota sampling was enacted to restrict the

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participants to certain counties within Florida and ensure the respondents were representative of the county based on the county 2010 census profile for gender, race, and age. A total of 700 complete responses were collected, resulting in a participation rate of 81%. It is important to note the use of a nonprobability sampling method may lead to limitations including nonparticipation biases, selection, and exclusion (Baker et al., 2013). As a result, the interpretations of the results of this study are limited to the respondents. Once all the responses were collected, descriptive statistics, using SPSS® 22.0, were conducted to reach the objectives of this study. Chi-square analysis was used to examine the existence of differences among demographic characteristics of sex, race, and age.

The demographic characteristics of the respondents can be seen in Table 1. The respondents included 412 (59%) females and 288 (41%) males. The majority of respondents were Caucasian/White (Non-Hispanic) (*n* = 657, 94%), followed by African American (*n* = 19, 3%); while 4% of the respondents considered their ethnicity as Hispanic (*n* = 28). The respondents were mostly aged between 50 and 79 (63%) with 27% (*n* = 189) between 60 and 69 and 19% (*n* = 135) between 50 and 59.

Table 1. Demographic Characteristics of the Respondents

Characteristic	***n***	***%***
Sex		
Female	412	58.9
Male	288	41.1
Race		
African American	19	2.7
Asian	6	0.9
Caucasian/White (Non-Hispanic)	657	93.9
Native American	7	1.0
Other	11	1.6
Hispanic Ethnicity	28	4.0
Age		
19 and younger	4	0.6
20-29	44	6.3
30-39	86	12.3
40-49	105	15.0
50-59	135	19.3
60-69	189	27.0
70-79	119	17.0
80+	17	2.4

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Results

Perceptions of BMPs Used by Farmers

Respondents were asked their level of agreement or disagreement about the BMPs farmers in Florida practice on a five-point Likert-type scale (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Disagree nor Agree*, 4 = *Agree*, 5 = *Strongly Agree*) (Table 2). A majority of the respondents agreed or strongly agreed Florida farmers practice proper pest management (*n* = 367, 53%), water management (*n* = 358, 51%), and nutrient management (*n* = 353, 51%), while 51% of respondents (*n* = 288) were undecided if they agreed or disagreed that Florida farmers practice proper sediment management.

Table 2. Perceptions of Farmers' BMPs Use

	Perception BMPs are Used by Farmers (%)				
BMPs	***Strongly Disagree***	***Disagree***	***Neither Disagree nor Agree***	***Agree***	***Strongly Agree***
Pest management	0.9	4.9	41.9	44.6	7.9
Water management	1.9	7.4	39.6	41.0	10.1
Nutrient management	1.0	4.7	43.9	41.9	8.6
Sediment management	1.1	6.7	51.1	33.7	7.4

When asked the level of importance the respondents associated with Florida farmers' engagement in the BMPs on a five-point Likert-type scale (1 = *Not at All Important*, 2 = *Slightly Important*, 3 = *Fairly Important*, 4 = *Highly Important*, 5 = *Extremely Important*), 80% of the respondents (*n* = 560) indicated water management as highly or extremely important, 72% (*n* = 505) indicated nutrient management as highly or extremely important, 71% (*n* = 495) indicated pest management as highly or extremely important, and 66% (*n* = 462) indicated sediment management as highly or extremely important (Table 3).

Table 3. Importance Associated with Farmers' Engagement in BMPs

	Importance of Farmers' Engagement in BMPs (%)				
BMPs	***Not at All Important***	***Slightly Important***	***Fairly Important***	***Highly Important***	***Extremely Important***
Water management	0.6	1.4	18.0	35.1	44.9
Nutrient management	0.4	1.7	25.7	42.7	29.4
Pest management	0.4	1.7	27.1	43.7	27.0
Sediment management	0.4	4.3	29.3	37.4	28.6

Beliefs, Trust, and Attitudes Toward Farmers' Engagement in BMPs

Respondents identified their beliefs, trust, and attitudes toward Florida farmers' engagement in BMPs based on three statements on a five-point Likert-type scale (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Disagree nor Agree*, 4 = *Agree*, 5 = *Strongly Agree*) (Table 4). Seventy-five percent of respondents (n = 525) agreed or strongly agreed they believed farmers practicing BMPs care about the environment, 64% (n = 446) agreed or strongly agreed they trust farmers practicing BMPs more than those that do not, and 68% (n = 473) agreed or strongly agreed they would rather purchase products from a farmer that uses BMPs than one who does not.

Table 4. Beliefs, Trust, and Attitudes Toward Farmers' Engagement in BMPs

	Beliefs, Trust, and Attitudes toward Farmers' Engagement in BMPs (%)				
Category	***Strongly Disagree***	***Disagree***	***Neither Disagree nor Agree***	***Agree***	***Strongly Agree***
I believe farmers practicing BMPs care about the environment.	0.3	0.9	23.9	51.7	23.3
I trust farmers practicing BMPs more than those that do not.	0.6	0.6	35.1	43.6	20.1
I would rather purchase products from a farmer that uses BMPs than those who do not.	0.4	1.0	31.0	41.1	26.4

Information Sources and Communication Channels

Respondents were asked which information sources they used to receive farming information (Table 5). Information sources used by the most respondents were television (n = 384, 55%), newspaper (n = 375, 54%), and the Internet (n = 289, 41%). Respondents who selected "Other" indicated they also used books, research publications, Extension services, school courses, other personal contacts, and the radio as sources for farming information.

Table 5. Information Sources Used to Receive Farming Information

Information Sources	***n***	***%***
Television	384	54.9
Newspaper	375	53.6
Internet	289	41.3
Self-observation	253	36.1
Friends/families	153	21.9
Magazine	61	8.7
Attending activities/events	48	6.9
Other	47	6.7

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The respondents indicated the public events they attended (Table 6). Farmers' markets (n = 497, 71%), local festivals/fairs (n = 396, 57%), and sporting events (n = 265, 38%) were the public events with the most responses. For the respondents who chose "Other," church, concerts, community meetings, and art shows were the events in which they participated.

Table 6. Public Events Participated in as Communication Channels

Information Sources	***n***	***%***
Farmers' markets	497	71.0
Local festivals/fairs	396	56.6
Sporting events	265	37.9
Community volunteer activities	141	20.1
Seminar/conference	87	12.4
Other	59	8.4
Public workshops	54	7.7
Local farm expo	44	6.3

Differences Based on Demographics

Differences in the areas of interest were analyzed by demographic characteristics (sex, race, and age) (Table 7). In respondents' perceptions of farmers' use of BMPs, the only difference between demographics was found in pest management in race ($\chi^2(16) = 29.03$, $p = .02$). As for the importance associated with farmers' engagement in BMPs, differences in sex were found in items of nutrient management ($\chi^2(4) = 14.29$, $p = .01$) and pest management ($\chi^2(4) = 11.47$, $p = .02$), while differences in age were found in pest management ($\chi^2(28) = 48.84$, $p = .01$) and water management ($\chi^2(28) = 48.12$, $p = .01$). When examining the differences between demographics in beliefs, trust, and attitudes toward farmers' engagement in BMPs, differences in sex and age were both found in beliefs ($\chi^2(4) = 10.11$, $p = .04$; $\chi^2(28) = 51.30$, $p = .01$). Demographic differences in information sources used to receive farming information were identified in sex and race in newspaper only ($\chi^2(1) = 3.83$, $p = .05$; $\chi^2(4) = 21.71$, $p = .00$), while differences in age were identified in newspaper ($\chi^2(7) = 91.31$, $p = .00$) and television ($\chi^2(7) = 33.42$, $p = .00$). As for respondents' public events participated in as communication channels, demographic differences were found in sex in sporting events ($\chi^2(1) = 18.24$, $p = .00$), local festivals/fairs ($\chi^2(1) = 10.52$, $p = .00$), and farmers' markets ($\chi^2(1) = 5.21$, $p = .02$), while differences in age were identified only in farmers' markets ($\chi^2(7) = 86.42$, $p = .05$).

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Table 7. Differences Based on Demographics

	Sex		Race		Age	
Items	χ^2	***p***	χ^2	***p***	χ^2	***p***
Perceptions of Farmers' Use of BMPs						
Sediment management	7.06	.13	19.33	.25	16.14	.96
Nutrient management	3.21	.52	24.29	.08	39.64	.07
Pest management	2.89	.58	29.03	.02*	28.21	.45
Water management	2.82	.59	12.63	.70	28.82	.42
Importance Associated with Farmers' Engagement in BMPs						
Nutrient management	14.29	.01*	10.07	.86	31.08	.31
Pest management	11.47	.02*	7.33	.97	48.84	.01*
Sediment management	8.38	.08	5.40	.99	25.41	.61
Water management	2.83	.59	13.35	.65	48.12	.01*
Beliefs, Trust, and Attitudes toward Farmers' Engagement in BMPs						
Beliefs	10.11	.04*	8.81	.92	51.30	.01*
Attitudes	5.35	.25	16.02	.45	38.75	.09
Trust	3.10	.54	11.45	.78	36.88	.12
Preferred Information Sources						
Newspaper	3.83	.05*	21.71	.00*	91.31	.00*
Television	2.89	.09	3.63	.46	33.42	.00*
Friends/families	2.77	.10	7.99	.09	11.45	.12
Internet	1.23	.27	5.28	.26	11.31	.13
Other	.51	.47	2.33	.68	6.70	.46
Magazine	.09	.77	2.78	.60	5.25	.63
Attending activities/events	.05	.82	4.65	.33	6.87	.44
Self-observation	.02	.89	5.55	.24	9.33	.23
Preferred Communication Channels						
Sporting events	18.24	.00*	.89	.93	85.01	.06
Local festivals/fairs	10.52	.00*	3.62	.46	55.34	.82
Farmers' markets	5.21	.02*	3.28	.51	86.42	.05*
Seminar/conference	3.65	.06	5.41	.25	60.38	.67
Community volunteer activities	1.80	.18	2.02	.73	67.96	.41
Public workshops	1.47	.23	7.15	.13	44.42	.98
Other	.23	.63	6.52	.16	51.25	.91
Local farm expo	.08	.78	1.72	.79	54.94	.83

*Significant difference was found at the .05 level.

Conclusion

The findings of this study showed almost half of the respondents perceived that Florida farmers practice proper BMPs. However, the other half were undecided if Florida farmers practice proper BMPs. Despite being undecided about the actual practices in which farmers engaged, the

majority of the respondents perceived farmers' engagement in BMPs to be highly important. These findings agreed with the findings from Schultz (2001) and Wray-Lake et al. (2010) when they discovered the general public was aware of the importance of environmental quality and protection.

When investigating respondents' beliefs, trust, and attitudes toward farmers' engagement in BMPs, the findings indicated the majority of respondents 1) believed farmers' use of BMPs shows they care for the environment, 2) trusted farmers who practice BMPs more than those who do not, and 3) preferred to purchase products from farmers practicing BMPs compared to those not practicing BMPs. The findings of this study were similar to those of Zabkar and Hosta (2013) which indicated consumers' concern about the environment is positively associated with their willingness to perform environmentally-conscious behavior with an exchange concept, as well as the findings of Yiridoe et al. (2005) which indicated consumers' perceptions of agriculture and their attitudes and behaviors associated with food purchases reflect their concern about the environment. In this study, most of the respondents agreed that farmers should engage in BMPs and indicated their willingness to provide credit to farmers engaging in BMPs by offering them their trust and willingness to place value on purchasing their products. Since this study was descriptive in nature, the associated levels between respondents' environmental concern and their behavior related to environmental protection was not identified. Overall, the findings of this study aligned with Social Exchange Theory (Homans, 1958) and can be explained according to the similarity between the findings of this study and Zabkar and Hosta's (2013) study. The respondents' perceived importance of farmers' engagement in BMPs led to their beliefs that farmers care about the environment, which is shown through farmers practicing BMPs. As a result, respondents would consider expending costs, which were their trust and willingness to purchase in this case, in exchange for rewards, which could be a positive feeling of protecting the environment and an improvement of their social status.

In this study, the potential communication channels providing farming information and interactive opportunities were similar to those described by Leeuwis (2004) and Galindo-Gonzalez and Israel (2010). Most of the respondents received farming information from mass media, such as television, newspaper, and the Internet, while personal observation, interactive information sharing through family and friends, and participation in activities and events were also reported by respondents as communication channels used. Moreover, the findings indicated the importance of farmers' markets and local festivals and fairs as communication channels. As suggested by Israel (1991), sufficient information coverage through information channels can benefit Extension clientele's preferences based on an individual's cost/reward system for exchange. Therefore, the findings in this study, which indicated a wide range of information channels the respondents preferred to use, can be tied back to the exchange concept similar to the findings of Israel's (1991) study.

While differences between demographics in respondents' opinions were also examined in this study, different response patterns were revealed in different demographic characteristics. Such results indicated some of respondents' perceptions, uses of information channels, and participation in public events differed by sex, race, and age.

Implications

Based on the findings of this study, the key implications for Extension educators are the need to connect the general public with farmers through the proper communication channels so more information about BMPs can be disseminated. According to the findings, a knowledge gap was found with almost half of the respondents unable to make clear decisions about their agreement or disagreement that Florida farmers practice proper BMPs. Moreover, within the four listed BMPs, the water management BMP was perceived as an extremely important BMP and received the most responses that it was practiced properly by Florida farmers. Conversely, the sediment management BMP received the most responses as undecided whether or not it was practiced properly by Florida farmers, while the least number of respondents perceived it as a highly or extremely important BMP. These findings indicated differences existed in respondents' familiarity with the different types of BMPs, and also implied people are more aware of subject matter closer to their life.

Three-fourths of the respondents agreed or strongly agreed they believed farmers practicing BMPs care about the environment, but the proportion of respondents dropped by 11% when asked about their trust of farmers practicing BMPs, and dropped by 7% when asked if they would support farmers practicing BMPs. These findings implied trust with farmers may be developed on more than just farmers' engagement in BMPs. Moreover, even though most would be willing to support farmers who practice BMPs, some may have other concerns taking higher priority than support of farmers using BMPs when making food purchases. According to Social Exchange Theory (Homans, 1958), people's decisions to perform a certain behavior, such as purchasing products from farmers who practice BMPs, will need an evaluation process regarding the cost and reward transfer (Cook et al., 2013). People who have a high level of trust and therefore support for farmers using BMPs, are receiving the sufficient profit from exchanging their financial resources when purchasing products with farmers' engagement in environmentally protective practices and will continue to be more likely to continue this behavior.

When examining preferred communication channels, the respondents of this study indicated they preferred to use mass media and interactive events, such as farmers' markets, as communication channels. This finding supports Borisova et al.'s (2012) study that all of the identified information sources in this study can be used to spread farming information, and the study of Abel et al. (1999) which described the importance of farmers' markets as information sources and educational avenues. However, although 71% of respondents indicated they attended

farmers' markets, only 7% of respondents reported their use of attending activities and events as information sources for farming information. This finding implies farmers' markets have not been used as an information distribution point properly in the studied area.

Lastly, the differences between demographic characteristics of sex, race, and age in this study were found in certain perception and communication channel items. Such findings imply respondents in different races may have different understanding about farmers' use of nutrient BMPs, while respondents' in different sex and ages may have different levels of concerns and beliefs about farmers' engagement in certain BMPs. Additionally, sex, race, and age may influence respondents' selection of using certain communication channels.

Recommendations

Extension has made efforts toward educating farmers on the importance of using BMPs and even management strategies for BMP application to protect the agricultural environment (Allen et al., 1991; USEPA, 2010; Young, 2011). According to the findings of this study, consumers did perceive practicing BMPs as important, and therefore, Extension should continue its efforts regarding current BMP-related educational programs to keep farmers updated on new technologies and try to reach farmers who have not been involved in programs emphasizing the implementation of BMPs.

Findings also indicated the existence of a knowledge gap in terms of consumers' understanding of the actual BMPs of which farmers engage. Thus, further emphasis should be placed by Extension on BMP educational programs associated with communication to connect farmers with consumers around specific BMPs that may seem foreign to consumers. As Jordan and Constance (2008) suggested, consumers should be considered as a part of a sound agricultural system for environmental, economic, and social goods and therefore be engaged in the conversation as the separation between farmer and consumer are leading to these identified knowledge gaps.

When developing Extension programming, Extension educators should consider incorporating tips on how to use the information sources and communication channels suggested by this study. Extension, as an authorized information source, could help farmers spread information about environmentally-sustainable farming practices by providing related information through mass media and on state and county Extension websites and other online sources. Other than being visible on mass media and the Internet, farmers' markets should be used as an interactive opportunity for farmers to communicate directly with consumers (Abel et al., 1999). The communication should use a language consumers can understand through conversations started from topics which directly relate to a consumer's daily life (e.g., water use) and are attractive to the consumers to facilitate their understanding of agriculture (Leeuwis, 2004).

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Future studies are also recommended based on the findings of this study. In order to provide thorough recommendations to Extension to improve the effectiveness of BMP educational programs targeting consumers, differences between demographics should be located by each characteristic in future studies. Similar studies can be conducted in different areas of Florida and other states to explore the results in different locations where programs may not be focused on BMPs. Comparison studies can also be conducted to explore variations of people's perceptions in multiple locations. A correlational study analyzing the relationships between people's perceptions of BMPs and trust and willingness to purchase could be used to further examine relationships and to investigate and demonstrate the existence of possible trends. Moreover, factors impacting consumers' trust in farmers beyond farmers' engagement in BMPs should be further examined and the use of communication channels suggested by this study should be evaluated to ensure the effectiveness of these strategies to further optimize their success.

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"I felt really respected and I know she felt respected too": Using Youth-Adult Partnerships to Promote Positive Youth Development in 4-H Youth

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Youth-adult relationships exist on a continuum from adult-led to youth-led collaborations. However, research suggests that quality youth-adult partnerships, which fall in the middle of this continuum, directly contribute to positive youth development. Given this, the current study evaluated the impact of a 4-H Youth Development program, using youth-adult partnerships and a teens as teachers program model, on positive youth development outcomes of participating youth. Qualitative data were collected from 29 youth to evaluate the 4-H Food Smart Families program presented by Washington State University Youth Advocates for Health (YA4-H!). Data analysis identified themes related to the benefits and challenges of the youth-adult partnership and skills gained from being a teen teacher. When looking at results from a positive youth development perspective, it is evident the youth who participated in youth-adult partnerships and as teen teachers experienced beneficial outcomes. Qualitative codes clearly aligned with 4-H Essential Elements of belonging, mastery, independence, and generosity, indicating positive youth development had occurred despite real-world implementation challenges. Based on our experience and lessons learned, we conclude with suggestions for successful implementation of a youth-adult partnership.

Key Words: positive youth development, youth-adult partnerships, teens as teachers

Introduction

It is well established that youth engagement in structured, supervised, out-of-school activities is associated with both short- and long-term positive outcomes, such as greater psychological health and academic achievement (e.g., Bartko & Eccles, 2003). One important aspect

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enhancing healthy development is the presence of supportive, caring adults within out-of-school activities (Eccles, Barber, Stone, & Hunt, 2003). Although youth engage with adult leaders in a variety of contexts (e.g., teachers, coaches, 4-H club leaders), not all youth-adult relationships are true partnerships. In many instances, adults retain much of the control and power in the relationship. While this power imbalance may be appropriate for some types of activities such as sports, greater developmental outcomes may be reached when youth and adults are equals in the relationship. Research suggests youth-adult partnerships, characterized by shared power, directly contribute to positive youth development (Wong, Zimmerman, & Parker, 2010; Zeldin, Krauss, Collura, Lucchesi, & Sulaiman, 2014). Given this, the current study evaluated the impact of a 4-H Youth Development program, where youth and adults work in partnership to implement a teens as teachers program model, on positive youth development.

Positive Youth Development and the Essential Elements

Positive youth development (PYD) is a strategic approach to youth development focused on empowering youth to actively promote their own positive growth by building external (e.g., relationships, opportunities) and internal (e.g., personal qualities) assets (Scales & Leffert, 2004; Surko, Pasti, Whitlock, & Benson, 2006). As an applied developmental science, PYD is grounded in developmental psychology and driven by an emphasis on youth as agents of change, especially in community contexts (Benson, Scales, Hamilton, & Sesma, 2007). The concept of PYD emerged in the early 1990s in contrast to the more common deficit-based approach that "underestimated the true capacities of young people by focusing on their deficits rather than their developmental potentials" (Damon, 2004, p. 13). As the theory and practice of PYD rapidly developed so did language by which to measure it. The Six C's (i.e., connection, competence, confidence, character, compassion, and contribution), proposed in a synergistic progression by Little (1993), Eccles and Gootman (2002), Roth and Brooks-Gunn (2003a, 2003b), and Lerner and colleagues (2005; Lerner, Dowling, & Anderson, 2003), are widely recognized as the developmental foci and indicators of PYD programming.

As PYD and the six C's became more widespread, 4-H was beginning to acknowledge the importance of PYD within its programming. In 1999, eight Critical Elements (listed in Table 1) were identified as crucial components of PYD experiences by evaluators from the National 4-H Impact Design Implementation Team (Martz, Mincemoyer, & McNeely, 2009). These eight Critical Elements were later simplified by Cathann Kress, former Director of Youth Development at National 4-H Headquarters, into the four Essential Elements of belonging, mastery, independence, and generosity. These four Essential Elements were modeled after the Circle of Courage, a PYD model developed in 1990 by Brendtro, Brokenleg, and Van Bockern (2005) who consider the Essential Elements vital and universal needs of all children. The Essential Elements are designed to work in concert with one another to empower youth while building positive assets and to best promote healthy development when program facilitators

emphasize them in the appropriate hierarchy: establishing belonging before mastery, followed by opportunities for independence then generosity (Martz et al., 2009).

The four Essential Elements are a holistic assembly of the eight Critical Elements and the Six C's. Table 1 demonstrates these relationships and related vocabulary. In addition, this table clarifies how the key features of developmental relationships (i.e., attachment, progressive complexity, balance of power, and reciprocity) align neatly within the Essential Elements framework. These features are thought to be a foundational component of youth-adult partnerships and subsequent PYD outcomes (Bowers, Johnson, Warren, Tirrell, & Lerner, 2015; Li & Julian, 2012) and will be reviewed in detail later in this article.

Table 1. Synthesis of Positive Youth Development Indicators

Four Essential Elements	Essential Element Definitions[1,2]	Eight Critical Elements[3]	Features of Developmental Relationships[4]	Six C's[5]
BELONGING	Opportunity to establish trusting connections.[1] Youth need to know they are cared about and feel a sense of connection to others.[2]	• Positive relationship with caring adult • Safe environment • Inclusive environment	Attachment	Connection
MASTERY	Opportunity to solve problems and meet goals.[1] Youth need to feel they are capable and experience success at meeting challenges aligned with their own interests.[2]	• Engagement in learning • Opportunity for mastery	Progressive Complexity	Competence
				Confidence
INDEPENDENCE	Opportunity to build self-control and responsibility.[1] Youth need to know that they are able to influence people and events through decision-making and action.[2]	• Opportunity to see oneself as an active participant in the future • Opportunity for self-determination	Balance of Power	
				Character Contribution
GENEROSITY	Opportunity to show respect and concern.[1] Youth need to feel their lives have meaning and purpose.[2]	• Opportunity to value and practice service for others	Reciprocity	Compassion

[1]Brendtro et al., 2005, p.132; [2]Kress, 2004, p.1; [3]Martz et al., 2009; [4]Li & Julian, 2012; [5]Lerner et al., 2005

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Youth-Adult Partnerships

Since its inception in the early 1900s, the 4-H Youth Development program has fostered positive relationships between youth and adults. Initially, these relationships were adult-driven – not allowing for equal youth voice. However, in the 1970s, policy changes initiated by the National Commission on Resources for Youth and the National Task Force on Citizen Education highlighted the importance of youth and adults working together. These youth-adult partnerships were identified as a "strategy for increasing civic and political knowledge, promoting personal efficacy, and encouraging later democratic action" (Zeldin, Christens, & Powers, 2013, p. 386). Recently, the model of a reciprocal, evolving relationship through youth-adult partnerships has become more prevalent. In the 2000s, empirical data began to support youth-adult partnerships as a strategy to promote positive youth development (Camino, 2000; Zeldin & Petrokubi, 2006). Zeldin and colleagues took this one step further, stating "From the perspective of accomplished practitioners, the *most effective* [emphasis added] type of youth participation is typically labeled as youth-adult partnership" (2014, p. 338).

A youth-adult partnership is characterized by a supportive relationship of mutuality and respect between youth and adults with a focus on shared learning and decision-making while working together for a common purpose over a sustained period of time (Camino, 2000; Zeldin et al., 2013; Zeldin, Krauss, Kim, Collura, & Abdullah, 2016; Zeldin & Petrokubi, 2006). Li and Julian (2012) proposed the underlying foundation of the youth-adult partnership is developmental relationships, which are necessary to reach sustained and effective positive youth outcomes. As depicted in Table 1, developmental relationships are comprised of four interwoven features of attachment (e.g., positive emotional connection), progressive complexity (e.g., scaffolding), balance of power, and reciprocity, and tie into the Essential Elements framework as PYD indicators. These relationships are key to "produc[ing] meaningful developmental change" (2012, p. 164), such as early development of cognitive and social skills for children, and later outcomes of greater social skills, emotion regulation, and general psychological well-being.

Components of Youth-Adult Partnerships

Youth-adult partnerships based on the Essential Elements (and developmental relationships) support positive developmental outcomes for youth. Zeldin and colleagues (2016) proposed the two main components of youth-adult partnerships, youth voice in decision-making and supportive adult relationships, lead to the developmental outcomes of youth empowerment and community connectedness when encompassed by program safety and engagement.

Youth voice, the opportunity to speak on behalf of one's self and others, is an important ingredient to identity formation and gaining competence and social trust by providing youth

opportunities to explore their identity, practice and sharpen critical thinking, and develop teamwork and communication skills (i.e., mastery, independence; Zeldin et al., 2016). The second main component, supportive adult relationships, is key to the developmental relationship that enables the youth to increasingly gain skills and power (i.e., mastery, independence; Camino, 2005; Zeldin et al., 2016). A developmental relationship with a caring adult provides a sense of belonging and increased commitment to community and social networks, as well as personal and social well-being and empowerment (i.e., belonging, generosity; Christens, 2012; Zeldin & Petrokubi, 2006).

Youth participation in youth-adult partnerships is associated with youth empowerment, self-determined behaviors, and the ability to see one's self as having influence (i.e., independence; Zeldin et al., 2014). Anderson and Sandmann (2009) depicted this in their model for youth empowerment, identifying five key practices for a successful youth-adult partnership including fostering self-efficacy, setting a context for action, structuring the task, creating a sense of ownership, and coaching for performance. Empirical research has supported this association between participation and empowerment. For example, Cowan and Smith (2010) found that youth participating in a youth-adult partnership while planning a leadership event for their peers reported positive outcomes, such as greater sense of empowerment and independence (e.g., greater self-confidence and autonomy).

In addition to youth empowerment, research has suggested a link between youth-adult partnerships and greater community connectedness (i.e., belonging, generosity; Zeldin, 2004; Zeldin et al., 2016). The connections formed with adults and peers can provide networks of opportunities for youth, including access to scholarships, awards, and employment (Zeldin et al., 2013). In addition, such community interactions provide opportunity for generosity to be "engaged with and act to enhance their world" (Lerner, Lerner, von Eye, Bowers, & Lewin-Bizan, 2011, p. 1109). Greater connectedness within their community, in turn, enhances the youth-adult partnership by enabling adults to observe youth competence and motivation (Zeldin, 2004).

Teens as Teachers

Youth-adult partnerships can be utilized in multiple settings and are a natural fit within teens as teachers (TAT) program models, which are often employed by Extension youth development programs such as 4-H (Lee & Murdock, 2001). TAT program models utilize cross-age teaching in which teens (i.e., youth) become lead teachers providing academic lessons to younger youth. Through the Essential Elements framework, youth-adult partnerships, using intentionally designed TAT program models, are primed to provide high quality PYD for both the youth and those they teach. Cross-age teaching programs are "believed by many to be among the most effective at providing youth with opportunities that will lead to healthy development and

avoidance of delinquent behaviors" and therefore nicely complement a youth-adult partnership (Lee & Murdock, 2001, p. 1).

Lee and Murdock (2001) outlined critical components for TAT success, all of which align within one or more of the four Essential Elements. A successful TAT program model promotes belonging through active teen recruitment, team building, recognition, and the support of dedicated adults. Mastery and independence are promoted by strong, detailed curricula, initial and ongoing trainings, communication and support plans, and appropriate evaluation. Generosity is promoted through the service teen teachers provide to their community. Of all the components, Lee and Murdock (2001) found the passion and commitment of adults working in partnership with teen teachers as the key factor for success and long-term sustainability.

Current Study

The purpose of the current qualitative study was to evaluate the impact on youth participating in youth-adult partnerships to implement the 4-H Food Smart Families (4-H FSF) program presented by Washington State University (WSU) Youth Advocates for Health (YA4-H!). YA4-H!, originally developed by Dr. Mary Arnold at Oregon State University, is an umbrella program that engages youth and adults in partnership to address critical community health issues. WSU adopted this program and under it, the 4-H FSF project was implemented using youth-adult partnerships to support 4-H teens as teachers and advocates for health teaching younger youth nutrition, cooking, and food-related budgeting lessons using the Choose Health: Food, Fun, and Fitness curriculum (CHFFF; Cornell University, 2014). Within the current study, we focused on the experience and positive youth development outcomes related to being a youth partner in the 4-H FSF program.

Methods

The study employed a qualitative approach of using focus groups and interviews to capture rich detail on the experience of being in a youth-adult partnership. A focus group is a "group interview – centered on a specific topic ('focus') and facilitated and coordinated by a moderator or facilitator – which seeks to generate primarily qualitative data, by capitalising [sic] on the interaction that occurs within the group setting" (Sim & Snell, 1996, p. 189). Focus groups are a cost-effective and efficient approach to understanding phenomena and provide for a less formal and structured environment that "facilitates self-disclosure of teens and permits researchers to capture experiences and perspectives that may be less readily available via one-on-one situations" (Jones & Broome, 2001, p. 90). When focus groups are not feasible (e.g., due to small sample size, geographical distance), interviews are a viable alternative as long as the same protocol is used for both methods of data collection to facilitate continuity.

Participants

The sample was taken from a roster of all teens (age 14 to 18 years) who participated as teen teachers in the 2013-2014 implementation of 4-H FSF presented by YA4-H! Out of 61 teens who participated as teen teachers, 29 (48%) participated in the follow-up qualitative evaluation. Twenty-four participated in one of four focus groups, and five participated in a one-on-one interview between October 2014 and January 2015. These 29 teens (59% female) represented eight different counties throughout Washington State. Teen participants were recruited via phone call, email, and word of mouth. The university-affiliated research office found the project was exempt from the need for IRB review; however, parental and youth consent were obtained for all study participants.

Program

YA4-H! employed a three-step implementation model: 1) a 12-hour train-the-trainer event for youth and adult partners statewide, 2) recruitment and training of additional youth and adults at the community level, and 3) implementation of the selected curriculum or process. In the current project, YA4-H! youth-adult partners were engaged in the 4-H FSF program which utilized teen teachers with adult partners to teach CHFFF to younger youth, 8 to 12 years old, in their communities.

Critical to the success of the program is the initial 12-hour train-the-trainer event. The Essential Elements (Kress, 2004), best practices for teens as teachers (Lee & Murdock, 2001), and best practices for enhancing youth-adult partnerships (Denner, Meyer, & Bean, 2005) were considered when designing the structure of the training. The training was held over a weekend in a central location within the state where youth-adult partners, comprised of one adult and two teens, participated from eight communities. The training was facilitated by an experienced YA4-H! youth-adult team consisting of the research staff (two of whom were curriculum authors), a nutrition specialist, and an experienced teen teacher. The 12 hours were divided into 3 sections: 4 hours on working as youth-adult partners (Arnold & Gifford, 2014), 4 hours on teens as teachers (Arnold, Gifford, Deen, & Edwards, 2015), and 4 hours on subject matter content (i.e., CHFFF). Upon returning to their communities, youth-adult partners recruited additional youth and adults, conducted training for the new members, and implemented the 4-H FSF model of teaching the CHFFF curriculum at a variety of community settings.

Procedures

Prior conceptual work on positive youth development and manualized curriculums on youth-adult partnerships and teens as teachers by Arnold and colleagues (Arnold et al., 2015; Arnold & Gifford, 2014) were used as sensitizing information to develop the focus group and interview

protocol and inform the coding process. The research team and curriculum experts reviewed the protocol questions to ensure they represented main concepts of interest. Interviews and focus group sessions were conducted using a semi-structured protocol to achieve consistency across data collection methods. Probing or follow-up questions were left to the discretion of the facilitator. The project evaluator led two focus groups and five interviews, while two county Extension faculty who were directly involved with the project each conducted one focus group. Focus group questions covered the topics of nutrition (e.g., "How do you think participating in the program has impacted your nutrition or healthy eating?"), the youth-adult partnership (e.g., "What was your experience like in the youth-adult partnership?"), the translation of teen teacher skills to job skills (e.g., "Thinking back on your experience, not only working with adults but in being a teen teacher, are there any skills you learned that could be used in future or current work setting?"), the translation of teen teacher skills to other life areas (e.g., "How do you think the skills you learned could translate into other areas of your life?"), and physical activity (i.e., "How do you think participation in the program has impacted your level of physical activity?"). The current study focused on responses related to the youth-adult partnership and the translation of TAT skills gained to employment and other life areas.

Data Analysis

All interviews and focus groups were conducted until data saturation had been achieved or the point where additional data provided no new information and no new themes were observed (Guest, Bunce, & Johnson, 2006). Sessions were audio recorded and transcribed verbatim by a project staff member. Data analysis followed the four steps to generate best qualitative evidence from Green and colleagues (2007), including data immersion, coding, creating categories, and identifying themes. Three members of the research team read through all transcripts (i.e., data immersion), independently coded (i.e., coding), and collectively discussed and developed an emergent coding scheme based on theory, curriculums used, and prior empirical work (i.e., creating categories). To achieve reliability, six additional research team members independently coded each transcript with the previously developed coding scheme. All authors of the current study then convened to identify themes present (i.e., identification of themes). Intercoder agreement was calculated by percent of agreement divided by the percent agreement plus percent disagreement for coding pairs. Due to the large number of coded transcripts, 33% of transcripts were randomly selected for reliability calculations. Discrepancies within codes were discussed among coders until an acceptable level of agreement was reached (Creswell, 2013).

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Results

Benefits and Challenges of the Youth-Adult Partnership

Youth were asked about their experience in the youth-adult partnership (Y-AP) and specifically, what worked well and challenges faced. Seven subcodes were identified under the broader category of benefits of Y-APs. Subcodes included mutual respect, the opportunity to lead/teach, having an adult as a supportive mentor/coach, friendship with adults and peers, shared responsibilities/partnerships with adults and peers, independence/autonomy in teaching, and having fun.

Youth reported they felt as equals in the relationship with a supportive adult. One youth reported, "… she [the adult partner] didn't try to control anything, and we worked together, and it wasn't as if she was a superior – it was like we were equal." A second youth noted the mutual respect and the availability of the adult as a mentor when needed, "I felt really respected, and I know she felt respected too. She let me lead but was really helpful when I needed help." This support was noticed as youth had the opportunity to teach lessons independently, "…when it came to the actual teaching, we were pretty independent and were able to do things with our other teen teachers." Finally, youth appreciated the opportunity to work collaboratively not only with adults but also to develop relationships with peers as illustrated by this female, "We [youth] were all very close, and like kind of became friends, and it was a lot of fun."

Youth were also asked about the challenges of Y-APs. Although few challenges were identified, two common challenges included communication within the partnership and logistics such as organizing schedules and transportation. One female youth reported a challenge was "the time before the lessons and communication about when we needed to be places and where we needed to be." Method of communication was a challenge with youth and adults tending to use different forms. For example, many youth preferred to text versus read and answer emails. Other youth acknowledged transportation as a challenge since some youth were not able to drive on their own yet.

Skills Gained from Participating as Teen Teachers

In the process of participating as a teen teacher, youth reported gaining skills related to the four themes of teaching, communication, leadership, and emotional intelligence. Teaching skills encompassed aspects of preparation, engaging with youth, managing the classroom, and adapting curriculum. One youth who discussed the importance of planning stated, "I learned how to plan ahead of time and make sure I schedule my time well…," while another teen reported gaining flexibility as teens "learn[ed] how to make last minute adjustments…and last minute improvising" while teaching.

Communication skills included those related to public speaking (e.g., greater skill and confidence), being assertive, listening, tailoring a message to a specific audience, and nonverbal skills. Youth reported greater confidence in their own speaking skills, such as, "I was really shy to talk in front of a whole bunch of people but… I could do it now without being shy." Youth also noted how important it was to change their communication approach depending on to whom they were speaking. One youth stated:

> For example, if one of your friends said something wrong you'd want to be like "oh no, you're so wrong." Like if a kid says it wrong, you'd be like "nice try but it's actually this," so learning to change from talking to friends to kids.

Leadership skills gained spanned dealing with stressful situations, responsibility, organization, working in groups or teams, and professionalism. Many youth noted the importance of working as a group, with one stating, "…pretty much we had to work as a team 'cause some people are better at doing something than others. Like one person's probably better at cutting stuff or one person's better at talking to others, you know." Another youth noted how their own style may conflict with others:

> I'm kind of a controlling person, and I'm like, okay, I know this is going to work, so we should do this. But then I'm like wait, there's other ways we can do it. I think it (being a teen teacher) taught me a lot because I know not everywhere I work there's going to be people that work with me – sometimes I'm going to clash with people.

Finally, the subcode of emotional intelligence represented respecting others, relationships with other people, and personal characteristics or traits. Multiple youth reported developing skills related to patience throughout their experience. For example, one youth stated:

> Because we're teaching little kids and that requires a lot of patience, but towards the end, I would sort of get frustrated, and I couldn't, of course, be like, rude to any of the kids, so I would have to, like, take a deep breath and say, ok, this is what we're going to do.

Discussion

When looking at the results from a PYD perspective, it is evident the youth who participated in youth-adult partnerships as teen teachers experienced beneficial outcomes. Specifically, emergent qualitative codes clearly aligned with the 4-H Essential Elements of belonging, mastery, independence, and generosity, indicating PYD had occurred even when the overall program did not explicitly target such outcomes.

Evidence of Positive Youth Development

By developing a training and program in line with Zeldin et al.'s (2016) conceptualization of youth-adult partnerships, the critical components of a teens as teachers program model (Lee & Murdock, 2001), and characteristics of developmental relationships (Li & Julian, 2012), we anticipated positive youth development outcomes would emerge from the experiences of youth partners.

The two key components of a youth-adult partnership, youth voice in decision making and supportive adult relationships, were illustrated in emergent codes related to mutual respect, shared responsibilities with adults, and adults acting as a supportive coach or mentor. These codes also reflect the characteristics of developmental relationships between the youth and adult. Critical components of a TAT program model were intentionally built in through aspects such as the curriculum (i.e., Arnold et al., 2015) and structured training and were also evident through youth responses. Within qualitative codes, youth reported shared responsibilities, partnerships, and friendships with adults as well as other teens and reported greater confidence and comfort with a number of teaching-related skills (e.g., classroom management, preparation).

Given this foundation, finding evidence of the Essential Elements within the data was not surprising. Participating youth developed a sense of belonging through intentional engagement with adults and other youth in a positive environment where they were treated as equals. They developed mastery as they increased their knowledge, confidence, and skills related to being a teen teacher. Independence was evidenced through the opportunity for autonomy within the teaching environment with a supportive adult present. Finally, generosity was observed through the development of emotional intelligence where youth developed greater respect and appreciation for those around them.

Overall, this suggests that youth participants achieved short-term gains indicative of positive youth development. Continuing along this line, we would expect these youth to maintain a thriving trajectory toward adulthood, continue to engage and contribute positively within their world (e.g., social, community), and be less likely to engage in risk or problem behaviors (Lerner et al., 2011).

PYD as a Secondary Outcome

One notable feature of the current program was the positive impact made on youth when the intended focus of the program was the younger youth that were receiving the lessons. Broadly, the 4-H FSF program was designed with the aim of supporting healthy food choices for youth and families from point of purchase to preparation and enjoyment at the family table. This healthy living and nutrition education program primarily targeted younger youth aged 8 to 12

years. The role of older youth was limited to the delivery methods of the youth-adult partnership and teen as teacher program model. Therefore, the intended outcome for the program was primarily to promote nutrition in younger youth and their families. However, what the program neglected to fully appreciate was the potential for a PYD opportunity for the teens involved as partners and teachers. Results from the current study demonstrate how effective a purposeful youth-adult partnership can be in increasing PYD outcomes.

Moving Beyond Engagement

Youth today have ample opportunities for engagement with youth programs, illustrated by the fact that 83% of 12 to 17 year olds participate in at least one organized activity outside of school (Child and Adolescent Health Measurement Initiative, 2012). However, simply attending and participating does not achieve the same developmental benefits as purposefully engaging youth. In addition, the balance of power between youth and adults varies drastically depending upon the structure of the activity. In the current study, youth may have initially participated for external reasons (e.g., my parents signed me up); however, research suggests that when youth develop a personal meaning and connection to the activity through internal motivation, psychological engagement is facilitated, which promotes greater developmental benefits (Dawes & Larson, 2011). Results from the current study suggest the shared power present in youth-adult partnerships and the opportunity to be a teen teacher were associated with such psychological engagement as evidenced by the development of competence (e.g., communication skills gained), the understanding of how skills gained in the youth-adult partnership could be used for future goals (e.g., how to communicate with others in the future), and the ability to connect the activity outside of themselves (e.g., greater respect for others). By engaging youth as an equal partner, rather than in an adult-led partnership, we maximized the potential for PYD outcomes.

Implementation Challenges

Results from the current study demonstrate the value of intentional opportunities for teens to experience PYD. The 4-H FSF program was implemented by 4-H Youth Development professionals who understand the evidence behind youth-adult partnerships and have seen firsthand the impact quality partnerships have in the lives of young people. However, as with any curriculum, real-world factors highly influence implementation. In the current study, issues arose when implementing 4-H FSF at different county sites resulting in varying levels of youth participation.

One challenge Extension educators face is the reality of reaching participation numbers expected by funders and stakeholders at the expense of spending the time necessary for the type of PYD outcomes desired. The 4-H FSF program was intended to reach 2,500 younger youth 8 to12 years old using youth-adult partnerships and a teens as teachers program model. In order to

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reach that number of consistently attending younger youth, some counties partnered with their local school districts to offer the curriculum during educational class time. Unfortunately, this meant youth (i.e., teens) were in school when the curriculum was delivered and therefore were not able to participate as teachers. Second, many county coordinators for the 4-H FSF program partnered with other youth serving organizations within their communities. For example, Boys and Girls Clubs and local Parks and Recreation held after school and summer programs for youth in low-income neighborhoods at nearby community facilities. In these collaborations, 4-H FSF operated within the framework of existing programs. Third, while many counties were successful at engaging youth in partnership with adults, other counties involved youth as 'helpers' (i.e., adult-led collaborations) to the process instead of being truly engaged in a quality youth-adult partnership. Finally, youth lead busy lives, and one challenge was keeping the same youth engaged for the duration of the program. While there were examples of youth who continued to be involved after the 4-H FSF program ended, there were other youth who dropped out due to conflicts or competing interests.

Implications and Future Directions

Despite these challenges, positive outcomes were identified in participating youth. Based on our experience and lessons learned, we have identified three suggestions for successful implementation of a youth-adult partnership including basing programming on theory and evidence, proactively anticipating potential challenges of youth and adults working together, and considering funding deliverables.

In addition to the Essential Elements, it is important to build programs on a solid foundation of theory and evidence such as the components of youth-adult partnerships (Zeldin et al., 2016), elements essential to the success of teens as teachers (if using this program model; Lee & Murdock, 2001), and peer-reviewed curricula (Arnold et al., 2015; Arnold & Gifford, 2014). As described earlier, our initial train-the-trainer weekend event was critical to not only disseminating information about curriculums used but also to fostering positive relationships between youth, their adult partners, and peers.

Sustained youth engagement is key to the youth-adult partnership, and some challenges can be anticipated prior to program implementation. In the current study, the train-the-trainer event included a discussion on the benefits and challenges of working in a youth-adult partnership where youth and adults were in separate groups and had the opportunity to share their challenges with one another. Challenges identified in this training activity and in the qualitative evaluation focused on transportation (e.g., coordinating transportation, working around busy schedules) and communication issues (e.g., method and timeliness of communication). By identifying these issues prior to program implementation, youth-adult partners can jointly strategize ways to mitigate these challenges.

The program described here had funding to cover the costs of additional staff wages, training costs, curriculum, travel, and supplies. In planning any program involving youth-adult partnerships, how the program will be implemented and sustained must be considered carefully. At a minimum, the costs of initial and ongoing training and support must be determined, as training is key to the success of the partnership.

From an evaluation perspective, additional information on the youth-adult partnership would be beneficial. In the current study, qualitative data were collected from participating youth only. In the future, collecting data from both youth and their adult partners would provide a more holistic representation regarding the quality of the youth-adult experience. One potential tool for this is the Involvement and Interaction Rating scale (Jones & Perkins, 2005) which quantitatively assesses constructs of youth involvement, adult involvement, and youth-adult interaction. This could then supplement qualitative data collection approaches such as those used in the current study.

Conclusion

4-H remains one of the largest youth development programs in the United States. As such, it is important that 4-H Youth Development not only continue to use the 4-H Essential Elements to drive programing but also incorporate theoretically- and empirically-based approaches to maximize positive youth development outcomes. Supportive, caring adults are considered one of the most important strengths in an adolescent's life promoting youth development. Results from the current study add to the growing body of literature finding quality youth-adult partnerships serve to promote youth development outcomes in the short-term and place youth on a thriving trajectory toward adulthood in the long-term.

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Translating MyPlate into Food Selections that Meet *Dietary Guidelines* Recommendations

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The objective was to determine if individuals could plan a diet that met the Dietary Guidelines (DG) using MyPlate as a guide. Participants (n=73) were 38.9±17.0 years of age, with 97% being Non-Hispanic White, 95% having some college education, and Body Mass Index (BMI) of 26.7±5.9. Participants used MyPlate to plan a one-day menu using food models. Nutrition literacy, nutrition scanning behavior, and nutrition information-seeking experience were assessed. Menus were analyzed using Nutrition Data Systems for Research and were compared to individualized DG recommendations. A multiple linear regression examined what characteristics predicted energy difference scores (difference between energy from menu and DG). Participant menus were lower in energy, grains, and dairy; and higher in fruits and vegetables than DGs ($p < 0.001$). The regression model was significant ($R^2 = 0.24$; $p < 0.01$) with sex ($B = -386.92$; $p < 0.05$), BMI ($B = 29.29$; $p < 0.05$) with nutrition information-seeking experience ($B = 44.90$; $p < 0.05$) predicting energy difference score. Being male, having a higher BMI, and experiencing more frustration during nutrition information-seeking were associated with higher energy difference scores. It was challenging for this sample of well-educated individuals to make food selections that met the DGs using MyPlate. Extension professionals should not assume that consumers understand and can apply the key messages of MyPlate.

Keywords: MyPlate, Dietary Guidelines, translating nutrition information

Introduction

Currently, many Americans are selecting diets that do not meet the national recommendations for optimal health and place them at higher risk for development of chronic disease (Hiza, Casavale,

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Guenther, & Davis, 2013; Krebs-Smith, Guenther, Subar, Kirkpatrick, & Dodd, 2010; Rice, Quann, & Miller, 2013; U.S. Department of Agriculture & U.S. Department of Health and Human Services [USDA & USDHHS], 2010). More specifically, Americans are consuming diets that are excessive in energy from solid fats and added sugars and insufficient in fruits, vegetables, and dairy (Krebs-Smith et al., 2010). In 2011, the U.S. Department of Agriculture (USDA) released MyPlate, an educational tool that was developed as a part of an initiative to help Americans make better food choices based on recommendations in the *2010 Dietary Guidelines for Americans* (Figure 1) (Post, Haven, & Maniscalco, 2011, 2012; U.S. Department of Agriculture: Center for Nutrition Policy and Promotion [USDA CNPP], 2011; USDA & USDHHS, 2010). The USDA materials recommend that the MyPlate icon is not meant to be used alone to change consumer behaviors but rather as a reminder to eat healthfully. Research has found that mothers who were familiar with MyPlate and found it to be relevant and easy to understand also thought the icon would help them and their children eat better (Wansink & Kranz, 2013). This suggests that individuals think MyPlate can be used to inform their eating habits and demonstrates the value in examining how the information presented by the MyPlate icon is translated to food selections.

Figure 1. The MyPlate Icon

An additional purpose of MyPlate is to direct consumers to the ChooseMyPlate.org website for supplementary information. However, previous research on MyPyramid, the nutrition icon predating MyPlate released with the *2005 Dietary Guidelines for* Americans (USDA & USDHHS, 2005), has shown that not all Americans have access to the Internet. Those with internet access may not visit the MyPyramid website to obtain nutrition information (USDA CNPP, 2005; USDA & USDHHS, 2005; Zoellner, Connell, Bounds, Crook, & Yadrick, 2009). Consequently, MyPlate, and previously MyPyramid, are often viewed and interpreted independent of additional information. For MyPlate to fulfill its intention of prompting consumers to think about positive dietary behaviors, it is of interest to determine if individuals are able to process its contents and translate the information into food selections that meet the *Dietary Guidelines* recommendations. To date, there is no research assessing the use of the MyPlate icon independently to guide food selections.

Research also suggests there may be individual differences in the ability to interpret health information (Cutilli & Bennett, 2009). Health literacy, or the capability to obtain, process, and

understand health information, is associated with more positive health behaviors (Selden, Zorn, Ratzan, & Parker, 2000). Previous research found health literacy was higher in women than men; in White and Asian/Pacific Islanders compared to Black, American Indian/Alaskan Native, Hispanic, and multiracial adults; and in adults aged 25–39 compared to other adult age groups (lower health literacy rates are found in adults 65 years and older) (Cutilli & Bennett, 2009).

Nutrition literacy is similar to health literacy but relates specifically to nutrition (Zoellner et al., 2009). Research on nutrition literacy has found that greater nutrition literacy is associated with a healthier eating pattern (Wall, Gearry, Pearson, Parnell, & Skidmore, 2014). The relationship between nutrition literacy and understanding MyPlate has not been examined. An individual's health seeking behaviors and overall experience searching for health information may be related to health knowledge and application of health information (Arora et al., 2007; Shim, Kelly, & Hornick, 2006). Health information-seeking behaviors are positively related to health habits, with individuals who actively search for health information having a greater health knowledge and adoption of healthier behaviors (Shim et al., 2007). Since nutrition is one aspect of health, a similar relationship may exist between an individual's approach and experience searching for nutrition information and his/her nutrition-related habits; however, this has not been examined.

The primary purpose of this study was to compare a one-day menu developed using MyPlate to individualized (based on age, sex, weight, and physical activity level) dietary recommendations from the *2010 Dietary Guidelines for Americans* (USDA & USDHHS, 2010) to see if MyPlate can be used independently as a tool for planning a menu in line with recommendations. A secondary purpose was to examine what individual characteristics (demographic characteristics, nutrition literacy, attention to nutrition information, and nutrition information-seeking experience) were related to selecting a menu that was most consistent with the recommendations.

Methods

A convenience sample of participants was recruited at a small, private university from March to September 2012 through flyers placed around campus; faculty, staff, and student e-mail listservs; and direct mailings to campus mailboxes of faculty and staff. Inclusion criteria were that the participant needed to be English speaking and between the ages of 18 and 65 years. Participants were excluded if they had a degree or minor in nutrition or were a current student pursuing a degree or minor in nutrition as these individuals were assumed to have a greater knowledge about nutrition and the MyPlate icon at the start of this study than the general population. The University's Institutional Review Board approved this study.

Participants came to the Human Performance Laboratory at Marywood University for two individual appointments scheduled two weeks apart. At the first session, after informed consent was signed, participants completed a demographics questionnaire that assessed age, sex,

education level, race, ethnicity, and physical activity; the New Vital Sign (NVS) nutrition literacy questionnaire; and the Attention to Nutrition Information and Information-Seeking Experience (ANIISE) questionnaires (Arora et al., 2007; Shim et al., 2006; Weiss et al., 2005).

The NVS is a validated health and nutrition literacy screening tool (Weiss et al., 2005). Participants were verbally provided with six interview-administered questions related to a nutrition facts food label. The instrument was developed as a screening method to measure health literacy, or a person's ability to understand and process health information. A total score is calculated by counting the number of correct answers, resulting in a possible score of 0 to 6, with higher scores representing greater nutrition literacy. The instrument shows good reliability ($\alpha > .70$) and performs well against other validated literacy instruments (Weiss et al., 2005).

The ANIISE questionnaires were originally developed to assess attention to and the seeking experience for finding health information (Arora et al., 2007; Shim et al., 2006). The instruments were tested for reliability and indicated adequate internal consistency ($\alpha = .70$ and .82, respectively). For this study, the word "health" was changed to "nutrition," and "nutrition" was added before the word "information" in the ANIISE to focus on nutrition information specifically. Five people from the target population participated in a respondent debriefing process. They were informed on the purpose of the study and questionnaire. Then, the researcher asked each question and provided probes to the participant to assess clarity and understanding of questions. All participants felt the questions were clear and no further changes were made. A summary variable was calculated for each of the two subscales of the questionnaire. An attention to nutrition information summary variable was calculated by averaging the participant responses to the five items in that subscale (higher score indicates more attention is paid to nutrition information from a variety of sources) (Shim et al., 2006). A nutrition information-seeking experience subscale was calculated by creating a composite score for the six items in that subscale (higher score indicates a higher level of frustration with the process of finding accurate nutrition information) (Arora et al., 2007).

Height was measured on a stadiometer after removing shoes, and weight was measured on a calibrated scale (Weigh Beam Eye-Level Model #337, Detecto, Webb City, MO, USA) with shoes and outer layers of clothing removed according to standard protocols (Lohman, Roche, & Martorell, 1988). Body Mass Index (BMI) was then calculated as weight in kilograms (kg) divided by height in meters squared (m^2).

In a separate room, a large variety of food models (Nasco, Fort Atkinson, WI, USA; with representation from all of the food groups) and papers labeled Breakfast, Lunch, Dinner, and Snacks were available, and either the MyPlate or MyPyramid icon was on display (only results from MyPlate are included in the current study). The MyPlate poster was printed from the ChooseMyPlate.gov website (Figure 1). Participants were randomly assigned to view either

MyPlate or MyPyramid at their first session via the coin flip method. Participants were asked to use the icon and provided food models to plan a full day's menu for someone of their same age, gender, height, weight, and physical activity level they believed would match the information displayed on the poster. Participants were told to select foods for breakfast, lunch, and dinner and to include snacks if they thought snacks would be necessary to help them meet the guidelines recommended on the poster. To select foods for an individual meal or snack, the participants were told to place the selected food models in the designated spot on the table for the specific meal or snack that was marked with a paper labeled with the name of the eating occasion. Each paper also included blank lines where participants had the opportunity to write in any foods that they wished to include on their one-day menus that were not available as food models.

Once the participants made their menu, the research assistant reviewed, in detail, the foods that were selected for each meal and snack and asked the participant for any necessary clarifications. For each food selected, research assistants inquired about the serving size of the food ("How much would you plan to eat of this food?"), how the food would be prepared ("Would you plan to have the chicken baked or fried?" or "Would oil be added for cooking?"), and if there would be any additions to the food. Example clarification questions about additions to foods included asking about common food combinations such as if a participant would plan to add creamer to coffee, milk to cereal, or dressing to a salad. At the second session (2 weeks later), the same protocol was followed except the other icon was displayed. After completing both sessions, participants were compensated for their time with a $10 gift card to a local supermarket.

The participant menus were entered into Nutrition Data Systems for Research (NDS-R, version 2013) developed by the Nutrition Coordinating Center, University of Minnesota, Minneapolis, MN, to calculate total energy and servings from each food group: grains, vegetables, fruits, dairy, and protein. This calculated dietary information was then compared to the energy and food group recommendations provided by the *2010 Dietary Guidelines for Americans* for an individual of the participant's same age, gender, height, weight, and activity level. For example, the information for a 20-year-old female that weighed 140 lbs., was 5'7" tall, and was physically active less than 30 minutes per day was entered into the SuperTracker on ChooseMyPlate.gov which provided the following daily recommendations: 2,000 Calories, 6 oz. grains, 2.5 cups vegetables, 2 cups fruit, 3 cups dairy, and 5.5 oz of protein. An "energy difference score" was calculated by subtracting the Dietary Guideline energy recommendation from the amount of energy in the menu the participant developed. A larger energy difference score represents a menu that is further from the recommendations.

Data Analysis

To compare the differences between total energy and servings from each of the food groups for the menus selected using MyPlate and the *2010 Dietary Guidelines* recommendations, *t*-tests

were calculated. A multiple linear regression was used to determine if demographic characteristics (age, sex, BMI, and education), nutrition literacy, attention to nutrition information, and nutrition information-seeking experience predicted energy difference score. Results were considered significant at $p < 0.05$. Data were analyzed using IBM SPSS (version 21, 2013, SPSS Inc., Chicago, IL).

Results

Participants ($N = 73$) were predominantly female (83.6%), had at least some college education (95.9%), were White (97.3%), and non-Hispanic (100%). Table 1 provides further details of the participant demographics. Only one participant was lost to follow-up.

Table 1. Participant Characteristics and Scores on the NVS and ANIISE Questionnaires

Characteristic	
Age (years)	38.9 ± 17.0
Sex (% female)	83.6
Race (%)	
Black	2.7
White	97.3
Hispanic (%)	
Yes	100.0
No	0.0
Education (%)	
High School	4.1
Some College	26.0
College Graduate	26.0
Graduate School	43.8
Weight Status (%)[a]	
Underweight	4.1
Normal Weight	43.8
Overweight	21.9
Obese	30.1
Test Scores	***M (SD)***
NVS	5.2 (1.2)
ANIISE - Attention to Nutrition Information	2.5 (0.6)
ANIISE - Nutrition Information-Seeking Experience	14.2 (2.9)

[a]Weight status based on Body Mass Index (BMI). BMI < 18.5 – Underweight, BMI 18.5-24.9 – Normal Weight, BMI 25-29.9 – Overweight, BMI 30 and above – Obese (Centers for Disease Control and Prevention, 2015)

Results showed that the participant-planned menus using MyPlate were significantly ($p < 0.001$) different from the *2010 Dietary Guidelines* recommendations in energy, grains, vegetables, fruits, and dairy. More specifically, the menus were significantly lower in energy, grains, and dairy and higher in fruits and vegetables than the recommendations (see Table 2).

Table 2. Energy and Food Group Comparisons Between Menus Selected Using MyPlate and the 2010 Dietary Guidelines Recommendations (M ± SD)

Variable	MyPlate Menu	Recommendation	*p*-value
Energy (kcals)	1426 ± 475	2169 ± 369	< 0.001
Grains (ounces)	3.7 ± 2.1	7.0 ± 1.5	< 0.001
Vegetables (cups)	3.8 ± 1.7	2.8 ± 0.5	< 0.001
Fruit (cups)	3.4 ± 1.7	1.9 ± 0.3	< 0.001
Dairy (cups)	2.2 ± 0.8	3.0 ± 0.1	< 0.001
Protein foods (ounces)	5.6 ± 2.5	5.9 ± 0.6	0.365

Note: Values are considered significantly different at $p < 0.05$

The linear regression model was significant ($R^2 = 0.24$; $p < 0.01$) with sex ($B = -386.92$; $p < 0.05$), BMI ($B = 29.29$; $p < 0.05$), and nutrition information-seeking experience ($B = 44.90$; $p < 0.05$) significantly predicting energy difference score. Being male, having a higher BMI, and experiencing more frustration during nutrition information-seeking was associated with a higher energy difference score.

Discussion

The primary purpose of this study was to determine if adults could use the MyPlate icon to plan a full day's menu that met the recommendations from the *2010 Dietary Guidelines for Americans.* We found that when using MyPlate as a guide, participants selected diets that were vastly different than recommendations. Specifically, the menus were lower in energy, grains, and dairy and higher in fruits and vegetables than the recommendations. MyPlate is a tool used to help disseminate messages that represent the *Dietary Guidelines,* and while it is not intended to change behaviors by itself, if an individual uses MyPlate to direct food choices, he/she should theoretically select foods that results in a diet that is in line with the *Guidelines*. This is the first study to assess the use of MyPlate to make food selections. A secondary purpose was to determine if individual differences predicted ability to plan a menu in line with recommendations. We found that males, individuals with a higher BMI, and those that experienced more frustration when searching for nutrition information planned menus that were furthest from concordance with the *Dietary Guidelines* recommendations.

In the present study, participants planned a menu that was significantly lower in energy than the *Dietary Guidelines* recommendations. Although Americans that are overweight or obese may

benefit from an energy deficit that could lead to weight loss, that was not necessarily the case with the sample population as almost half were normal weight or underweight (as defined by their BMI) (Centers for Disease Control and Prevention, 2015; Hill, 2006). Additionally, since aiding in weight loss is not the intent of MyPlate, the energy deficit was not an appropriate interpretation of the information on the icon. One reason for the low energy level of the menu was that participants selected an excess number of servings from food groups that have lower energy options (fruits and vegetables) and fewer servings from the food groups that tend to have higher energy foods (grains and dairy). Beyond aiding with consuming an appropriate amount of energy per day, there are additional health benefits associated with meeting the recommendations for each of the individual food groups. While an excess in the number of servings from fruits and vegetables in the menus may not be harmful and, in fact, may further reduce risk for chronic disease, the issue may be that selecting a large number of servings of fruits and vegetables may reduce the inclusion of foods from other food groups (specifically, dairy and grains in this study) that are equally important (Boeing et al., 2012; Hung et al., 2004).

Our findings that females selected menus that were more representative of the *Dietary Guidelines* than males are consistent with previous research. Women have been found to have higher health literacy (Cutilli & Bennett, 2009), greater nutrition knowledge (Hendrie, Coveney, & Cox, 2008; Parmenter, Waller, & Wardle, 2000), and overall healthier diets (Hiza et al., 2013; Imamura et al., 2015) than men. It is therefore not surprising that the women in the study were more successful in using MyPlate to plan a menu that aligned more closely with the *Guidelines*.

Research on dietary intake assessment potentially provides insight on why we found that individuals with a higher BMI planned menus further from the recommendations. It has consistently been shown that overweight and obese adults underestimate dietary intake more so than normal weight individuals (Bailey, Mitchell, Miller, & Smiciklas-Wright, 2007; Headrick, Rowe, Kendall, Zitt, Bolton, & Langkamp-Henken, 2013). If the perception of what an overweight or obese individual usually eats is underestimated, that may have resulted in planning a menu that underestimated the volume of food that would be recommended to consume. Thus, it is not surprising that increasing BMI was associated with a larger gap between energy planned in the menu and energy recommended by the *Dietary Guidelines*.

Results indicated that individuals who reported being more frustrated with their experience looking for nutrition information were less successful in using MyPlate to plan a menu. Research linking nutrition-related information-seeking to nutrition knowledge or dietary choice is limited. However, studies have shown a positive correlation to nutrition information-seeking behavior, food label reading, and motivation (Elbon, Johnson, & Fischer, 1996; Szwajcer, Hiddink, Koelen, & van Woerkum, 2005). One study found that students with higher self-efficacy in reading nutrition information made better dietary choices (Worsley, Worsley, Coonan, & Peters, 1985). Therefore, it is not surprising in the present study that frustration with

nutrition information-seeking behavior was negatively associated with ability to accurately plan a menu using the MyPlate icon. Future studies attempting to identify the root of frustration during nutrition information seeking behavior may provide vital insight into the reason frustration is negatively associated with the ability to translate nutrition information accurately.

It is important to note that these participants were well-educated and scored high on the nutrition literacy questionnaire (84.9% of participants' scored 4 or better on the NVS, indicating adequate literacy). These characteristics may provide them with an advantage in interpreting this information over the general population as a whole, yet they still did not select food choices in line with recommendations. Thus, it is clear that for this group, additional information was needed for the icon to be effectively used for implementing positive dietary choices.

This study is the first to examine the use of MyPlate to plan a daily menu; thus, the use of a homogenous sample was appropriate for an initial study. However, a large limitation of this study was that participants were over 97% White and well-educated, which does not allow for the results of this study to be generalized to the American population as a whole. Another limitation of this study is that food models were used to simulate food selections; thus, we do not know how MyPlate would be used to guide actual food consumption.

A recently published manuscript outlining a recommended framework for research evaluating the effectiveness of the MyPlate message dissemination describes two main areas of interest, one of which is a focus on how well the *Dietary Guidelines* are being communicated to vulnerable populations (Levine, Abbatangelo-Gray, Mobley, McLaughlin, & Herzog, 2012). Future research in this area with individuals with a lower education or income level and minority populations would help describe how well a more diverse population interprets MyPlate for menu planning. Other ideas for future research include using a controlled environment where participants are provided with real food and asked to plan meals after viewing the icon or adding an additional assessment of participant intake by collecting a 24-hour recall prior to and after introduction to MyPlate to determine if exposure to the icon results in changes in dietary behaviors. Finally, examining the effects of making additions to the MyPlate icon, such as including quantitative recommendations (such as 2-3 servings of fruit per day) and a description of what counts as a serving, would be of interest to see if this additional guidance makes a stronger impact on selecting foods more in line with recommendations.

MyPlate often serves as the gateway for providing information about the *Dietary Guidelines* for the general public. Ideally, when an individual sees the icon, he/she will use the reference to the ChooseMyPlate.gov website as an impetus to investigate specific personal recommendations. Since we know that many people do not access this online information, the authors believe that it is important that these icons provide adequate information to help individuals select a healthy diet independent of accessing the website. The method for providing additional information that

aids with dietary planning and how to tailor this information to suit different populations remains to be determined by future research. Adding pictures of the types of foods that fall into each food group and focusing on those foods that are specifically recommended (e.g., including pictures of whole fruits rather than fruit juice and of whole grains rather than refined grains) as well as adding the range of the number of servings that most individuals should consume from each food group (e.g., 2 cups of fruit per day) may be additions that would allow MyPlate to become more helpful for encouraging daily food selections that meet the *Dietary Guidelines*. Since at this time, such additional information is not available on the icon, Extension professionals working with clients at a variety of educational levels should be aware that individuals may not understand the key messages for healthy eating that are supposed to be represented by MyPlate. For consumers that do not have access to the Internet or those that have access but may not choose to go to the ChooseMyPlate.gov website, additional materials and verbal instructions should be provided to help with translating the MyPlate icon into healthy dietary choices.

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Volunteer Delivery of a Community-Based Strength Training Program: Comparison of Adopting and Nonadopting Extension Educator Perspectives

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Volunteer leaders are increasingly being utilized to deliver community strength training classes, but the factors affecting adoption of volunteer delivery approaches by educators or program managers have not been well explored. This study sought to identify these factors by comparing perspectives of adopting and nonadopting county Extension educators for a group strength training program delivered through county Cooperative Extension offices. Semistructured interviews were conducted with a purposive sample of adopting (n=6) and nonadopting (n=13) educators. Interviews were recorded, transcribed verbatim, and coded using thematic content analysis. Review of codes related to adoption or nonadoption of volunteer delivery approaches produced common themes. Both groups acknowledged role differences between educators and volunteers and expressed concerns about maintaining program quality. Adopters expressed greater comfort with volunteer-led program approaches and understanding of the educator-volunteer role. Nonadopters were hesitant to request program participants serve as leaders but felt participants were capable. Both groups were motivated to offer the program for dual personal and community benefit, but nonadopters expressed reliance on the program to maintain physical activity habits and for social support. Findings can inform others seeking to adapt community programs for volunteer delivery or engage volunteers in existing program delivery.

Keywords: volunteers, fitness, strength training, health, wellness, community-based program, physical activity, volunteer leader, rural

Introduction

Rural Americans have lower rates of moderate-to-vigorous physical activity, higher rates of overweight, obesity, and chronic diseases, and tend to be older and poorer than their urban

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counterparts (Fan, Wen, & Kowaleski-Jones, 2014; Jones, Parker, Ahearn, Mishra, & Variyam, 2009). The positive health impacts of regular physical activity, including strength training, are well documented, particularly for older adults (Nelson et al., 2007). Strength training is associated with fall prevention (Braith & Stewart, 2006), chronic disease management (Beniamini, Rubenstein, Faigenbaum, Lichtenstein, & Crim, 1999; Castenada et al., 2002; Cuff et al., 2003; Kelley & Kelley, 2000; Warburton, Gledhill, & Quinney, 2001; Williams et al., 2007), and reduced rates of disability (Baker et al., 2001; Beniamini et al., 1999; Castenada et al., 2002; Layne & Nelson, 1999; Nelson et al., 1994). However, only 13% of older adults report regularly engaging in strengthening activities (Schoenborn & Heyman, 2009).

Access to structured physical activity opportunities, including fitness facilities and classes, is limited for the 15% of Americans residing in rural areas (U.S. Department of Agriculture, Economic Research Service, 2014). Geographic proximity and travel time to exercise facilities have been identified as barriers to physical activity (Schutzer & Graves, 2004). For very rural states, strategies to address such barriers are important to increase physical activity levels among this underserved population.

Peer or lay leadership of strength training programs is a promising approach to increase access, particularly in rural areas. Lay leaders have delivered health education program content for decades (Lewin et al., 2005; U.S. Department of Health and Human Services, 2007). Program sustainability can be enhanced when lay leaders are volunteers. Many nonprofit organizations, including those aiming to improve health, rely on volunteers to implement programs and provide services (Brudney, 2010; Graff, 2006; Jamison, 2003; Kreutzer & Jager, 2011; Manetti, Bellucci, Como, & Bagnoli, 2015; Wisner, Stringfellow, Youngdahl, & Parker, 2005). Use of volunteers may help to bridge the gap between high need for and limited availability of community-based programs, such as strength training classes, in rural, underserved areas (Plotnikoff & Karunamuni, 2011; Smith et al., 2012).

Numerous studies have explored volunteer delivery of health programs (Batik, Phelan, Walwick, Wang, & LoGerfo, 2008), especially for chronic disease self-management (Lorig et al., 1986; Lorig, Mazonson, & Holman, 1993; Lorig, Ritter, Laurent, & Fries, 2004) and fall prevention (Healy et al., 2008; Peel & Warburton, 2009; Robertson, Hale, Waters, Hale, & Andrew, 2014), and a few studies have examined volunteer-delivered strength training programs (Buman et al., 2011; Dorgo, King, Bader, & Limon, 2013; Layne et al., 2008; Robertson et al., 2014; Werner, Teufel, & Brown, 2014; Yan, Wilber, Aguirre, & Trejo, 2009). The need for volunteer-led programs to sustain interventions is documented (Turner, Kennedy, Kendall, & Muenchberger, 2014). However, factors affecting adoption of such delivery models, or factors influencing transition of programs initiated by educators and later sustained by lay volunteers in real-world settings, has not been well explored (Healy et al., 2008). The purpose of this study was to explore perspectives of Extension educators on volunteer leadership of StrongWomen, a

community-based strength training program delivered through county Extension offices in Arkansas, where 42% of the population resides in rural areas (University of Arkansas System Division of Agriculture, 2015).

Program Background

The StrongWomen program is an evidence-based strength training program for midlife and older women developed by researchers at Tufts University that was designed to be community-based and implemented through non-profit organizations and settings by trained StrongWomen program leaders. Program details, dissemination, and results have been described elsewhere (Seguin, Economos, et al., 2008; Seguin, Kuder, Heidkamp-Young, & Nelson, 2012; Seguin, Palombo, et al., 2008). The program is most widely delivered through state Cooperative Extension Services, part of the land-grant university system operating under auspices of the National Institute of Food and Agriculture, United States Department of Agriculture. Extension has traditionally relied heavily on volunteer engagement in many programs (Cassill, Culp, Hettmansperger, Stillwell, & Sublett, 2012).

The Arkansas StrongWomen program is offered through the University of Arkansas Cooperative Extension Service. County Extension offices in each county seat have base staff including a County Extension Agent-Family & Consumer Sciences (hereafter referred to as educator). Educators have responsibilities for programming in several subject-matter areas; StrongWomen is one of the health and aging programs educators may choose to offer. In states where the program is offered through Cooperative Extension Services, most strength training groups are led by educators only. A few states have utilized volunteers, but none to the extent of Arkansas, which adopted volunteer delivery as a core program component.

StrongWomen consists of hour-long strength training sessions held twice weekly over twelve weeks. Individual sessions include a warm-up, eight to ten strengthening exercises and a cool-down and stretch (Nelson & Seguin, 2005). Arkansas' classes meet in various program sites, most commonly community centers, churches, and meeting rooms located in county Extension offices.

The program was instructed by county educators when adopted as a statewide Extension program in 2006; four early adopting counties implemented the program starting in 2003 prior to statewide adoption. Early adopting counties began piloting volunteer leadership of strength training groups in 2006 as a strategy to ensure sustainability and extend access to participants following the initial twelve-week period when the twice-weekly classes were led by the educator. Consistent with StrongWomen program protocols, volunteer leaders were trained by StrongWomen Ambassadors using the same standardized format and materials as used for educator training (Seguin, Economos, et al., 2008).

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Viability of the volunteer delivery approach was apparent from pilot experiences. Volunteer delivery of the program, following initial instruction of strength training groups by county educators, was adopted as a core state program component in 2008. The transition of a StrongWomen group to volunteer leadership is dependent upon recruitment of volunteer leaders from among program participants by the educator. When volunteer leaders cannot be recruited or are not recruited, the program cannot transition to volunteer leadership, and one of two outcomes occurs: 1) the program continues to be instructed by the educator, or 2) the program ceases. Details of the volunteer delivery program structure have been published elsewhere (Washburn, Cornell, Phillips, Felix, & Traywick, 2014).

Two years after adoption of the volunteer leader approach, program data indicated unequal adoption of the model. Of 37 counties with active StrongWomen programs, 40.5% had groups led by volunteer leaders, 16.2% had groups jointly led by the educator and volunteer leaders, and 43.2% had groups led by the educator only. Previous study did not show a statistically significant relationship between adoption of the volunteer delivery model and county characteristics (poverty, minority population, rurality, percent of residents over 45 years of age, adult obesity levels) or educator characteristics (age, ethnicity, years of service) (Washburn et al., 2014). The need for further study to identify factors beyond county and educator characteristics was apparent and prompted the study described here. This paper describes educator attitudes and beliefs identified through face-to-face interviews that affected adoption of the volunteer delivery approach for the StrongWomen strength training program.

Methods

Sampling

Arkansas counties were assigned to one of four categories based on StrongWomen program implementation data as of August 2010: 1) program active and volunteer-led; 2) program active and not volunteer-led; 3) program inactive with trained volunteer leaders in county; and 4) program inactive with no trained volunteer leaders in county. Counties not implementing the program (n = 21) were excluded from the sample. Purposive homogeneous sampling was employed (Onwuegbuzie & Leech, 2007). Extension educators were identified for interview based upon their implementation of the StrongWomen Program and presence or absence of trained volunteer leaders in their counties.

Educators who had implemented the program but not transitioned to volunteer leadership (nonadopting educators, or NEs) were invited by email to participate in semistructured interviews. All educators in this group who responded to email invitations were interviewed. To ensure equal geographic representation, nonresponding educators in underrepresented areas of the state were contacted a second time. In all but one case, educators agreed to be interviewed

upon second contact. Educators who had implemented the program and transitioned to volunteer leadership (adopting educators, or AEs) were also invited by email to participate in interviews. In this group, invitations were extended to seven educators who were recommended by state Extension administrators to ensure a range of implementation experiences and equal geographic representation. One educator did not respond to invitations. Interviews were conducted until saturation was reached and no new information emerged from the data.

A description of the sampling frame used for interviews and breakdown of those interviewed/not interviewed within each category is described below. Table 1 reflects initial and adjusted sampling frame figures to account for educator vacancies, relocations, and newly hired educators.

Table 1. Educator Interview Sample by Program Status

Sample by county unit	Program active, not volunteer-led	Program active, volunteer-led	Program inactive, trained volunteer leaders	Program inactive, no trained volunteer leaders	TOTALS	TOTALS, excluded sample removed
Total sample	16	21	5	12	54	37
Interviewed	10 (63%)	6 (29%)	0 (0%)	3 (25%)	18 (33%)	19 (51%)
Excluded†	3 (19%)	7 (33%)	2 (40%)	5 (42%)	17 (32%)	--
Not interviewed	3 (19%)	8 (38%)	3 (60%)	4 (33%)	19 (35%)	18 (49%)

†Exclusion criteria: educator position vacancy (n = 5), educator relocation to another county (n = 5), educator hired after implementation and not involved in program initiation (n = 3), educator had limited involvement in initiating program (e.g., program led by interns) (n = 3). County of investigator also excluded (n = 1). There are 75 counties in Arkansas.

Data Collection

Semistructured interviews were conducted with two groups of educators, both of which had implemented the StrongWomen Program. One group of educators had StrongWomen programs that had transitioned to instruction by volunteer lay leaders (n = 6); the other group of educators had not transitioned programs from instruction by the educator to instruction by a volunteer leader (n = 13).

Interviews were conducted between August 2010 and October 2011. Interview guides were developed based on program implementation experiences and information gaps identified by a previously conducted survey of educators and were informed by Diffusion of Innovations Theory (Rogers, 2003). The guides were reviewed by an expert panel and modified based on feedback. Interviews occurred at the county Extension office where each educator was housed. The time

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required for each interview varied from 25 minutes to one hour depending upon the need for additional probing questions and the depth of educator responses. Interviews were digitally recorded with the interviewee's permission and transcribed in their entirety.

Educators with volunteer leaders were asked about experiences with the StrongWomen Program, what they liked and disliked about the program, and implementation challenges. They were also asked about their volunteer leaders, motivation to have the program led by volunteers, and challenges using volunteer leaders. Educators without volunteer leaders were also asked about their experiences, likes and dislikes, and challenges. In addition, they were asked about current and past participants in StrongWomen classes and their leadership skills and capabilities as potential program volunteers. The study protocol was approved by the University of Arkansas for Medical Sciences Institutional Review Board.

Data Analysis

Data were coded using open and axial coding and analyzed using thematic content analysis (Crabtree & Miller, 1999). An initial codebook was created based upon interview questions. Throughout the coding process, codes were defined and new codes added as needed to capture essential information. Codes were clustered into conceptual categories (Streubert & Carpenter, 2010). To assess reliability and establish intercoder agreement, three independent coders coded 10% of the interview transcripts to identify thematic patterns and codes. Reliability was assessed by comparing the results of the three coders for identical transcripts. Intercoder agreement was calculated at 79%. Validation strategies included member checking and triangulation (Creswell, 2013). Preliminary analyses were presented to interviewees to confirm accuracy of interpretation. Additional interviews and site visits were conducted with StrongWomen volunteers in counties of the adopting educators interviewed as part of a larger study exploring barriers and facilitators to adoption of the volunteer delivery model (Washburn, Cornell, Traywick, Felix, & Phillips, 2015). Comparisons were made between the two groups' interview responses to identify attitudes, feelings, and beliefs that may have affected adoption of the volunteer lay delivery model.

Results

Educators ranged in age from 26 to 60 years old. Eighteen females (15 Caucasian, 3 African-American) and one male (Caucasian) were interviewed. Years of service with the Cooperative Extension Service ranged from 3 to 38 years. StrongWomen Program experience varied widely. One county implemented the program two years prior to the study, while another started its first program seven years prior, before StrongWomen was adopted as a statewide Extension program.

Two primary themes emerged from analyses of educator interviews that shed light on the attitudes and beliefs that may affect adoption of the volunteer lay delivery approach. Differences existed between the two educator groups – those who had transitioned strength training groups to volunteer leadership (adopting educators, or AEs) and those who had not (nonadopting educators, or NEs) – in comfort with and acceptability of volunteer leader use in the program and motivations for transitioning groups to volunteer leadership versus continuing to instruct the group for personal reasons. Each primary theme and related subthemes are described below.

Comfort with Volunteer Delivery Approach

Views on use of volunteer leaders in the program differed between educator groups. AEs indicated few issues with the volunteer delivery approach. One AE offered this example of her comfort with assertiveness of a volunteer leader following training: "The word is that she straightened [the group] out on some things…telling them they weren't doing it quite right. I thought that was kind of fun." In contrast, NEs indicated participants were unwilling to lead because of personal characteristics and other obligations. However, nearly all NEs said they had participants capable and competent to lead the class and that participants have filled in as instructor when the educator was absent. Within their comments were indications that participants had not been asked or invited to volunteer and that educators had made assumptions about participant unwillingness. For example, one NE said, "I had no problem with one volunteering, but on a regular basis, I don't see that person doing it on a regular basis. It's just not the kind of person she is." Another NE offered this assumption about participants leading the group: "I really don't think they're motivated to do that. But I don't know."

Educator-volunteer leader role differences. Educators acknowledged the role differences between themselves and volunteer leaders. One AE said, "I think [participants] may be a little more relaxed with her. She used to be in a class with them, and also she's been with them for so long now." One AE conveyed the importance of allowing volunteers to make the program their own: "I think every teacher teaches differently… I think we have to allow for them to be individuals, too. No one can dictate to any of us how our teaching styles are going to be. We give them the basics and then they go from there." One AE acknowledged upfront that others may be better at leading exercise than she, which made her more comfortable in using the volunteer delivery approach: "I started at the beginning because the [volunteers leaders] were willing to do it, and I knew that some of these people had more skill in leading exercises than I." However, some AEs reported they struggled with the group transition to volunteer leadership:

> It was really hard. When they came back from the training, they were just so excited about it and I thought, "Well this is good. We've done good." And then I started thinking, "Maybe I wasn't teaching the exercises properly." But it all worked out fine. It made me feel inadequate at first because they were so good at it.

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Volunteer leadership concerns. While AEs described advantages of the volunteer delivery approach, even while acknowledging differences between their instruction and that of volunteers, they still had concerns about certain aspects of volunteer leadership. AEs identified several challenges, including maintaining program fidelity, getting volunteers trained, helping the group to progress, helping volunteers to understand their role, and communication. One AE said a challenge is "…being sure they're doing things correctly and keeping it within a time frame." Many AEs said they were more structured as instructors and perceived themselves to be more aware of the nuances of exercise form and mechanics than are volunteer leaders.

Another AE described communication issues encountered with volunteer-delivered programs:

> Every time you get away from home base, so to speak, things change a little. And by that I mean they may not do things quite the same way. They may miscommunicate sometimes between me and them and them and the next person. Not on purpose or anything, but I know sometimes when I go by they might not quite be doing something exactly the way I would've done it.

Some NEs seemed to be reluctant to ask participants to take on the volunteer role. When speaking of potential volunteers, one NE described a couple of people who she thinks "would not mind" instructing the class. One NE described fearing participants would feel she was taking advantage of them as "nonpaid employees" and worried they would feel she was asking them to do something she should be doing. She said of Extension volunteers in general, "I think that's a lot of how our volunteers have started to feel. 'We're volunteers because they don't have enough people to do these things.' And when our volunteers start feeling that way we start losing them." Another NE described her worries about overusing volunteers. She stated that for some participants, the praise of their peers might be enough to motivate them to continue as a volunteer leader but said for others, "…it's just not enough because they still feel like, 'Every time that [educator] has to go somewhere, I'm the only person she calls. She doesn't call anybody else.'"

Educator Motivations: Personal and Community Benefits

Educators expressed varying perspectives on initial implementation of the StrongWomen Program. Most AEs were early adopters; several implemented the program before its adoption statewide. In contrast, NEs expressed reluctance to initially implement the program in their counties fueled by personal discomfort with teaching exercise, feeling too busy to implement the program, and grappling with new ideas about the appropriateness of exercise programming for Extension. Some felt they did not have time to conduct an exercise program in their counties or for strength training personally. Others described discomfort with implementing an exercise program due to negative personal attitudes toward exercise and weight concerns.

Dual benefits: Self and community. Educators' motivations to conduct the StrongWomen Program in their counties varied between groups. AEs described offering the program motivated by a dual benefit to self and to the community. In general, AEs chose to offer the program for a combination of personal and professional reasons; responses indicated they enjoyed being able to offer a program providing benefits both for themselves and for participants. AEs, who instructed the program themselves for at least the first twelve weeks at each location, cited personal benefits, such as "I get to work out at work" and "it helps me just feel better" along with the benefits for others. One AE commented on this dual benefit, remarking, "I appreciate the opportunity to have a program that improves not only my own health, but I can help other people improve their own physical health. Because it helps me; while I'm helping them, it helps me."

Both groups of educators mentioned general personal health benefits, but the NEs cited specific personal benefits they received from the program, with nearly all mentioning getting to exercise at work as a benefit. Comments made by NEs referenced the program meeting personal needs for physical activity. For one, a nonexerciser, the program helped her to initiate physical activity habits. Many NEs felt they would have difficulty continuing to exercise if they were not instructing StrongWomen groups. Some said their exercise routines suffered when the StrongWomen group ceased meeting, remarking "since we stopped exercising, I stopped exercising" and "during the training for StrongWomen, I was in probably...the best shape I've been in, and it's really amazing once you quit how [the weight] all starts coming back."

For some NEs, it seemed a personal need for the group to maintain their own exercise habits may have offered greater benefits than program expansion. One described her reasons for not using volunteer leaders and what would cause her to expand the program: "The only reason I haven't [transitioned to volunteer leadership] is because it motivates me to still exercise." This educator expressed confidence the group could continue on its own but also perceived they need her there for reassurance, projecting for the group, "As long as [educator name] is there, we can do it." She goes on to say "I really think that they could [go on]. It's just being put in that position to actually do it."

Social support. Social support, both emotional and for continuance of physical activity habits, emerged as an important factor in educator adoption of the volunteer delivery model and a possible reason why some educators did not transition StrongWomen groups to volunteer leadership. AEs spoke of social support generated within the group among participants; more than half the NEs gave examples of social support provided to them as group instructors from program participants. Educator views on the role of social support within strength training groups were similar between AEs and NEs. Educators in both groups felt the socialization provided within the group was an important component of the program and was valued by participants. AEs spoke of the role of social support within the group as a whole and cited the importance of the group in helping participants maintain exercise habits.

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NEs spoke of feeling encouraged and validated by group members. One said of her group, "To me it feels like a family." This sentiment was expressed by others, describing the group as "one big, happy family." NEs spoke of caring and concern from group members. One said, "If I wasn't here they'd call the office to find out 'Now what's wrong with her? Now what can we do?'" NEs also spoke of the support and encouragement received within the group setting, validation received from the group, and fulfillment of their own needs for socialization. NEs mentioned positive, affirming feedback from group members and feeling liked and appreciated.

Discussion

These findings help explain how comfort with volunteer delivery approaches and motivations in offering programs may affect willingness of educators to utilize volunteer leaders for community-based strength training programs. Understanding these factors is important for increasing program access in rural, underserved areas as use of lay or volunteer leaders is a strategy shown to enhance sustainability (Robertson et al., 2014; Washburn et al., 2014; Werner et al., 2014). Lay- or volunteer-led fitness programs have been implemented in hospitals, senior centers, and other community settings (Lachenmayr & Mackenzie, 2004). Beyond the StrongWomen program and Extension context, the findings described here can inform proactive strategies to address barriers and strengthen perceived benefits of volunteer delivery when programs are adapted and implemented in real-world settings.

Diffusion of Innovations Theory provides a framework for explaining differences among AEs and NEs. According to Diffusion of Innovations Theory, five factors influence adoption of an innovation such as the volunteer delivery approach described here: relative advantage; compatibility; complexity, or degree of perceived difficulty; trialability; and observability (Rogers, 2003). Relative advantage, compatibility, and complexity are most important in explaining innovation adoption rates. The influence of each factor on adoption depends on the adopter category, which Rogers (2003) identifies as innovators, early adopters, early majority, late majority, and laggards. For example, late majority adopters may rely more heavily on observability than early adopters, who are persuaded by relative advantage. Within the context described here, observability is limited due to geographic isolation of county educators and thus may be a factor slowing adoption rates among NEs.

Perceived advantages of adopting the volunteer delivery approach, or relative advantage, and perceived compatibility were the primary factors differing between AEs and NEs. Relative advantage is the degree to which people perceive an idea, in this case, use of volunteer leaders, is better than the existing standard delivery by Extension educators. Perceived compatibility is the degree to which the volunteer delivery approach aligns with the values, experiences, and needs of potential adopters. Comments of AEs indicated understanding of the role differences between educators and volunteers; they valued volunteers in Extension programs and felt a greater degree

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of compatibility with volunteer-led approaches than did NEs. Further, concerns about volunteer leadership, which were expressed by both educator groups, indicated that AEs perceived greater compatibility and less complexity with the volunteer delivery approach than did NEs.

Comfort with the volunteer delivery approach varied between educator groups. Both groups expressed concerns about instructional quality, but AEs were able to manage these concerns and utilize volunteer leaders whereas NEs were not, suggesting AEs perceived a greater degree of relative advantage in adopting the volunteer delivery approach. Maintaining program quality is a relevant concern in volunteer programs (Studer & von Schnurbein, 2013). However, an underlying issue influencing differences between groups may be hesitance among NEs to ask program participants to step into leadership roles. Other studies have found that personal invitations effectively engage volunteers (Farris, McKinley, Ayres, Peters, & Brady, 2009). Educator requests were found to be a primary reason why volunteers agreed to serve in this program (Washburn et al., 2015). Directly and personally asking participants to serve as volunteers may be a key behavior to expand program access.

Comments from NEs suggest an imbalance of perceived benefits and barriers, indicating the importance of relative advantage in prompting adoption decisions. NEs benefited from remaining as group instructor; loss of benefits was a barrier to transitioning groups. For example, NEs seemed more reliant on the strength training group to ensure personal exercise habits were maintained and for social support, which is associated with exercise maintenance (Kahn et al., 2002; McAuley, Jerome, Marquez, Elvasky, & Blissmer, 2003). It may be that the group filled educator personal needs for social interaction, or the group support helped them to feel successful in their educator role. For NEs, transitioning to volunteer leadership would mean forfeiting these personal benefits. This underlying barrier, when added to those named by NEs, such as perceived lack of willing volunteers, made the perceived benefits of remaining as group leader outweigh the benefits of transitioning to volunteer leadership.

Understanding and acceptance of educator-volunteer leader roles and differences in teaching styles also appears to influence adoption. Consistent with other studies of factors affecting volunteers in organizations, NEs may not understand their role and relationship to volunteers and may feel threatened by them (Kreutzer & Jager, 2011; Studer & von Schnurbein, 2013). Others have suggested successful Extension programs position educators as facilitators, as opposed to subject-matter experts, as is the traditional Extension approach to educational programming (Dillivan, 2013; D. Sellers, personal communication, January 4, 2016). This aligns with AE methods and helps explain why NEs may have experienced difficulties with the volunteer leadership transition or perceived the approach as incompatible with their preferred program delivery methods.

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The value placed on volunteer leadership by Extension educators may be a factor in delivery method decisions. Volunteer leaders may be viewed as a back-up plan for program delivery when the educator is unavailable. Educator delivery may be perceived as the 'gold standard' and volunteer delivery may be seen as 'plan b.' The perception of educator delivery as superior to volunteer delivery may be a contributing factor when volunteers are not utilized (Snider, 1985). A paradigm shift is needed so volunteer engagement in program delivery is a priority, not part of a back-up plan. This shift might involve a change in values or needs among NEs, indicating that perceived compatibility was inadequate to prompt transition to volunteer leadership.

Volunteer management skills are needed to be a successful Extension educator (Cooper & Graham, 2001) and are important for any professional working with volunteers. Despite the organizational value of effective volunteer management, educator training is typically insufficient (Boyd, 2004; Cooper & Graham, 2001; Seevers, Baca, & VanLeeuwen, 2005). Expanded knowledge and skill in working with volunteers may address some factors identified here, such as understanding of role differences between educators and volunteers. Findings point to a need for focused volunteer management training for professionals who coordinate volunteer-led programs. Such training might reduce perceived complexity of managing volunteers engaged in program delivery.

Identifying factors affecting adoption of volunteer delivery approaches is important considering the impact volunteer leadership has on program sustainability. Sustainability, which can be defined as the capacity of a project to continue to deliver its intended benefits over a long period of time, is important for community-based programs to make a long-term difference in health behaviors (Scheirer & Dearing, 2011; Stirman et al., 2012). Program access and continuation is limited when volunteer delivery approaches are available but not adopted. For those in rural, underserved areas who could most benefit from volunteer-led community programs, addressing the factors identified here is critical to ensure those most in need have access.

Limitations

A limitation of the argument presented here is the lack of evidence for the effectiveness of volunteer leaders compared to educators conducting the program. Studies comparing effectiveness of volunteer leaders versus professionals in other programs found participant outcomes were similar (Dorgo et al., 2013; Healy et al., 2008; Sobel, Lorig, & Hobbs, 2002). StrongWomen is a structured program, and when instructed by volunteer leaders, is conducted under the guidance of Extension educators to extend access to an otherwise fixed length program. When program protocols are followed, participant outcomes are expected to be consistent with previous effectiveness studies (Seguin, et al., 2012). Thus, we focus here on factors affecting expansion of volunteer delivery approaches to make ongoing, structured strength training classes available in rural areas where access would otherwise be limited or

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nonexistent (Washburn, et al., 2014). Understanding factors affecting adoption by program decision makers can help other organizations avoid barriers and strengthen perceived benefits as they plan to implement volunteer delivery approaches.

The StrongWomen Program was introduced as an educator-led program and evolved to include volunteer delivery. This makes it difficult to speculate whether adoption might have been different had intent to transition always been part of the delivery model. Gradual evolution of the program from educator to volunteer leadership, as opposed to program initiation with a clear intent to transition, may play a role in adoption, but data to support this are not available. Educators may perceive transition to volunteer leadership as unnecessary or undesirable. While volunteer leadership was not required, within the context described, it is the most feasible option for ensuring program sustainability. As such, strategies for addressing the issues identified here are needed. Further study is needed to identify barriers and facilitators beyond the educator perspectives described which may affect adoption of volunteer delivery approaches.

Conclusion

This study provides insight on factors affecting adoption of a volunteer delivery approach for community-based strength training programs. Comfort with the volunteer approach and motivations for conducting the program influenced educator decisions about transitioning strength training groups to volunteer leadership. Programs adapted for volunteer delivery should clearly delineate educator and volunteer roles and ensure adequate training for those managing volunteers. These findings can assist other organizations as they seek to expand program access by utilizing volunteer leaders in new programs or in transitioning existing programs from professional to volunteer delivery.

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Utilizing Film to Teach Leadership: An Analysis of *Miracle*, *Rocky IV*, and *Lincoln*

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Presenting verbal and visual material can be an effective teaching tool for learners who are being introduced to new leadership material. Film was selected as the multimedia outlet to engage an individual's critical thinking skills while demonstrating different leadership components. This study analyzed three films with the intent of assisting a leadership educator in the process of teaching (a) leading teams, (b) leading change, and (c) transformational leadership. It was concluded that Miracle (O'Connor & Ciardi, 2004) was ideal for teaching about leading teams because it exposed the nuances of team dynamics. Additionally, Rocky IV (Stallone, 1985) was ideal for demonstrating leading change because the movie focused on breaking cultural barriers and highlighted how individuals prepare for significant change. Finally, Lincoln (Lupi, Skoll, King, & Spielberg, 2012) was a valuable film in teaching transformational leadership because the leader in the film was successful at changing the mindsets of people.

Keywords: leadership, teaching, film analysis

Introduction

The Agricultural Leadership, Education, and Communications (ALEC) 303: Classic Figures in Leadership course is taught every fall to teach undergraduates about historical leadership events and/or individuals and compare those to current leadership events and/or individuals. The course is taught by instructors utilizing film. The use of film as a teaching tool provides students the opportunity to evaluate leadership via both auditory and visual messages (Mayer, 2001). The purpose of this study was to analyze three different films *Miracle* (O'Connor & Ciardi, 2004), *Rocky IV* (Stallone, 1985), and *Lincoln* (Lupi, Skoll, King, & Spielberg, 2012) in the ALEC 303 course to produce teaching information for instructors of leadership. A literature review on film analysis and film analysis in leadership found several studies that identified film as an excellent teaching tool. However, no studies had analyzed these three films in a practical format for teaching leadership concepts. The films presented in this study can be incorporated into leadership courses to assist in the transformation of how students analyze leadership and provide three more leadership case studies to be incorporated into leadership courses.

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Theoretical Framework

The dynamics of leadership revolve around developing one's self and followers, as well as influencing the organization in which one serves (Northouse, 2013). Organizational leadership, in particular, requires the leader to develop working teams which in turn strive to reach organizational goals (Northouse, 2013). The influence of Cohen and Bailey (1997) and Yukl (2013) provided a detailed outline for how to lead a team. Those guidelines include (a) emphasize common interests and values, and use ceremonies, rituals, or symbols as a means to develop collective identification; (b) encourage and facilitate social interaction; (c) tell people about group activities and achievements; (d) conduct process analysis sessions; (e) hold practice sessions under realistic conditions; and (f) use after-activity reviews to facilitate collective learning by the team.

Once the guidelines for teams are established, changes within the organization may need to occur, and the leader, once again, may need to enforce some tactics for change (Kotter, 1996). Those tactics for leading change are "(a) create a sense of urgency about the need for change and communicate a clear vision of the benefits to be gained; (b) identify likely supporters, opponents, and reasons for resistance; (c) build a broad coalition to support the change, and fill key positions with competent change agents; (d) use task forces to guide the implementation of changes; (e) empower competent people to help plan and implement change; (f) make dramatic, symbolic changes that affect the work; (g) prepare people for change by explaining how it will affect them, and help people deal with the stress and difficulties of major change; (h) provide opportunities for early successes to build confidence and monitor the progress of change and make any necessary adjustments; and (i) keep people informed about the progress of change and demonstrate continued optimism and commitment to the change" (Yukl, 2013, p. 84). The dynamics within an organization team may appear trite, but the ultimate goal of the leader in the organization should be to transform individuals into leaders who will positively impact the organization. Thus, this process is referred to as transformational leadership.

The guidelines of transformational leadership for the leader are (a) articulate a clear and appealing vision, and explain how the vision can be attained; (b) act confident and optimistic; (c) express confidence in followers; (d) use dramatic, symbolic actions to emphasize key values; and (e) lead by example (Yukl, 2013). Furthermore, transformational leadership empowers followers to evolve and grow into leaders through inspiration, motivation, and stimulation (Bass & Riggio, 2006). Transformational leaders also inspire followers to recognize their individual strengths and weaknesses in order to enhance performance and align themselves with their goals and objectives while developing a sense of self-identity (Bass & Riggio, 2006).

Bass and Riggio (2006) noted an essential component of transformational leadership is intellectual stimulation, a leader's ability to motivate followers to be innovative, try new

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approaches to old situations, and be creative in reframing problems. Intellectual stimulation encourages the leader to analyze problems from multiple perspectives and derive multiple solutions to the problem (Bass & Riggio, 2006). For example, a leader who challenges students to be engaged in leadership and creatively analyze and/or reflect on the experience is actively working on transforming the follower and stimulating thought. Additionally, transformational leaders are also mentors who positively influence the followers' development and individual capacity to lead (Bass & Riggio, 2006). Those developments are fostered through active engagement within the environment and the individual construction of one's own learning (Bass & Riggio, 2006), thus referred to as constructivism. Constructivism posits learning as an active process where one learns through engagement with the environment around them (Bass & Riggio, 2006). The learner possesses the ability to derive meaning from events which occurred within the environment (Dewey, 1916). Dewey (1916) explained that by engaging people in activities within social environments, their emotional and mental dispositions are shaped through observing the behaviors of other individuals engaging in the activities with them. Furthermore, constructivists believe the learner acquires new knowledge by processing relationships through assimilating new data with preexisting data (Kamii, Manning, & Manning, 1991). By processing relationships, learners continually modify their understanding of events and reality by linking prior knowledge to new information, further developing how they think and what they know (Strommen & Lincoln, 1992). Therefore, a learner's knowledge emerges from experiences and situations in social settings, which denote importance and meaning to the learner.

Through constructivism, learners develop critical insight and knowledge of new phenomena by means of actively engaging with objects or events within the environment (Wadsworth, 1979). Three actively engaging educational practices that substantiate learning are simulations and role playing, active discussions, and graphics (Schunk, 2012). Through these venues (especially graphics), a learner is more engaged in the learning process, and the human body can obtain more information (Schunk, 2012). Additionally, Piaget (1926) postulated a learner should be submerged in an environment where opportunities are presented in order to construct personal experiences through the individual development process. Piaget (1926) also believed learning was an active process in a social setting where collaboration takes place, and assimilation with prior experiences helped to shape the learner's present reality.

Shaping one's learning and presenting the learning in a form of reality calls for an understanding of neuroscience, a specialized field dealing with the brain and the nervous system, which works to understand and decipher brain commands and functions (Zull, 2002). One important facet of neuroscience concerns the cerebral hemispheres (Zull, 2002). The cerebral hemispheres consist of the left side of the brain and the right side of the brain, each having different functions relating to the ways people think and process information (Gazzaniga, 1992; Sperry, 1973). The left hemisphere controls and receives input from the right side of the body and predominantly specializes in rule-based reasoning, deductive tasks, logical rationale, and analytical thinking

(Miller, 1997). Furthermore, the left hemisphere sequentially processes information such as mathematics, language, and writing (Champoux, 1999) and is considered to be the verbal side of the brain (Miller, 1997). Additionally, research has indicated the left hemisphere processes the majority of academic content received by the brain, whereas context of information is processed in the right hemisphere (Schunk, 2012).

The right hemisphere is responsible for creativity and is typically unorganized, spontaneous, and artistic; and directs focus on pictures, art, colors, and music (Jourdain, 1997). One way to actively engage the right hemisphere in creative thought and analysis is by using multimedia outlets. Multimedia refers to presenting material in auditory/verbal and visual/pictorial forms (Mayer, 2001). Multimedia outlets can assist an individual in cognitively connecting learning to life events (Schunk, 2012). Schunk (2012) stated, "cognitive neuroscience supports the idea that much can be learned through observation" (p. 46). Additionally, to make learning meaningful, context should be incorporated into the learning process as much as possible (Schunk, 2012).

Mayer's (2005) cognitive theory of multimedia learning postulated individuals learn and retain information more effectively from combining words and pictures rather than using words alone. Furthermore, multimedia learning begins "within a learner's information system, a system that contains separate channels for visual and verbal processing" (Mayer, 2005, p. 46) and is activated through five steps: "(a) selecting relevant words for processing in verbal working memory, (b) selecting relevant images for processing in visual working memory, (c) organizing selected words into a verbal mental model, (d) organizing selected images into a visual mental model, and (e) integrating verbal and visual representations as well as prior knowledge" (Mayer, 2001, p. 54). Mayer (2001, 2005) has included PowerPoint, video media, and computer video learning as examples of multimedia. Simultaneously presenting verbal and visual material can be an effective teaching tool for learners who are being introduced to new material (Berk, 2009; Mayer & Johnson, 2008). Therefore, engaging students in constructivist learning environments by utilizing multimedia outlets may be one way to teach leading teams, leading change, and transformational leadership.

Purpose and Objectives

The purpose of this study was to analyze three leadership films with the intent of assisting a leadership educator in the process of teaching (a) leading teams, (b) leading change, and (c) transformational leadership. The objectives of this study were to:

1. Describe how *Miracle* (O'Connor & Ciardi, 2004) demonstrates leading teams;
2. Describe how *Rocky IV* (Stallone, 1985) demonstrates leading change; and
3. Describe how *Lincoln* (Lupi et al., 2012) demonstrates transformational leadership.

Subjectivity Statement

Two researchers were involved in this study: (a) one agricultural leadership lecturer and (b) one professor of agricultural leadership and education. The lecturer completed her undergraduate degree in psychology, her masters degree in agricultural leadership, and is a former student-athlete. The professor recently published works in the areas of leadership development, women in leadership, and supervisory leadership. Both have prior experience with qualitative data collection techniques and have published qualitative works.

Collectively, the researchers believe students construct knowledge through prior knowledge and experiences. In addition, the researchers believe that active engagement with one's environment is a necessity in order to transform and shape one's leadership perspective. Therefore, these beliefs influenced and provided the basis for the theoretical lens chosen for this study.

Methods

The leadership components chosen for analysis were leading teams, leading change, and transformational leadership. Film was selected as the multimedia outlet with the intention of engaging an individual's critical thinking skills while demonstrating different leadership components. In addition, film provides an opportunity to view authentic leadership predicaments (Saldana, 2009). The films selected were *Miracle* (O'Connor & Ciardi, 2004), *Rocky IV* (Stallone, 1985), and *Lincoln* (Lupi et al., 2012). Additionally, these films were analyzed and pilot tested during a fall 2013 and fall 2014 undergraduate leadership class in the Agricultural Leadership, Education, and Communications Department in which leadership is analyzed through a variety of genres including, film, autobiography, drama, fiction, and speeches. The students in the fall 2013 and fall 2014 leadership class were given an outline of specific leadership concepts (leading teams, leading change, and transformational leadership). Each film was shown in its entirety to the students, and they were instructed to select scenes from each movie that would correspond with the specific leadership concepts related to that film. The scenes selected by the students were then discussed in the course, and this discussion provided data to compare with the instructors of the course.

The film, *Miracle*, was selected to effectively demonstrate leadership within teams. *Miracle* is based on a true story of the 1980 United States hockey team that defeated the Soviet Union team and later went on to win Olympic gold over Finland. The coach, Herb Brooks, demonstrated his ability as a leader to make difficult group decisions to develop his players as a team. Furthermore, he convinced the group of twenty-six undisciplined players to believe in his leadership vision that they could defeat the undefeatable, the Soviet Union. Leading teams was the leadership focus for this film, and the researchers utilized the guidelines to leading teams for their evaluation.

The 1985 film, *Rocky IV*, is based upon a prizefighter, Rocky Balboa, and his internal struggles with the controversy between the United States, the Soviet Union, and the cultures that defined both the countries during that era. Rocky was faced with the challenge of fighting Ivan Drago, from the Soviet Union, after Ivan Drago killed his best friend and trainer, Apollo Creed, during an exhibition fight. Rocky challenged Ivan Drago to a fight on Christmas day. Rocky journeyed to the Soviet Union to train for his professional fight on Christmas. The plot of the movie demonstrated a man's internal desire to increase acceptance between cultures and to encourage hard work and dedication. In addition, Rocky changed the organizational climate of the Soviet Union people. Overall, the movie is an inspiring account of how one individual can and will change the organizational climates of culture.

The 2012 film, *Lincoln*, recounts President Abraham Lincoln's efforts to abolish slavery under the 13th Amendment during the U.S. Civil War. In 1865, President Lincoln feared his 1863 signing of the Emancipation Proclamation, an executive order proclaiming the freedom of all slaves in the ten rebellion states during the Civil War, would be thrown out by the courts once the war had concluded. Lincoln was adamant slavery needed to be abolished; however, he was part of the Republican Party, and the steps necessary to abolish slavery required convincing the Democratic side. President Lincoln and the Republican Party had to transform the thinking of the Democratic Party and the nation. Lincoln was a leader first and a politician second; he used transformational leadership to accomplish desired tasks. Throughout the movie, President Lincoln demonstrated the qualities of a transformational leader, showing respect for those around him regardless of their skin color or age and maintaining close relationships with his followers. Transformational leadership was the leadership focus in this film, and the researchers used the guidelines for transformational leadership to evaluate the film.

To fully examine leadership approaches demonstrated in the three films, the study used a qualitative research design (Hays & Singh, 2012). Each researcher independently collected data from the three films. Data were also gathered from in-course observations, leadership documents, and scenes analysis related to each film collected from the fall 2013 and fall 2014 students and researchers. These multiple sources of artifacts provided a bank of data from which themes could be created and interpretations made (Hays & Singh, 2012). Specifically, content analysis was utilized to collect and interpret the data by the researchers. Hays and Singh (2012) outlined specific steps for performing a content analysis study:

1. **Identify research questions and constructs**. The researchers collaborated to develop research questions and/or objectives.
2. **Identify texts to be examined**. The textbook from the course and leadership literature were utilized for this study to check validity coding for leadership literature, film literature, and the films, *Miracle*, *Rocky IV*, and *Lincoln*.

3. **Specify the unit of analysis**. The films, *Rocky IV*, *Lincoln*, and *Miracle*; verbal conversation in those films; and the films' visual scenes were the units of analysis. These multiple sources of data collection provided source validity for the study.
4. **Specify the categories**. The specific categories selected were leading teams, leading change, and transformational leadership.
5. **Generate sample coding**. The sample coding scheme established was to identify scenes in the movie in which the specific leadership concepts existed.
6. **Collect data**. Each researcher collected data independently on the films, *Miracle*, *Rocky IV*, and *Lincoln*.
7. **Purify the coding scheme**. Semantic validity involved examining and comparing the data collected in order to agree on specific content in the films that presented the leadership theory or approach.
8. **Collect data**. Researchers continued to collect data from the movies until the data were exhausted and represented the leadership theory or approach.
9. **Assess reliability and validity of the coding schemes**. Researchers compared data collected and examined how well each piece of data represented the underlying constructs.
10. **Analyze data**. The data were analyzed, and common themes were agreed upon by the researchers.

Once the themes were identified, the literature was reviewed again to verify that the analysis of the films represented the appropriate leadership theory or approach. This process of inductive and recursive analysis requires the research process to be a field of discovery while still reflecting on the process (Hays & Singh, 2012).

Results

Results are presented for each of the three objectives based on the guidelines identified by Cohen and Bailey (1997) and/or Yukl (2013).

Objective 1. Describe How *Miracle* (O'Connor & Ciardi, 2004*)* Demonstrates Leading Teams

Emphasize common interests and values, and use ceremonies, rituals, or symbols as a means to develop collective identification (Cohen & Bailey, 1997; Yukl, 2013). Part of being on a team is establishing common interests and values. This was displayed in the movie when the U.S. hockey team traveled to Norway to play the Norwegian team. While there, the U.S. team was not focused on the game. Players on the bench were more interested in looking at the women in the crowd, and the players on the ice were not competing or working hard enough during the game. After the game was finished and the U.S. team lost, Coach Brooks made the

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team get on the line and do sprints on the ice as a team. While the players did ice sprints, Coach Brooks emphasized they were going to play like champions; play like teammates; cooperate; and play with the same shared values, priorities, and strategies. The players did ice sprints for hours, even after the lights in the arena were turned off, until one player, Mike Eruzione, stood up, said his name, and said he played for the United States of America, symbolizing that he had come to the realization he played on a team, and part of being on that team required cooperation, shared goals, and common interests. This scene is also applicable to developing collective identification through symbols. The U.S. jersey became a symbol of the group's identity and solidified what it meant to have membership on such an elite team (scene start/stop time 37–46:54). An additional scene that displays a team emphasizing shared interests and values is when Coach Brooks walked into the locker room of the U.S. hockey team right before they were about to play the Soviet Union and gave a motivational speech stating the goals for the game, the strategy that would be implemented during the game, and that it was the U.S. hockey team's time to win (scene start/stop time 1:24:25–1:25:36).

Encourage and facilitate social interaction (Cohen & Bailey, 1997; Yukl, 2013). After Rob McClanahan and Jack O'Callahan got into a fist fight on the ice, Coach Brooks stood up and said that from that point on they needed to move forward as a team, and part of doing that required them getting to know one another. Therefore, Coach Brooks made a few of the players say their names, from where they came, and for whom they played (scene start/stop time 22:06–23:46). Another scene that exhibits social interaction is when the team was doing group stretching. Group stretches before or after practices are a great way to interact with all team members (scene start/stop time 55:39–56:38). Additionally, after the Christmas party, the players went outside and played football together where social interaction occurred (scene start/stop time 1:05:30–1:07:06).

Tell people about group activities and achievements (Cohen & Bailey, 1997; Yukl, 2013). In order to keep from feeling alienated, a few members of the team inquired about the plans for the new team member added to the roster late. The players demanded to know from the coaching staff why the new player was added and if he would stay. Coach Brooks made the decision to tell the players he added the new player because he would contribute to the team. This scene was an example of telling people about group activities (scene start/stop time: 1:00:34–1:03:01). Furthermore, part of leading a team is keeping members of the team informed about their performance. Coach Brooks did just that when he let Jim Craig, the goalie, know that he was not planning to let him play due to his lack of effort on the ice and said he knew Craig had more to give than what he was (scene start/stop time 1:16:27–1:18:00).

Conduct process analysis sessions (Cohen & Bailey, 1997; Yukl, 2013). Conducting open discussions with the intention of improving a team is essential. Two scenes displayed discussions where suggestions were made about the overall decisions for the team. The first was

when Coach Brooks and Coach Patrick were in Coach Patrick's office and Coach Brooks suggested that pushing players too hard was making the players tired and it was not a good idea because it would not improve the players' performance (scene start/stop time 36:00–37:38). The second scene was when a few players asked to talk with Coach Brooks and Coach Patrick about the addition of a new team member late in the season. The players felt the new player should not be a part of the team because he was not making the roles of the other team members easier and therefore was not contributing to the team's overall success (scene start/stop time 1:00:36–1:03:01).

Hold practice sessions under realistic conditions (Cohen & Bailey, 1997; Yukl, 2013). Practice sessions improve team performance and prepare team members for potential difficult tasks in the future. Many practice sessions were held throughout the movie where the players were pushed to work together and perform complex tasks. This enhanced the team members' confidence so when they played in games, they could rise to the occasion and respond using what they had learned in practice (scene start/stop times 20:08–23:46; 32:50–35:33; 50:57–53:07; 59:11–59:39).

Use after-activity reviews to facilitate collective learning by the team (Cohen & Bailey, 1997; Yukl, 2013). When the U.S. hockey team watched game film, collective learning from experience was taking place. The game film allowed the players to analyze their game and discover what they had to do to improve (scene start/stop time 48:20–50:56). During the half time against Sweden in the Olympics, Coach Brooks went into the locker room and assessed the first half of the game telling the players that they were playing horribly and needed to improve their performance in order to win. Furthermore, Coach Brooks used dramatic actions and words to get the team "fired up" so the team would get back on track and improve from the first half (scene start/stop time 1:24:25–1:25:36).

Objective 2. Describe How *Rocky IV* (Stallone, 1985) Demonstrates Leading Change

Create a sense of urgency about the need for change and communicate a clear vision of the benefits to be gained (Yukl, 2013). The Soviet Union and the United States during the filming of *Rocky IV* were enemies. Therefore, Apollo Creed (U.S. professional boxer) initiated an exhibition fight with Ivan Drago (Russian professional boxer). During the exhibition fight, Apollo Creed died; this created a sense of urgency for Rocky Balboa (another U.S. professional boxer and Apollo Creed's manager) to challenge Ivan Drago to a boxing match in the Soviet Union. The death of Apollo Creed initiated the vision for Rocky Balboa to change the relationship between the U.S. and Soviet Union (scene start/stop time 15:10–33:47).

Identify likely supporters, opponents, and reasons for resistance (Yukl, 2013). Rocky Balboa decided to train to fight Ivan Drago in the Soviet Union on Christmas Day. He explained

to his wife (Adrian) the reason he will be fighting Ivan Drago, and she became negative about Rocky's decision. Rocky clearly explained to Adrian why he was drawn to fight Ivan Drago and identified supporters, opponents, and reasons for resistance (scene start/stop time 35:27–41:25).

Build a broad coalition to support the change and fill key positions with competent change agents, use task forces to guide the implementation of changes and empower competent people to help plan and implement change (Yukl, 2013). Rocky Balboa refused to let Adrian convince him to not fight Ivan Drago in the Soviet Union and reflected on his life as a professional boxer, husband, friend, and father. In addition, he took Paulie (Adrian's brother and Rocky's manager) and Tony "Duke" Evers (Rocky's corner man) to the Soviet Union. Paulie and Duke assisted Rocky in the training process for the fight (scene start/stop time 41:17–50:08).

Make dramatic, symbolic changes that affect the work (Yukl, 2013). Rocky Balboa flew to Russia to train for his upcoming fight with Ivan Drago. Rocky requested a nonluxury living facility for the duration of his training. This request enabled Rocky to make a dramatic change to his training unlike Ivan Drago. The symbolic changes to training for the upcoming fight left Rocky Balboa in a better position to be mentally and physically strong enough to complete his work (scene start/stop time 50:57–58:34).

Prepare people for change by explaining how it will affect them and help people deal with the stress and difficulties of major change (Yukl, 2013). Rocky Balboa returned from his training run to find Adrian standing on the porch of his house in the Soviet Union. She realized it would be difficult to watch Rocky fight Ivan Drago but accepted the reason for the fight – to make a major change in the way the U.S. and Soviet Union interacted (scene start/stop time 58:48–1:02:47).

Provide opportunities for early successes to build confidence, and monitor the progress of change and make any necessary adjustments (Yukl, 2013). Rocky Balboa was training in the Soviet Union and was assigned two Soviet Union individuals to follow him throughout his training. On one specific training outing, Rocky recognized he must make adjustments to better prepare himself for the upcoming fight. Therefore, Rocky navigated from his normal training route (leaving the Soviet Union individuals unable to keep up) and explored other aspects of the Soviet Union (the mountains) in an effort to build his confidence for the fight with Ivan Drago (scene start/stop time 1:02:47–1:04:22).

Keep people informed about the progress of change and demonstrate continued optimism and commitment to the change (Yukl, 2013). The final fight between Rocky Balboa and Ivan Drago was an intense battle between two professional fighters who were also fighting for their country. At the beginning of the fight, the Soviets were completely against Rocky and the U.S. However, as the intensity of the battle between Rocky and Ivan Drago continued, the Soviets

began to change their perspectives of Rocky and the U.S. At the conclusion of the fight, Rocky addressed the audience and stated, "If I can change and you can change, everybody can change" (scene start/stop time 1:04:22–1:27:17).

Objective 3. Describe How *Lincoln* (Lupi, Skoll, King, & Spielberg, 2012) Demonstrates Transformational Leadership

Articulate a clear and appealing vision and explain how the vision can be attained (Yukl, 2013). In the movie, *Lincoln*, President Lincoln articulated a clear and appealing vision while in a meeting with his wartime cabinet. President Lincoln communicated the reasons that he wanted to abolish slavery, why it was important to him, why it was important for the country, and why the wartime cabinet needed to make passing the 13th Amendment a priority (scene start/stop time 23:15–30:45). In addition, President Lincoln continued to articulate his vision. Lincoln stood before a few of his cabinet members and emphasized that despite the rumors people were hearing about a Confederate peace offer to end the war, it was more important to pass the 13th Amendment before accepting any peace offer. President Lincoln insisted his activists needed to talk with members of the House of Representatives and procure at least two more votes to secure the passage of the 13th Amendment (scene start/stop time 1:43:43–1:46:34).

Act confident and optimistic (Yukl, 2013). President Lincoln displayed a very confident and optimistic attitude about the passage of the 13th Amendment throughout the movie by never giving up on his vision. However, his confidence and optimism was most evident when he was in a state of unrest with himself and yet stood firm in his beliefs by sending General Ulysses S. Grant a telegram asking him to remain prepared for military action and not allow the passage of the peace commissioners to Washington DC. President Lincoln made this decision with the hope and optimism that holding the peace commissioners off a few days would give the House of Representatives time to vote and possibly pass the 13th Amendment (scene start/stop time 1:17:38–1:18:51).

Express confidence in followers (Yukl, 2013). Throughout the movie, there were a multitude of times President Lincoln's cabinet members, activists, and fellow party members visually displayed doubt about the vision; however, President Lincoln reassured them that he had confidence not only in the vision but also in the people carrying out the vision. President Lincoln went to the house of one of his activists, William Bilbo, and encouraged him by saying Bilbo could get a few remaining undecided democrats to vote in favor of the 13th Amendment. President Lincoln gave Bilbo instructions on attaining the votes while at the same time expressing confidence that Bilbo could get the unattainable task accomplished (scene start/stop time 1:35:36–1:39:52).

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Use dramatic, symbolic actions to emphasize key values (Yukl, 2013). In order to make a statement about the importance of not passing the 13th Amendment, Fernando Wood stood before the House of Representatives and used dramatic actions and tone of voice to emphasize his beliefs. Furthermore, Wood fabricated the situation by calling President Lincoln a dictator to make the point that passing the 13th Amendment was not the right thing to do (scene start/stop time 35:16–39:12). Additionally, President Lincoln often told stories throughout the movie that were intended to be symbolic of the overall vision he was trying to get people to see. In one scene of the movie, Lincoln told a story of Euclid and his law of axioms in order to relate to the people around him and get them to see things in a different, yet symbolic way that emphasized the importance of passing the 13th Amendment (scene start/stop time 1:15:29–1:17:26).

Lead by example (Yukl, 2013). At times, leading by example can mean one's actions speak louder than words. Towards the end of the movie, Thaddeus Stevens stood before the House of Representatives and said, "I don't stand for equality of all things, only for the equality of all things under the law." Stevens used a play on words in order to stand up for what he believed was right and not upset too many people so that the Republican party might procure the necessary votes to pass the 13th Amendment (scene start/stop time 1:19:32–1:23:16).

Discussion

The three films discussed in this paper are based on the researchers' and students' analysis of each film. Students who participated in the course were instrumental in assisting with the scene selections from each film to coincide with components of leading teams, leading change, and transformational leadership. The students' scene selections were discussed in class and then submitted to the researchers. Once the course had been completed, the researchers compared the scene selections with their own analysis and selected the scenes that best fit each leadership concept. The qualitative approach in this study, content analysis, was utilized to provide the *educator* teaching materials with which to teach. Therefore, the discussion of this research is intended for the *educator* to add to his or her *toolbox* when teaching about leadership.

The three films utilized in this study, *Miracle* (O'Connor & Ciardi, 2004), *Rocky IV* (Stallone, 1985), and *Lincoln* (Lupi et al., 2012), provide educators a template for teaching three leadership components: (a) leading teams, (b) leading change, and (c) transformational leadership. Educators could show the entire film in a leadership course and connect the leadership concepts identified in this paper to the film. Also, if the educator decided to only show specific clips from the film to highlight leadership concepts, then the educator could utilize the start/stop times identified in this paper to show the clip and discuss the specific leadership concept(s). Either way, the educator has specific scenes from a film case study to implement into his or her course.

Miracle is ideal for teaching about leading teams because it exposes the nuances of a team, what comprises a team, and what a team goes through from beginning to end to be successful. *Rocky IV* is ideal for demonstrating leading change because the movie focused on breaking cultural barriers between the U.S. and the Soviet Union. In addition, the movie highlights how individuals prepare for significant change. Additionally, *Lincoln* is a valuable film in teaching transformational leadership because it provides students a glimpse of what it took to get the 13th Amendment passed. Students could observe President Lincoln practicing transformational leadership while trying to change the mindsets of people against the process of change.

In order to use the films as an effective teaching method, the neuroscience of the brain was taken into account. As Zull (2002) stated, neuroscience is a field specifically dealing with the brain and the nervous system, working to decipher commands, functions, and the world around us. Furthermore, it is important to note the brain is made up of two cerebral hemispheres, the left and the right, each having different functions (Sperry, 1973). Throughout the duration of the films, students are presented *the opportunity* to actively engage both sides of the brain – the left hemisphere through verbal cues and the right hemisphere through visual cues (Miller, 1997). Simultaneously engaging both hemispheres allows the human body to obtain and process more information (Schunk, 2012). By understanding the neuroscience of the brain, educators have an advantage in creating teaching methods beneficial for students' learning and acquisition.

Learning through role playing or simulations, the learner could develop critical insight from experience (Schunk, 2012). With film, students are not only learning more about leadership and the components of leadership but are getting first-hand experience through film. *Miracle* presented a form of reality of what it means to be a part of a team and could allow students the opportunity to experience the nuances of a team through visual representation including practices, games, and team adversity. In a short amount of time, students could be exposed to what the 1980 U.S. Olympic hockey team experienced to achieve success.

Utilizing film to teach leadership can engage students in learning situations where visual and verbal cues are already incorporated. For example, in the beginning scene of *Rocky IV*, Apollo Creed's death was visually and verbally depicted on the screen. However, the sense of urgency residing in Rocky Balboa to challenge Ivan Drago to a boxing match in honor of his friend and his country could only be seen through visual delineation. Correspondingly, throughout *Lincoln*, President Lincoln's intentions regarding the 13th Amendment and the hardships he endured were made very clear through his words, facial gestures, or exaggerated hand movements; President Lincoln's speeches and discussions with the people and his cabinet solidified those intentions.

Typically, leadership is taught by means of lectures and textbooks; however, by teaching leadership through film, instructors are utilizing transformational leadership in order to inspire students to look at leadership through a new lens. Bass and Riggio (2006) noted an essential

component of transformational leadership is intellectual stimulation. Therefore, educators could use the information in this paper to intellectually simulate students in the process of analyzing leadership.

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Gathering Evaluation Data on Fact Sheet Publications

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Evaluation is a critical aspect of understanding and communicating the efficacy of Extension outreach endeavors, yet the knowledge, attitude, or behavior change triggered by a printed publication can be difficult to capture as in-person assessments may not be possible. This is particularly true for fact sheet publications, which are often used as grab-and-go pieces of reliable educational information. By printing a QR code – an electronically readable code of black and white squares – on a publication, readers can be directly linked via a variety of free smartphone applications to an online survey platform where evaluation data can be collected. In order to encourage participation, a brief explanation of the survey, the value of a response, and instructions on scanning the QR code can be provided. To facilitate a follow-up assessment, requesting participants' consent, contact information, and preferred mode of contact for future communication within the online survey can be effective.

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