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Identification of the Competencies Needed to Apply Social Marketing to Extension Programming: Results of a Delphi Study

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Abstract

The purpose of this study was to identify the specific competencies needed to apply social marketing, a promising approach to behavior change, to Extension programming. A modified Delphi study was used to achieve group consensus among a panel of experts on the skills, characteristics, and knowledge needed to successfully apply this behavior change approach within the context of Extension. Findings are comprised of thirty-seven competencies within eight categories: (a) Personal attributes; (b) Knowledge and understanding; (c) Research and analysis; (d) Communication; (e) Leadership; (f) Professionalism and ethics; (g) Program-planning, implementation, and evaluation; and (h) System thinking. Additional findings include identification of barriers and motivators related to the adoption of social marketing. The resulting competencies may be used for self-assessment, the identification of potential partnerships, and needs assessments to reveal educational opportunities and assist in the prioritization of future professional development.

Keywords: Behavior change competencies, Delphi, Extension education, needs assessment, Social marketing

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Introduction

Originally established to serve the agricultural community, Cooperative Extension has evolved to address society's constantly changing needs (Rennekamp & Engle, 2008). As this educational outreach organization evolved, so did its measure of success. While early Extension programming focused on participation as its primary evaluation measure, today's Cooperative

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Extension views "behavioral change as a logical and valued outcome of Extension programming, particularly in areas of work where social, economic, or environmental benefits may be deferred or difficult to measure" (Rennekamp & Engle, 2008, p. 20).

Extension is considered a principle change agency (Rogers, 2003) and has explored various approaches to changing behavior. To create positive community change, such as improving water quality or decreasing health risks, individuals need to take action. To bring about individual behavior changes, someone must illuminate the issue and develop solutions to the problem as well as encourage people to become engaged with the solution (Andreasen, 2006). Despite the value placed on behavior change, "understanding how and why behaviors occur is perhaps the greatest barrier to affecting behavioral outcomes in educational programs" (Heimlich & Ardoin, 2008, p. 230).

Social marketing is a promising approach to bringing about behavior change, yet it is underutilized in Extension programming (McKenzie-Mohr, 2000; Rogers, 2003; Warner & Murphrey, 2015). Social marketing is defined as applying "commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence the voluntary behavior of target audiences in order to improve their personal welfare and that of the society of which they are a part" (Andreasen, 1994, p. 110). The process of social marketing includes:

- identifying the target audience and selecting specific behaviors to influence;
- analyzing the audience to understand the barriers that will prevent them from making the change;
- developing strategies to remove barriers to action and encourage the behavior change;
- piloting the strategy with a subset of the audience; and
- extensive implementation and evaluation (McKenzie-Mohr, 2011).

A synergy between the social marketing approach and Extension program-planning process has been identified (Skelly, 2005; Warner, 2014; Warner & Murphrey, 2015). Both focus on influencing behaviors as the bottom line and both are successful due to the act of tailoring programming to specific audience needs (Skelly, 2005; Warner, 2014; Warner & Murphrey, 2015). Bringing about change through planned programs is a primary responsibility among Extension professionals and a complex task in itself, and it may therefore be an area of great opportunity to provide support and professional development programs for Extension (Clements, 1999; Skelly, 2005; Strong & Irani, 2011). A need for professional development to increase social marketing skills and other behavior change competencies has been documented (Reilly & Andrews, 2009; Strong & Irani, 2011; Warner, 2014), and some professional development activities have revealed a successful increase in Extension agents' confidence and ability to plan programs to change behaviors and influence audience characteristics (Andreasen, 2006; Boone, Safrit, & Jones, 2002; Warner, 2014).

In addition to creating positive changes in the communities it serves, Extension is committed to providing growth opportunities for its employees. Professional development has been identified as a critical component of career advancement for Extension professionals as well as the success of the organization itself (Garrett et al., 2014; Kutilek, Gunderson, & Conklin, 2002). Professionals may seek out professional development opportunities. For example, the membership of the Association for International Agricultural and Extension Education, a professional organization for agricultural and Extension educators, has identified professional development as one of the top five benefits of belonging to the organization (Garrett et al., 2014). Competency-based professional development initiatives may promote job satisfaction and the improvement of core skills necessary for successful Extension work (Brodeur, Higgins, Galindo-Gonzalez, Craig, & Haile, 2011). Harder, Place, and Scheer (2010) asserted that by improving organizational

competencies, "Extension can focus on building its own strategic capacities as a means for meeting anticipated challenges of the future and ensuring its relevancy as a public organization" (p. 45).

Professional development should rely on established goals in the form of competencies, which are the specific skills, characteristics, knowledge, and motives needed to perform satisfactorily (Boyd, 2003; Schoenfeld-Tacher & Sims, 2013). People who deliver professional development can meet the demand of specific professions and promote learner success by ensuring participants have successfully mastered specific competencies upon finishing the program (Parolia, Jian & Klein, 2013; Schoenfeld-Tasher & Sims, 2013). The use of specific competencies may prove to be useful because they help programs to set performance targets for learners (Calhoun, Ramiah, Weist, & Shortell, 2008). In addition to ensuring that desired outcomes are met, a competency-based model encourages practice-based learning, which can improve "individual performance, enhance communication and [encourage] coordination across courses and programs" (Calhoun et al., 2008, p. 1598). Higher order skills such as critical-thinking, problem-solving, decision-making, and knowledge application are in high demand, and social competencies such as those related to communication, leadership, and professionalism are becoming vital as industries require individuals with social responsibility and solidarity (Parolia et al., 2013). Furthermore, the identification of common competencies among organizations may illuminate potential partnerships and opportunities for a program to achieve outreach and creative partnership goals (Leach, 2008).

Social marketing holds the promise of encouraging behavior through Extension programming; thus, it may be advantageous to provide professional development activities to increase Extension educators' skill level in using this strategy. Given the complexity of changing behaviors, it may be desirable to provide competency-based training on social marketing techniques for Extension professionals. However, beginning with the appropriate social marketing competencies is important. In recent years, social marketing occupational standards were classified in the United Kingdom (Thorpe & Truss, 2010), and academic competencies for social marketing courses were identified (Lefebvre, 2014). Despite this, competencies for applying social marketing to Extension programming have not been identified nor explored.

The United Kingdom's National Occupation Standards (NOS) for Social Marketing were intended to describe potential professional roles, ensure that professionals maximize the social marketing approach's potential for behavior change, and use it effectively (Thorpe & Truss, 2010). The identified competencies were developed from an analysis of existing competency databases and were not considered within a specific context in a particular field. The NOS categorized its 23 published competencies into five areas:

- carry out social marketing research;
- establish and evaluate social marketing strategies;
- manage social marketing activities;
- deliver social marketing interventions; and
- promote and continually improve social marketing (Thorpe & Truss, 2010).

The academic social marketing competencies published in 2014 were a result of collaboration and discussion among the European Social Marketing Association (ESMA), the International Social Marketing Association (iSMA), and the Australian Association of Social Marketing (AASM) (Lefebvre, 2014). This set of competencies was intended to support educators who design and instruct academic courses and nonacademic certificate programs (Lefebvre, 2014).

Theoretical Framework

The National Research Agenda of the American Association for Agricultural Education identifies Priority 2 as *New Technologies, Practices and Products Adoption Decisions* (Doerfert, 2011). Within this priority, one area of focus recognizes the importance of "[i]dentifying potential gaps in knowledge, socioeconomic biases, and other factors that constrain effective communication and education efforts to various target audiences" (Doerfert, 2011, p. 8). Accordingly, the current study was positioned to identify Extension educators' professional development needs and characteristics that could be addressed to enable more effective programming to create behavior change and improve communities. In an effort to encourage the adoption of social marketing strategies by Extension professionals, this study sought to document a list of competencies that would be necessary for an individual to effectively utilize social marketing within their programming.

The study treated social marketing as an innovation that would be introduced to the Extension professional population using continuing education. Thus, Rogers' (2003) diffusion of innovation theory was used as the framework. Specifically, the attributes of an innovation and the innovation-decision process framed the study. Rogers (2003) articulated five specific characteristics of an innovation that influence adoption: compatibility, complexity, observability, trialability, and relative advantage. Compatibility refers to the degree to which the innovation fits with current practice, while complexity relates to the level of difficulty by which the innovation can be utilized (Rogers, 2003). Given that social marketing has numerous similarities to other Extension methods, it was hypothesized that it would be compatible and complexity could vary based on the elements of the social marketing process. Observability relates to the potential for an adoptee to see the innovation in practice and thus gain an understanding of potential advantages while trialability relates to the potential to be able to experiment with the innovation. Relative advantage related to the degree to which the innovation is perceived better than a current tool. A review of the competencies related to implementing social marketing in light of these five characteristics was intended to further shape the documentation of a continuing education plan. Additionally, the innovation-decision framework describes the process by which a person gains information, passes judgment, forms attitudes, and decides whether or not to adopt an innovation (Rogers, 2003). Viewing the competencies through the lens of the innovation-decision process allowed the researchers to sort, rank, and categorize proposed competencies.

Purpose and Objectives

The purpose of this modified Delphi study was to achieve group consensus to establish a foundation for professional development activities that enhance programming capabilities for Extension professionals working as change agents around the globe. The specific objectives were:

1. to identify the competencies needed by Extension professionals to apply social marketing to Extension programming; and
2. to identify the perceived barriers and benefits to applying social marketing to Extension programming.

Methods

Selection of Participants

We used a combination of expert and snowball sampling methods (Dooley, 2007) and sought a sample of at least 13 expert panelists to ensure reliability within a 0.90 coefficient (Dalkey, 2002). We initially identified 10 experts based on the following criteria: (a) Extension

professionals or applied researchers; (b) highly knowledgeable about social marketing; and (c) with a good working knowledge of Extension programming. To be considered highly knowledgeable about social marketing, our research team required evidence of engagement in the scholarship and application of social marketing to behavioral change programs. Peer-reviewed research publications or successful completion of grant activities that funded social marketing behavior change campaigns were examples of evidence. Depth in understanding of Extension programming was documented through length of successful employment in the Extension system and recommendation as an expert by experienced Extension professionals.

In order to represent diverse viewpoints, we purposefully included county and regional Extension educators, university faculty, independent consultants who had substantial professional experience with Extension, and governmental and nonprofit professionals who regularly collaborate with Extension. The experts were initially invited to participate in the Delphi study via email and then engaged in snowball sampling to identify additional experts who met the prescribed criteria. Snowball sampling led to the identification of an additional 17 qualified potential participants who were also invited to participate in the study via email. In total, 27 experts were invited and 22 agreed to participate. Of the 22 who agreed to participate, all participated in round one, 16 participated in round two, and 17 participated in round three.

Study Design and Data Analysis

Our modified Delphi study employed three stages and was initiated through an email detailing the research process and anticipated timeline. The entire study was conducted electronically as our expert panel was distributed throughout several states and countries. We employed a modified tailored design survey method and distributed up to two replacement questionnaires to nonrespondents during each round (Dillman, Smyth, & Christian, 2007). Each round was closed after 21 days, and data collection lasted 63 days. A minimum of 16 panelists responded to each round, which was sufficient for ensuring reliability (Dalkey, 2002). IBM SPSS Statistics Version 22.0.0.0 was used to create frequency tables. For the purpose of data analysis, variables were recoded to combine agree and strongly agree so that we could examine the percentage of overall agreement among the panel. Consensus was defined as two-thirds agreement or strong agreement on a seven-point Likert scale. Prior to commencing this study, this research protocol was reviewed and approved by the University of Florida Institutional Review Board.

Round One

The first round consisted of one open-ended statement: "Please identify the competencies you feel Extension professionals need in order to apply social marketing principles to Extension programming." We provided definitions of competency and social marketing to ensure study accuracy. *Competency* was defined as a "knowledge, skill, motive or characteristic that causes or predicts outstanding performance" (Boyd, 2003, p. 49), and *social marketing* was defined as a "social-change management technology involving the design, implementation, and control of programs aimed at increasing the acceptability of a social idea or practice in one or more groups of target adopters" (Kotler & Roberto, 1989, p. 24). We provided a multi-line answer space to encourage participants to provide in-depth detail and themes (Israel, 2010).

Round one data were analyzed using the constant-comparative method (Lincoln & Guba, 1985). The constant-comparative method is characterized by a continuous evaluation of data with emerging perceptions through a series of coding and categorization (Lincoln & Guba, 1985). During data analysis, we combined multiple responses into one competency if we determined they had like meanings and separated divisible responses into multiple single competencies as needed. The competencies were compared to the initial data to ensure that the breadth of suggestions was fully captured. All panel members (n = 22) participated in round one for a 100% response rate.

Round one resulted in a total of 208 initial responses, which were condensed into 57 competencies. These competencies were presented to respondents in round two.

Round Two

In round two, group members were presented with the resulting competencies alongside a Likert scale and asked to rate their level of agreement or disagreement to whether the competency was needed to apply social marketing to Extension programs. The Likert scale was constructed with seven-points ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). In round two, the expert panel was also asked to revisit the complete list from round one thoughtfully and provide additional competencies that were missing from the list. The same data analysis process used in round one was repeated to analyze the additional suggestions.

We defined consensus *a priori* as items that achieved two-thirds consensus of agree or strongly agree (Boyd, 2003; Conner, Roberts, & Harder, 2013; Shinn, Wingenbach, Briers, Lindner, & Baker, 2009). Individual items that achieved consensus in round two advanced to round three and were subject to an iteration of the same process and criteria. Data analysis on round two responses revealed that a total of 41 items (see Table 1) achieved at least two-thirds consensus. Sixteen competencies did not achieve consensus and were therefore removed from consideration. The response rate for round two was 72.7% (n = 16).

Table 1

Round Two Results in a Delphi Study Conducted to Identify the Competencies Needed to Apply Social Marketing to Extension Programming (n = 16)

Competencies Needed to Apply Social Marketing to Extension Programming	% Agree or Strongly Agree
1. Understand the tools and techniques employed in social marketing	100.0
2. Willing to use social marketing tools	93.8
3. Use appropriate methods to interact with diverse audiences	93.8
4. Identify problems or issues most appropriate for applying a social marketing approach	93.8
5. Select appropriate behavior change goals	93.8
6. Design programs based on specific behavioral goals	93.8
7. Design and execute a program evaluation plan (to test whether a social marketing campaign was successful)	93.8
8. Identify key leaders within a social group	87.5
9. Identify individuals who set norms within a social group	87.5
10. Build positive collaborative relationships	87.5
11. Focus on goal of attaining behavior change	87.5
12. Identify and locate stakeholders	87.5
13. Determine the costs associated with social marketing techniques and campaigns	87.5

Table 1 (continued)

Round Two Results in a Delphi Study Conducted to Identify the Competencies Needed to Apply Social Marketing to Extension Programming (n = 16)

Competencies Needed to Apply Social Marketing to Extension Programming	% Agree or Strongly Agree
14. Build collaborative relationships based on trust and authenticity	81.3
15. Utilize creative thinking in approaching problem	81.3
16. Exhibit an understanding of the basic principles, theories, concepts, and history of social marketing	81.3
17. Gather qualitative data through focus groups, interviews, and other methods	81.3
18. Develop materials with a clear message using images and words	81.3
19. Communicate results of social marketing campaigns to colleagues, stakeholders, communities, and others	81.3
20. Decide when sub-contracting may be appropriate	81.3
21. Conduct a pilot test that improves the final product	81.3
22. Design and execute a program monitoring plan	81.3
23. Prioritize the thinking of the target audience rather than the researcher	81.3
24. Exhibit a desire to change behavior	75.0
25. Utilize knowledge of behavior change theory	75.0
26. Understand the basic psychological principles behind behavior change	75.0
27. Synthesize primary and secondary data to understand target audience's perceived barriers, benefits, and motivators to a given change	75.0
28. Generate publicity that leads to participation in social marketing initiatives	75.0
29. Engage community members (and other stakeholders) in dialogue	75.0
30. Facilitate interactions with target audience members	75.0
31. Select a creative team to design materials	75.0
32. Apply ethical principles in developing and implementing a social marketing plan	75.0
33. Exhibit an ability to be systematic in developing a long-term approach to social marketing	75.0
34. Willing to ask for help and feedback and to learn from failure (humility)	68.8
35. Conduct stakeholder analysis	68.8
36. Design valid and reliable survey questionnaires	68.8
37. Identify the behaviors and influences that may compete against adopting new behaviors, products or services	68.8
38. Develop resources to support a social marketing campaign (grant writing and other fund raising skills)	68.8

Table 1 (continued)

Round Two Results in a Delphi Study Conducted to Identify the Competencies Needed to Apply Social Marketing to Extension Programming (n = 16)

Competencies Needed to Apply Social Marketing to Extension Programming	% Agree or Strongly Agree
39. Segment populations and identify appropriate segment to prioritize	68.8
40. Coordinate the implementation of a multi-faceted intervention	68.8
41. Prioritize and select target behaviors that will yield optimum return on investment	68.8

During round two, the expert panel was asked to use an open-ended response block to input additional competencies they determined were missing from the list generated in round one. Panel members provided competencies related to positioning desired behaviors against current or competing ones, reinvesting in monitoring changed behaviors, and focusing on the target audience through conducting research. Six new competencies were created based upon the additional suggestions and qualitative input (see Table 2). These competencies were added to those that achieved consensus, and a total of 47 competencies were subsequently presented to the panel in round three.

Table 2

Competencies Added as a result of Round Two in a Delphi Study Conducted to Identify the Competencies Needed to Apply Social Marketing to Extension Programming (n = 16)

Competencies Needed to Apply Social Marketing to Extension Programming
1. Implement research that leads to insights into current/desired consumer behaviors
2. Demonstrate the willingness to devote more time to program development in exchange for greater potential impacts
3. Maintain consistent programming focused on specific fixed behaviors over multiple years
4. Describe the connection between social marketing and Extension's goal of behavior change
5. Write a social marketing plan
6. Position desired behaviors against competing ones

Round Three

The 47 competencies that emerged from round two were presented to the panel during round three. As in round two, those that received at two-thirds responding with agree or strongly agree were considered to have reached consensus. During round three, we also incorporated open-ended questions to allow the expert panel to share the barriers and benefits Extension professionals experience or perceive in applying social marketing to their Extension programming. The panel provided extensive feedback, which was analyzed and categorized into four major areas: training, time and financial support, personnel support, and individual's emotions and behaviors. Rogers'

theories of the innovation-decision process were used to analyze the responses. The response rate for round three was 77.3% (n = 17).

Results

Data analysis following round three revealed the competencies Extension professionals need to apply social marketing to their Extension programs (Objective One) and the barriers and benefits that may influence their doing so (Objective Two).

Objective One: to identify the competencies needed by Extension professionals to apply social marketing to Extension programming

Data analysis of round three responses revealed consensus on a total of 37 competencies (see Table 3) that comprise the final study findings. Ten competencies did not achieve consensus and were therefore removed.

Table 3

Round Three Results in a Delphi Study Conducted to Identify the Competencies Needed to Apply Social Marketing to Extension Programming (n = 17)

Final Competencies Sorted by Level of Agreement	% Agree or Strongly Agree
1. Willing to use social marketing tools	94.1
2. Identify problems or issues most appropriate for applying a social marketing approach	94.1
3. Prioritize the thinking of the target audience rather than the researcher	88.2
4. Utilize creative thinking in approaching problems	88.2
5. Exhibit an understanding of the basic principles, theories, concepts, and history of social marketing	88.2
6. Understand the tools and techniques employed in social marketing	88.2
7. Identify the behaviors and influences that may compete against adopting new behaviors, products or services	88.2
8. Communicate results of social marketing campaigns to colleagues, stakeholders, communities, and others	88.2
9. Build positive collaborative relationships	88.2
10. Design programs based on specific behavioral goals	82.4
11. Use appropriate methods to interact with diverse audiences	82.4
12. Utilize knowledge of behavior change theory	82.4
13. Understand the basic psychological principles behind behavior change	82.4
14. Synthesize primary and secondary data to understand target audience's perceived barriers, benefits, and motivators to a given change	82.4
15. Identify key leaders within a social group	82.4

Table 3 (continued)

Round Three Results in a Delphi Study Conducted to Identify the Competencies Needed to Apply Social Marketing to Extension Programming (n = 17)

Final Competencies Sorted by Level of Agreement	% Agree or Strongly Agree
16. Engage community members (and other stakeholders) in dialogue	82.4
17. Decide when sub-contracting may be appropriate	82.4
18. Identify and locate stakeholders	82.4
19. Select appropriate behavior change goals	82.4
20. Position desired behaviors against competing ones	82.4
21. Build collaborative relationships based on trust and authenticity	76.5
22. Willing to ask for help and feedback and to learn from failure (humility)	76.5
23. Develop materials with a clear message using images and words	76.5
24. Facilitate interactions with target audience members	76.5
25. Focus on goal of attaining behavior change	76.5
26. Maintain consistent programming focused on specific fixed behaviors over multiple years	76.5
27. Segment populations and identify appropriate segment to prioritize	76.5
28. Design and execute a program monitoring plan	76.5
29. Exhibit an ability to be systematic in developing a long-term approach to social marketing	76.5
30. Gather qualitative data through focus groups, interviews, and other methods	70.6
31. Identify individuals who set norms within a social group	70.6
32. Generate publicity that leads to participation in social marketing initiatives	70.6
33. Select a creative team to design materials	70.6
34. Apply ethical principles in developing and implementing a social marketing plan	70.6
35. Describe the connection between social marketing and Extension's goal of behavior change	70.6
36. Design and execute a program evaluation plan (to test whether a social marketing campaign was successful)	70.6
37. Prioritize and select target behaviors that will yield optimum return on investment	70.6

These final competencies were organized into eight categories (see Table 4): (a) *Personal Attributes;* (b) *Knowledge and Understanding;* (c) *Research and Analysis;* (d) *Leadership;* (e)

Professionalism and Ethics; (f) *Communication;* (g) *Program-Planning, Implementation, and Evaluation;* and (h) *System Thinking*.

Table 4

Categorized Results in a Delphi Study Conducted to Identify the Competencies Needed to Apply Social Marketing to Extension Programming

Competencies Needed to Apply Social Marketing to Extension Programming
Personal attributes
1. Willing to use social marketing tools
2. Use appropriate methods to interact with diverse audiences
3. Build collaborative relationships based on trust and authenticity
4. Willing to ask for help and feedback and to learn from failure (humility)
5. Utilize creative thinking in approaching problems
Knowledge and understanding
6. Exhibit an understanding of the basic principles, theories, concepts, and history of social marketing
7. Utilize knowledge of behavior change theory
8. Understand the basic psychological principles behind behavior change
9. Understand the tools and techniques employed in social marketing
10. Identify problems or issues most appropriate for applying a social marketing approach
Research and analysis
11. Gather qualitative data through focus groups, interviews, and other methods
12. Identify the behaviors and influences that may compete against adopting new behaviors, products or services
13. Synthesize primary and secondary data to understand target audience's perceived barriers, benefits, and motivators to a given change
14. Identify key leaders within a social group
15. Identify individuals who set norms within a social group
Communication
16. Develop materials with a clear message using images and words
17. Communicate results of social marketing campaigns to colleagues, stakeholders, communities, and others
18. Generate publicity that leads to participation in social marketing initiatives
19. Engage community members (and other stakeholders) in dialogue
Leadership
20. Facilitate interactions with target audience members
21. Select a creative team to design materials
22. Decide when sub-contracting may be appropriate
23. Build positive collaborative relationships
24. Focus on goal of attaining behavior change

Table 4 (continued)

Categorized Results in a Delphi Study Conducted to Identify the Competencies Needed to Apply Social Marketing to Extension Programming

Competencies Needed to Apply Social Marketing to Extension Programming
Professionalism and ethics
25. Apply ethical principles in developing and implementing a social marketing plan
26. Maintain consistent programming focused on specific fixed behaviors over multiple years
27. Describe the connection between social marketing and Extension's goal of behavior change
Program-planning, implementation, and evaluation
28. Identify and locate stakeholders
29. Select appropriate behavior change goals
30. Segment populations and identify appropriate segment to prioritize
31. Design programs based on specific behavioral goals
32. Design and execute a program monitoring plan
33. Design and execute a program evaluation plan (to test whether a social marketing campaign was successful)
System thinking
34. Prioritize and select target behaviors that will yield optimum return on investment
35. Prioritize the thinking of the target audience rather than the researcher
36. Exhibit an ability to be systematic in developing a long-term approach to social marketing
37. Position desired behaviors against competing ones

Objective Two: to identify the perceived barriers and benefits to applying social marketing to Extension programming

Open-ended questions from round three revealed the barriers and benefits Extension professionals experience or perceive in applying social marketing to their Extension programming. The diffusion of innovation proposed by Rogers (2003) was used to analyze the responses. Social marketing was viewed as an innovation that could be adopted among Extension professionals.

Barriers were categorized into four major areas: training, time and financial support, personnel support, and an individual's emotions and behaviors. More than half of the respondents identified a need for training in social marketing as a barrier, indicating the *lack of training, lack of understanding the principles of social marketing,* and *lack of understanding of how to implement a social marketing campaign* adequately. The panel also expressed concern over the resources needed to engage in social marketing, which includes time and financial support from administrators or other sources. Respondents identified *lack of financial resources* and *limited time* as barriers that could prevent the adoption of social marketing.

Another major barrier was the internal emotions of individuals. According to the respondents, fear of failure, pressure to produce results quickly, and the reluctance to try something new are barriers that may prevent the application of social marketing. Some of the notable responses included: *fear of failure/success, pressure to produce fast results to demonstrate worth of program,* and *reluctance to try alternative or outside-the-box approaches.* A final barrier identified by the

panel involved personnel support. Respondents argued that without appropriate support or assistance from administrators, the application of a social marketing approach posed difficulties, suggesting *lack of support networks, lack of support from superiors or colleagues,* and *technical assistance* as primary barriers that prevented Extension professionals from applying social marketing to their programs.

In addition to the barriers to applying social marketing, several benefits were identified. The respondents indicated the implementation of policies to change behaviors and the provision of personnel support and resources by administrators or external agencies would motivate Extension professionals to adopt social marketing. Respondents suggested administration *make [social marketing] a requirement in their annual plans*, enhance the ability to *realize more effective behavioral change,* and articulate *explicit requests from supervisors to meet behavior change goals.* These actions would promote and encourage Extension professionals' adoption and application of social marketing. The panel suggested support from supervisors and administrators could encourage the application of social marketing. Resources such as training, financial incentives, and funding could make a difference in Extension professionals applying social marketing in their practices. The panel identified *support staff or use of trained volunteers to assist*, *merit pay or other monetary incentive*, and highlighting *more efficient and effective allocation of resources* as ways an organization's leadership could influence Extension professionals' attitudes towards the innovation.

Conclusions

This Delphi study was used to develop an understanding of the specific skills, characteristics, knowledge, and motives needed to successfully apply social marketing to Extension programming. The diversity in type and location of social marketing and Extension experts who participated in the Delphi panel allowed an international view of the core competencies needed. Thirty-seven competencies related to effective application of social marketing to Extension programming were identified. Two competencies tied with highest scores among respondents: the *willing to use social marketing tools* and an ability to *identify problems or issues most appropriate for applying a social marketing approach*. Several tied for the third-highest scored competency, including *prioritize the thinking of the target audience; utilize creative thinking in approaching problems; exhibit an understanding of the basic principles, theories, concepts, and history of social marketing; understand the tools and techniques employed in social marketing; identify competing behaviors; communicate results of social marketing campaigns;* and *build positive relationships.*

To avoid bias in analyzing the data, we intentionally did not use the United Kingdom's social marketing occupational standards (Thorpe & Truss, 2010) or the existing academic competencies for social marketing courses (Lefebvre, 2014) to inform the design of this Delphi study. We compared our findings to these two references after data analysis was complete. Because the current study focused on the application of social marketing to Extension, it was not surprising that the other two references did not incorporate Extension and the current study resulted in one competency that specifically referred to Extension: *Describe the connection between social marketing and Extension's goal of behavior change*.

Several differences between prior competency lists and the current study list emerged. The expert panel identified the need for practitioners to focus a program on specific behaviors over many years. Additionally, the panel pointed out the importance of identifying people who set the norms within a community and the key leaders within a social group. Finally, a major area of dissimilarity to the other two competency lists was the focus on systems thinking. Within this category, respondents felt that prioritizing target behaviors, approaching problems from the audience's point of view, and positioning desired behaviors against competing ones were important

skills. Another difference in the current study was the focus on personal attributes such as an individual's willingness to use social marketing, ability to apply critical thinking to a problem, and the willingness to ask for feedback.

There were a number of similarities among the three lists. They included understanding the principles and theories that guide social marketing, designing programs for specific behavioral goals, generating publicity for a campaign and communicating results, and segmenting the population. We shared the categorization of competencies with the panelists and requested feedback electronically. Some concerns were expressed over the title of *system thinking* in that the definition of system thinking was unclear or perceived negatively. System thinking is an important higher-order skill that includes the organization of ideas and techniques (Assaraf & Orion, 2010; Habron, Garolnik, & Thorp, 2012). Thoughts and ideas may be whole systems in their own right while also being a part of and influencing a larger system (Dixon, 2007). Competencies in system thinking allow individuals to approach and resolve a problem systematically through understanding what, when, where, why, and how (Inelmen, 2010). In social marketing, competencies under system thinking enable an understanding of the interrelationship between problematic behaviors and intended audiences, which leads to a systematic approach to solving problems. We did not ultimately change our title of *system thinking*, but acknowledge that a few of our panel members were in disagreement with the term.

A critical step in encouraging behavior change is the identification of real and perceived barriers the target audience has to making a behavior change (Lee & Kotler, 2011). According to Rogers (2003), the process of diffusing new ideas starts with an innovation being communicated through some types of channel over time among individuals of a social system. A social system, such as an Extension organization, is "a set of interrelated units that are engaged in joint problem solving to accomplish a common goal" (Rogers, 2003, p. 36). The innovation-decision process refers to the idea that individuals move through the process from gaining knowledge about the innovation (social marketing) to ultimately making the decision to adopt it (Rogers, 2003).

The need for training is a barrier to the adoption of social marketing among Extension professionals. These concerns are apparent in the knowledge stage of the innovation-decision process. Individuals' willingness to participate occurs when they are "exposed to an innovation's existence and gain understanding of how it functions" (Rogers, 2003, p. 167). Without proper training in social marketing and exposure to its application, individuals will not be able to apply the principles to practice. Knowledge was also previously identified as a barrier in a study focused on the use of social marketing in the context of Extension within the state of Florida (Warner, 2014).

The lack of adequate time or financial resources was another barrier to Extension's adoption of social marketing, which was also reflected in a needs assessment in Florida (Warner, 2014). Perceptions about inadequate resources may contribute to individuals' opinions of the social marketing approach to behavior change. According to Rogers (2003), individuals may reject the innovation during the persuasion stage if they form an unfavorable attitude toward it.

Individual feelings of pressure to deliver results quickly and fear of failing in trying something new may serve as barriers to the adoption of social marketing. These emotions may hinder adoption during the decision stage of the innovation-decision process as negative emotions toward an innovation could lead to its rejection. Further, this perceived uncertainty of success or failure points to the complexity of this innovation, a feature that can reduce its likelihood of adoption. A perceived lack of support also serves as a barrier. During the implementation stage of the innovation-decision process, when a new idea is being implemented, if there is uncertainty or lack of support, individuals may reject the idea altogether (Rogers, 2003).

Numerous benefits and motivators exist that could help to encourage the adoption of social marketing. The primary motivators that could be used by an organization to improve the environment for social marketing include support from administration, financial and merit incentives, and training for social marketing. An additional and important motivator that should be emphasized is the potential for efficiency and the potential for being impactful when the social marketing approach is utilized. These motivators reflect the idea that the diffusion of innovation as a change in adopters' behaviors or attitude can lead to an acceptance (Rogers, 2003).

Limitations to this research include the response rate and potential desire to conform to group dynamics. While a minimum of 16 panelists responded to each round, we had less than a 100% response rate on rounds two and three. Additionally, while a benefit of the Delphi process is respondents' anonymity, there is nonetheless a subtle pressure for participants to conform to group feedback (Hsu & Sandford, 2007).

Implications and Recommendations

Despite its application to public health campaigns for decades, social marketing competency identification is in its infancy, regardless of the field or application. The UK NOS competencies, published in 2009, were the "first NOS for social marketing in the world" (Thorpe & Truss, 2010, p. 6), and the collaborative academic social marketing competencies from the ESMA, iSMA, and AASM were published in 2014 (Lefebvre, 2014). Despite the fact that there is a great need for professional development to increase social marketing skills and other behavior change competencies (Reilly & Andrews, 2009; Warner, 2014; Warner & Murphrey, 2015), competencies needed to apply social marketing to Extension programming had not been identified previously.

As social marketing is a method that involves the use of social influences to change behaviors of the target audience, those who apply social marketing to Extension programming need to demonstrate ability in their areas of focus as well as program-planning and delivery. Social marketing competencies are independent of the context and technical focus of an Extension program. Social marketing is related to the process of program delivery and may be used in any context where behavior change is desired. Therefore, these competencies may be useful to diverse Extension organizations and professionals working in any focus area.

Providing Extension professionals with training in social marketing is a motivator for encouraging the use of this behavior change strategy. Based on the findings, these competencies may be used as a guide for self-assessment for Extension professionals who are new to social marketing or who are considering engaging in this approach. Areas of identified weakness may be used as a guide for professional development programming. Meanwhile, areas of strength may point to the roles practitioners may contribute to collaborative social marketing partnerships.

The identified competencies may not be applicable to all Extension professionals. While some panelists indicated that all competencies were important to any potential social marketing practitioner, Extension professionals can collaborate with others who offer expertise in areas where they are lacking. We agree with Thorpe and Truss (2010) in that no professional would be expected to master every social marketing competency. However, the competencies identified by this study can be used as a framework in the social marketing planning process. At the individual level, professionals who engage in applying social marketing to Extension programming may reflect on the list of competencies to determine areas needed for collaboration or the need to hire external support in order to ensure coverage of the necessary skills. We suggest that many Extension professionals may find they have adequate skills in some of the competency areas and the areas

where they have less expertise may illuminate opportunities to partner with individuals who are skilled in them.

Results indicated Extension professionals should be able to describe the connection between social marketing and Extension's goal of behavior change. Thus, it is essential that professional development clearly articulates social marketing's synergy with Extension programming and the value it adds. At the organizational level, we recommend these competencies be used for needs assessment activities that guide the prioritization of professional development activities. The competencies can be useful in guiding professional development programming within local, regional, and international Extension organizations that seek to increase their Extension professionals' social marketing and behavior change abilities. The results may also be useful in identifying competencies that should be considered during broad-scale professional development activities among organizations or entities that encompass multiple organizations. For example, a national Extension professional development organization may consider conducting a needs assessment using the results of this study. Competencies that emerge as areas of need among multiple states or organizations would be ideal candidates for national professional development seminars or conferences. Competencies that emerge as localized needs would be best addressed at the local level.

Barriers are the "concerns and real reasons why your target audience members perceive they can't or don't want to do your desired behavior" (Lee & Kotler, 2011, p. 61). The identification of barriers is an important step in the social marketing process. Based upon the results of this study, it is recommended that Extension organizations consider removing or reducing the barriers that prevent their practitioners from adopting social marketing. The removal of barriers is a social marketing principle that can lead to the desired behavior change. Providing organizational support, trainings, and incentives for adopting social marketing may also help to encourage adoption.

Organizations and individuals may find the study results useful in identifying partnerships (Leach, 2008) that make sense at diverse scales (i.e., local, regional, or international). Social marketing is a valuable, yet underused strategy for creating behavior change (McKenzie-Mohr, 2000; Rogers, 2003) and is highly compatible with the Extension programming process (Warner, 2014). Extension organizations are considered premier change agencies, and social marketing is one of many encouraging approaches to facilitate behavior changes that can benefit target audiences.

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