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## Social Media as a Supplement to Face-to-Face Education: The Perspectives of Expanded Food and Nutrition Education Program Paraprofessionals and Graduates

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## **Social Media as a Supplement to Face-to-Face Education: The Perspectives of Expanded Food and Nutrition Education Program Paraprofessionals and Graduates**

### **Abstract**

Using social media is an inexpensive, innovative approach to supplementing direct education provided by the Expanded Food and Nutrition Education Program (EFNEP). Focus group research was conducted with EFNEP paraprofessionals ( $n = 33$ ) and participants ( $n = 39$ ) to inform the development of a social media presence for the program. Although recommendations by EFNEP's social media committee focus on providing online articles, focus group results suggest that content should be presented as colorful pictures and videos, portraying recipes and nutrition tips. Also, the study highlights the importance of using engaging, colorful visuals when using social media as a form of indirect education.

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## **Introduction**

Proper nutrition is a modifiable risk factor for several chronic diseases. Heart disease, cancer, and diabetes are among the top 10 causes of death in the United States (Centers for Disease Control & Prevention, 2013), and each is affected by diet quality. Low-income Americans are disproportionately affected by poor health (Banks, Marmot, Oldfield, & Smith, 2006) and face several barriers to healthful eating, including cost of food, lack of nutrition knowledge, undervaluing of the importance of nutrition, and lack of self-efficacy (Davis, Befort, Steiger, Simpson, & Mijares, 2013; Food Marketing Institute, 2000; Resnicow et al., 2000).

One approach for addressing these health disparities is the use of nutrition education programs. Specifically, the peer-educator model has been shown to improve nutrition-related behaviors (Arlotti, Cottrell, Lee, & Curtin, 1998). The Expanded Food and Nutrition Education Program (EFNEP), a nationwide, federally funded program, recruits peer educators to teach low-income

adults and youth how to eat healthfully on a budget through a series of interactive, face-to-face lessons. These lessons focus on improving behaviors in four core areas: diet quality and physical activity, food resource management, food safety, and food security.

EFNEP uses an in-person, peer-educator model to provide evidence-based nutrition education. Yet the Internet is increasingly becoming a source of health information for Americans (Pew Research Center, 2014), and the idea of coupling direct education with online content is attractive. Internet-based nutrition interventions have been shown to effectively encourage healthful eating behaviors. A systematic review of randomized controlled trials evaluating the effectiveness of computer-based physical activity and nutrition education interventions found that 60% of the studies ( $n = 50$ ) showed a positive effect on physical activity or nutrition behaviors (Broekhuizen, Kroeze, Poppel, Oenema, & Brug, 2012).

Social media can be an effective delivery method for an educational intervention. Studies involving college students have shown Facebook interventions to be successful in improving attitudes, practices, and knowledge of food safety; improving perceived social support for physical activity interventions; and expanding food choices (Cavallo et al., 2012; Mayer & Harrison, 2012; Vaterlaus, Patten, Roche, & Young, 2015). A Facebook page dedicated to the promotion of breastfeeding improved participants' attitudes and behavioral intentions regarding breastfeeding (Jin, Phua, & Lee, 2015). Facebook advertisements were effective in recruiting low-income adult women for an online nutrition education program (Lohse, 2013). On the basis of their work with "Food Hero", a popular social media-based nutrition education program, Tobey and Manore (2014) suggested the following steps for effective use of social media: conduct a needs assessment; select social media sites; create a plan; integrate the social media team; and regularly collect, track, and use social media measurement data. Leak et al. (2014) conducted focus group research with 26 EFNEP graduates in North Carolina to obtain feedback on how EFNEP could use social media to communicate nutrition-related information to a low-income audience. They found interest in visually appealing material that was not too wordy, including new recipes, information about healthful ingredient substitutions, tips for how to include children in meal preparation, information about how to make meals from foods on sale in local stores, and coupons for healthful ingredients. Case, Cluskey, and Hino (2011) conducted focus group research with low-income adults in a rural community to learn about their thoughts related to obtaining nutrition education online. The focus group participants were interested in getting nutrition education online and indicated that new content that changed frequently, recipes that did not take long to make, and the ability to interact with other users or experts would motivate them to access online nutrition content.

Most online adults use social media, with the most popular platform being Facebook (Duggan & Smith, 2013). The preference for Facebook is independent of income (Duggan & Smith, 2013). In addition, education, race/ethnicity, and health care access have not been shown to be significant predictors of social media use among Internet users (Chou, Hunt, Beckjord, Moser, & Hesse, 2009). Social media is low cost and widely available and could encourage a relationship with an audience beyond face-to-face lessons. Therefore, the development of a social media presence for EFNEP is an enhancement to the program's direct education efforts. EFNEP-implementing institutions have acknowledged the potential of social media and formed a multistate social media committee (SMC)

to examine this potential. The SMC developed an instrument for vetting potential posts to ensure that they meet best practices for communicating health information through social media. In 2014, the SMC used this instrument to compile a list of vetted posts organized by core area. These vetted posts are intended to provide resources states can build on as they develop social media-based content for program participants (<https://efnepsocialmedia.wordpress.com/efnep-social-media-toolkit/>).

The study described in this article was conducted to further inform the development of a social media presence for EFNEP. Although other studies have assessed the potential of communicating nutrition information to EFNEP audiences through social media (Leak et al., 2014), the study reported here is the first to include the perspective of EFNEP paraprofessionals (peer educators) and the effect of demographic variables in the formative evaluation. Furthermore, the study results build on the work of the SMC by suggesting ways EFNEP can optimize content delivery through social media to best supplement face-to-face education.

## Methods

### Study Sample and Design

Focus group research was conducted in Georgia with the state EFNEP program's paraprofessionals ( $n = 33$ ) and a convenience sample of EFNEP participants from urban and rural counties ( $n = 39$ ). All focus group participants were over the age of 18. Approval was obtained from the University of Georgia Institutional Review Board for all procedures before work with human subjects was initiated.

### Data Collection and Analysis

The focus group research for both EFNEP paraprofessionals and EFNEP participants involved administration of a survey followed by a discussion of the focus group participants' opinions and ideas related to EFNEP's use of social media and the design of the program's social media content. The survey was used to collect demographic information and a brief overview of focus group participants' views on social media and EFNEP's use of it. The following open-ended questions were developed to guide the focus group discussions:

- Would you use social media to receive free nutrition information?
- What kinds of social media would you like to see EFNEP use?
- How often would you like to get the information?
- Which way of getting nutrition information would you like the best?
- Which way of getting nutrition information would be the most helpful?

The survey and discussion questions were developed by the moderator and reviewed for clarity by

an EFNEP social media specialist, the EFNEP coordinator, and an Extension food safety specialist. The audio for each focus group was recorded. The moderator transcribed the sessions and identified common themes.

Statistical consultation was provided by the university's Statistics Consulting Center. Data from the surveys were analyzed to determine the effects that four demographic variables—area of residence (urban or rural), age, race, and education—had on EFNEP participants' social media preferences. Models were fit for each question, using stepwise logistic regression with backward elimination or a cumulative logistic model with backward elimination with a 0.05 significance level.

Finally, the SMC's recommended list of vetted social media posts was analyzed to determine the total number of posts, the number of posts per core area, and the format of each post. The frequency of each type of post was then counted, and the percentage of the total number of posts was calculated. These findings were compared to the findings from the focus groups.

## Results

### Focus Group Research with EFNEP Paraprofessionals

All the paraprofessionals in this study were female and had at least a high school education. The majority of the paraprofessionals were White (42%) or African American (39%) and non-Hispanic (61%). Forty-five percent were between the ages of 51 and 60. Overall, the paraprofessionals were open to EFNEP's using social media. They were particularly interested in seeing EFNEP use social media for marketing and recruiting. A few also expressed concerns, including concerns related to job security and the potential impact on EFNEP's credibility if users were to post questionable content on the social media page.

The majority of paraprofessionals ranked Facebook as the social media platform they were most interested in seeing EFNEP use and indicated that they would want to receive content once a day to a few times a week; the preferred formats for content delivery were tips, videos, recipes, and links to more information (Table 1). Regarding appearance, the terms "colors" and "pictures" were frequently used. The paraprofessionals offered ideas for content, including reminders of what was covered in face-to-face sessions, additional tips about eating healthfully, information about popular diets, and directions to reliable sources of nutrition information. Other suggestions for content were grab-and-go breakfast ideas, tips on making healthful eating fun for kids, and motivational content, such as success stories.

**Table 1.**  
EFNEP Paraprofessionals' Opinions Regarding Use  
and Optimal Design of a Social Media Presence  
for EFNEP

Question and responses	No. (%) <sup>a</sup>
Would you use social media to receive nutrition information from EFNEP?	27b

Yes	24 (89)
No	3 (11)
Would you like to see EFNEP use social media to repeat key messages from Food Talk between the sessions?	30b
Yes	29 (97)
No	1 (3)
Rank the types of social media below according to which you would like to see EFNEP use the most.	29b
Ranked Facebook highest	27 (93)
Ranked YouTube highest	1 (3)
Ranked Pinterest highest	1 (3)
Ranked Instagram highest	0 (0)
Ranked Other highest	0 (0)
How often would you like to get the information from EFNEP on social media?	29b
Once a day	14 (48)
A few times a week	13 (45)
More than once a day	2 (7)
How would you present the social media content?	27b
Tips	23 (85)
Videos	21 (78)
Recipes	19 (70)
Links to more information	14 (52)
Recipe demonstrations	14 (52)
Games	12 (44)
Discussions	10 (37)

Other	4 (15)
<p>aPercentages may not add up to 100 because they were rounded to the nearest whole number and multiple responses were allowed for one question. bTotal number of responses to the question.</p>	

## Focus Group Research with EFNEP Participants

The EFNEP participants who participated in the focus groups ranged in age from 19 to 59. Most were female, White, and non-Hispanic and had less than a complete college education. Table 2 shows results of the focus group discussions. The majority of EFNEP participants (82%) indicated interest in seeing EFNEP use social media. Of those participants, most selected Facebook and YouTube as the ideal platforms. Recommendations for an ideal frequency of communication ranged from two to four times a day to two times a week. Participants said they preferred to get information via daily tips and videos rather than discussions.

**Table 2.**

EFNEP Participants' Preferences Regarding Use and Optimal Design of a Social Media Presence for EFNEP

Question and responses	No. (%) <sup>a</sup>		
	Urban	Rural	Total
Would you use social media to receive free nutrition information from EFNEP (in addition to the information talked about in the Food Talk sessions)?	24 <sup>b</sup>	15 <sup>b</sup>	39 <sup>b</sup>
Yes	20 (83)	12 (80)	32 (82)
No	4 (17)	3 (20)	7 (18)
What kind of social media would you like to see EFNEP use?	20 <sup>b</sup>	12 <sup>b</sup>	32 <sup>b</sup>
Facebook	17 (85)	8 (67)	25 (78)
YouTube	17 (85)	3 (25)	20 (63)
Instagram	9 (45)	0 (0)	9 (28)
Pinterest	7 (35)	1 (8)	8 (25)
Twitter	6 (30)	2 (17)	8 (25)
How often would you like to get the information?	20 <sup>b</sup>	12 <sup>b</sup>	32 <sup>b</sup>

A few times a week	12 (60)	6 (50)	18 (56)
Once a day	7 (35)	5 (42)	12 (38)
More than once a day	1 (5)	1 (8)	2 (6)
Which way of getting nutrition information would you like the best?	20 <sup>b</sup>	12 <sup>b</sup>	32 <sup>b</sup>
Daily tips	18 (90)	6 (50)	24 (75)
Videos	11 (55)	5 (42)	16 (50)
Discussion	1 (5)	2 (17)	3 (9)
Which way of getting nutrition information would be the most helpful?	20 <sup>b</sup>	12 <sup>b</sup>	32 <sup>b</sup>
Daily tips	13 (65)	8 (67)	21 (66)
Videos	15 (75)	4 (33)	19 (59)
Discussion	2 (10)	2 (17)	4 (13)
<sup>a</sup> Percentages may not add up to 100 because they were rounded to the nearest whole number and multiple responses were allowed for some questions. <sup>b</sup> Total number of responses to the question.			

Characteristics of appearance of the social media content that were emphasized were color, pictures of food, and videos. Specifically, participants were interested in recipes with pictures, meal ideas, recipe demonstrations, and ideas about how to make meals with ingredients they have on hand. One participant mentioned interest in getting ideas about how to make meals with food from food banks.

Statistical analysis of the survey results showed that age ( $p < 0.03$ ) and education ( $p < 0.04$ ) had significant effects on whether participants would use social media content from EFNEP. Interest in using social media decreased as age increased. On the other hand, education level and interest in using social media were directly correlated. In terms of preference for social media platform, demographic variables had no effect on participants' interest in seeing EFNEP use Facebook or Instagram. Among participants who said they would use social media from EFNEP, the older a participant was, the more likely he or she was to be interested in Twitter ( $p < 0.05$ ). Rural participants were less likely to be interested in YouTube ( $p < 0.02$ ), and participants with some education beyond high school were more likely to be interested in Pinterest ( $p < 0.03$ ). Age had a significant effect ( $p < 0.03$ ) on how often participants wanted to receive information from EFNEP, with older age associated with greater interest in receiving information more frequently. The only significant relationship between demographic variables and the preferred format for nutrition information (videos, tips, or discussions) was that urban participants were more likely than rural participants to consider videos as a preferred format.

# Analysis of the EFNEP Multistate SMC's List of Vetted Posts

As of April 2015, the SMC had vetted 206 social media posts, grouped by EFNEP's four core areas. Approximately 62% of the vetted posts pertained to EFNEP's core area of diet quality and physical activity; 21% pertained to the food resource management area; 17% pertained to the food safety area; and no posts pertained to the food security area. The majority of the vetted posts (95%) were tips and links to articles; there were also a few videos (2%), recipes (1%), and other miscellaneous types of posts (2%), such as a link to a blog and an infographic.

## Discussion

Most members of the program participants focus group (82%) indicated that they would use social media to get information from EFNEP. However, the finding that participants with lower education levels are less likely to be interested in seeing EFNEP use social media should not be overlooked. Approximately two-thirds of EFNEP participants in Georgia have no more than a high school education (FY2014 WebNEERS Data, Web-Nutrition Education Evaluation Reporting System, U.S. Department of Agriculture). Barriers to the interest among adults with lower education levels might include a lack of ability to relate to nutrition content found on social media platforms. For example, recipes with hard-to-find ingredients or physical activity promotion that involves expensive gear might alienate the average EFNEP participant. It is important to tailor social media content to its intended audience's interests and needs to encourage its use.

Rural participants were less likely than urban participants to be interested in seeing EFNEP use YouTube, and they were less likely than urban participants to consider videos a preferred format for information. This circumstance could be due to slower Internet connections in rural areas, which could make watching videos difficult. Since EFNEP often provides programming in densely populated urban areas, videos should be pursued as an effective way of providing education to a large audience. However, accommodations, such as providing transcripts of videos, should be made for audiences who might not have access to high-speed Internet connections.

A comparison between the available vetted posts from the SMC and the results of the focus group research showed that there are a few differences between what EFNEP participants want and what the SMC currently recommends. The SMC does not specify which social media platform to use, but focus group participants expressed greatest interest in seeing EFNEP use Facebook and YouTube. In addition, participants were highly interested in recipes, but currently only 1% of the vetted posts from the SMC are recipes. Similarly, focus group participants were highly interested in videos, but currently only 2% of the vetted posts are videos. Taking these results into account, EFNEP coordinators interested in establishing a social media presence can focus their efforts on obtaining online material that program participants would be most likely to access. Specifically, efforts to develop recipes and videos to be posted on Facebook and YouTube would be well received by program participants. The SMC can gather material in an optimized list of vetted posts that would be available to all EFNEP-implementing institutions.

The study reported here contributes to the literature by both supporting results of other studies and offering new insights. The results of this study were similar to that of Duggan and Smith (2013),

who found that the majority of online adults use social media and that Facebook is the most popular form of social media. The results of the study reported here align with the findings of Leak et al. (2014) with regard to the format of content EFNEP participants are interested in seeing yet build on that work by using a larger sample of EFNEP participants from a different state and by including the perspective of EFNEP paraprofessionals. The study also highlights the importance of using engaging, colorful visuals when conveying nutrition messages online.

A limitation of the study is that it was conducted with a convenience sample of EFNEP participants from only one state. Another limitation is that the urban area from which the focus group participants were selected is the home of a large university; transient college students are a large part of the population, and the total population is around 100,000. The parameter used to define an urban area was a population of over 50,000. Samples from a larger urban area or additional focus groups might have altered the conclusions. Regardless of these limitations, the study demonstrated interest in the use of social media as a supplement to face-to-face education to improve healthful nutrition-related knowledge, attitudes, and behaviors of low-income adults.

Nutrition education programs such as EFNEP aim to encourage more healthful habits in low-income Americans. We have reported here on the interest in using social media as a supplement to direct nutrition education in EFNEP for both rural and urban audiences. EFNEP paraprofessionals are eager to see an EFNEP presence on social media, meaning that they are more likely to promote it to participants. Participants are familiar with social media and wish to access credible nutrition-related information from EFNEP at their convenience. The study resulted in ideas for how the SMC can better align its list of vetted posts with the kinds of content EFNEP participants are most interested in accessing. Overall, the results of the study can be used to enhance the effectiveness of a social media presence for EFNEP, one that would reinforce the lessons taught in the program's face-to-face classes and magnify the improved behavioral outcomes in program participants.

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