

Nutrition Content in a National Nutrition Education Program for Low-Income Adults: Content Analysis and Comparison With the 2010 Dietary Guidelines for Americans

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ABSTRACT

The purpose of this study was to identify nutrition-related content employed nationally by the *Expanded Food and Nutrition Education Program* (EFNEP) with adult participants. A content analysis was used to assess the type, frequency, and depth of nutrition content in adult curricula most used by EFNEP nationally compared with the 2010 Dietary Guidelines for Americans (2010 DGA). All EFNEP curricula reviewed employed the vast majority of the 2010 DGA nutrition recommendations, with differences in the frequency and depth of nutrition content. Further research is needed to determine which 2010 DGA recommendations are most important to teach and evaluate within a low-income population.

Key Words: dietary guidelines, low-income population, curriculum, EFNEP, nutrition education (*J Nutr Educ Behav.* 2015;47:566-573.)

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INTRODUCTION

Low-income families are at greater risk of poor diet quality,¹⁻³ which contributes to obesity⁴⁻⁶ and other chronic diseases.⁷ Effective nutrition education programs serve an important role in helping to change eating behaviors to improve diet quality and the health status of low-income families.^{8,9} The *Expanded Food and Nutrition Education Program* (EFNEP) is a national program implemented locally through cooperative extension offices, which teaches low-income families how to improve their diet quality.¹⁰ In 2013, 121,025 adults participated in EFNEP and a total of 359,120 family members benefited from the program nationally.¹¹

Trained EFNEP paraprofessionals, indigenous to the communities they serve, teach in group or one-on-one settings.¹⁰ Participants attend an

average of 8 lessons taught over 2–3 months.¹¹ At the state level, EFNEP develops and implements its own curricula or adopts curricula developed by another state.¹² Some state programs use more than 1 curriculum.

Program policy requires EFNEP nutrition education content to reflect the most current version of the Dietary Guidelines for Americans (DGA), address public health priorities such as reducing obesity, and be evidence-based and learner-centered to support the needs and learning styles of participants.¹³ Nutrition interventions for a low-income audience need to be relatively short-term owing to competing time demands of the target population.¹⁴ The *Expanded Food and Nutrition Education Program* is challenged with meeting program requirements to provide education about not just diet but also physical activity, food safety, food resource management,

and food security within a limited number of classes.¹³

No published information exists that evaluates the nutrition-related content used to teach EFNEP adult participants nationally. However, content analysis has been used to evaluate different curricula, including nursing¹⁵ and physician¹⁶ education curricula, nutrition education curricula for kindergarten students,¹⁷ youth EFNEP participants,¹⁸ adult EFNEP participants on a community or statewide level,¹⁹ and nutrition and health messages from the media.^{20,21}

Nationally, there is a need to identify the nutrition content in curricula used by EFNEP and how the content aligns with national nutrition recommendations, which could contribute to improvements in nutrition education materials by identifying omissions or inconsistencies across curricula.²² The reach of curricula used in EFNEP extends beyond the program because the curriculum is also used by other nutrition education programs including the Supplemental Nutrition Assistance Program–Education.¹⁴

The purpose of this study was to use a systematic content analysis to identify the nutrition-related content topics addressed in the most widely used adult curricula in EFNEP and compare it with the nutrition recommendations of the 2010 DGA.²³ This

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analysis will help identify the most important content for EFNEP to teach and evaluate nationally, and supports the work of a US Department of Agriculture Experiment Station multistate research project (NC2169: EFNEP Related Research, Program Evaluation and Outreach).²⁴ The purpose of the multistate research project includes the development of valid evaluation measures that assess EFNEP adult participant changes in diet quality and nutrition-related behaviors.

DESCRIPTION OF CONTENT ANALYSIS Curricula Selection

In January, 2013, at the researchers' request, the EFNEP national office provided the number of adult graduates reported through annual EFNEP year-end reports and names of curricula that 75 state programs reported using to teach adults in 2011, which were the most recent data available at the time. Researchers used a systematic approach²² to select the most widely used curricula based on (1) the number of EFNEP state programs using a curriculum, (2) the percentage of EFNEP adult participants who were exposed to a particular curriculum (reach), and (3) the percentage of the largest funded (tiers 1 and 2) EFNEP state programs using a specific curriculum. The *Expanded Food and Nutrition Education Program* is separated into 7 levels (tiers) based on the federal allocation of EFNEP funds,²⁵ which influences the potential reach of the individual programs. *Reach* was a crude estimate because several state programs reported using more than 1 curriculum but did not identify the number of participants taught with each curriculum; researchers estimated these numbers by dividing the total number of program participants by the total number of curricula used by the state program.

In 2011, the most widely used adult curricula were *Eating Smart • Being Active*, developed by Colorado State University and the University of California-Davis (31 programs; 42% of participants); *Eating Right is Basic-4*, developed by Michigan State University (9 programs; 11% of participants); *Eating Smart, Moving More*,

developed by North Carolina State University (8 programs; 12% of participants); *Healthy Food, Healthy Families*, developed by Texas A & M University (1 program; 15% of participants); *Eat Right for Life*, developed by the University of Florida (6 programs; 8% of participants); and *Cent\$ible Nutrition*, developed by the University of Wyoming (6 programs; 3% of participants). The curriculum *Healthy Food, Healthy Families* is used only in Texas, but Texas is the single largest program in terms of the number of adult participants.

State EFNEP coordinators were contacted in 2013 to verify the curricula they used to teach adult participants and to obtain copies of the curricula for the content analysis. Two curricula were considered out of date because they were last revised before the 2010 DGA were issued: *Eating Right is Basic* (last revised in 2007) and *Eat Right for Life* (last revised in 2005). The researchers did extensive work to contact curriculum developers and states that reported using the out-of-date curricula to discern what curricula were currently being used. States that reported using these out-of-date curricula in their 2011 year-end report told the authors they had already switched or were in the process of switching to 1 of the 3 curricula the authors reviewed. Current information about curricula use indicates that the above-mentioned 3 curricula are still the most used, and more states report they are now using 1 of the 3 curricula included in this content analysis. As a result of this investigation, which took several months of communication with EFNEP state programs, the researchers have a high level of confidence that using core lessons from the 3 curricula for this multistate review captured the majority of EFNEP state programs.

The curriculum *Cent\$ible Nutrition* was used for the pilot study to test the content analysis instrument. The curriculum remained the fourth most used nationally, with a total of 5 state programs, but the curriculum's reach was small: only 0.7% of participants.

Thus, 3 curricula were chosen for the EFNEP curricula content analysis, and the numbers of state programs and percentage of participants were revised based on 2013 data: *Eating*

Smart • Being Active (37 state programs; 51% of participants), *Eating Smart, Moving More* (8 state programs; 12% of participants), and *Healthy Food, Healthy Families* (1 state program; 15% of participants). These 3 curricula were used in 9 of the 13 largest state programs (69%), 46 of 75 state programs (61%), and an estimated total of 104,638 (78%) of adult participants.

No national data were available to determine the number and kind of supplemental lessons taught in addition to the core lessons from a curriculum that are typically taught to EFNEP participants. Developers of the 3 curricula were contacted to determine the estimated percentage of adults taught from the supplemental lessons. The Texas curriculum *Healthy Food, Healthy Families* has 1 supplemental lesson that was included in the content analysis because it was reportedly taught to 50% of participants. Supplemental lessons from the other curricula were not included in the content analysis owing to the reported low use and inability to determine an accurate estimate of use.

Instrument Development and Procedures for the Content Analysis

Researchers used a systematic approach to develop a content analysis instrument and conduct the content analysis by incorporating reliable and valid methods^{20,22,26} and best practices to evaluate curricula.²⁷ The approach involved 3 overarching steps: (1) develop an instrument to capture all relevant nutrition education content in curricula; (2) test the instrument using an existing curricula currently used by EFNEP state programs; and (3) conduct the content analysis using the tested instrument.

As a first step in the process, a content analysis instrument was developed by a group of 5 experts in the field of nutrition education curricula development and EFNEP administration. The content analysis instrument captured nutrition-related content compared with the 2010 DGA.²³ Concrete nutrition recommendations (n = 23) from the 2010 DGA, including key recommendations and

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