Exploring School Nutrition Professionals’ Preferences of USDA Recipes and R4HK Competition Recipes for Meeting USDA Meal Pattern Requirements

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PURPOSE
The purpose of the National Food Service Management Institute is to improve the operation of child nutrition programs through research, education and training, and information dissemination.

MISSION
The mission of the National Food Service Management Institute is to provide information and services that promote the continuous improvement of child nutrition programs.

VISION
The vision of the National Food Service Management Institute is to be the leader in providing education, research, and resources to promote excellence in child nutrition programs.

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EXPLORING SCHOOL NUTRITION PROFESSIONALS’ PREFERENCES OF USDA RECIPES AND R4HK COMPETITION RECIPES FOR MEETING USDA MEAL PATTERN REQUIREMENTS

EXECUTIVE SUMMARY

The federal government has been involved in the development of standardized recipes for school lunch since 1936 (United States Department of Agriculture [USDA], 1936). In 2007, the USDA Recipes for Schools was modified to reflect the 2001 revisions to the USDA’s Food Buying Guide for Child Nutrition Programs. In 2010, new regulations for meal patterns and nutrition standards for the National School Lunch Program (NSLP) and School Breakfast Program (SBP) were finalized (USDA Food and Nutrition Service, 2012). To support the new meal patterns and nutrition standards, the USDA launched the Recipes for Healthy Kids (R4HK) competition, challenging school nutrition (SN) professionals and stakeholders to develop creative, nutritious, kid-friendly recipes for schools participating in the NSLP and SBP. The top recipes in each category (whole grains, dark green/orange vegetables, and dry beans and peas) were standardized for use in child nutrition programs. The current file of the USDA Recipes for Schools, which includes the R4HK, is online, and may be found at the National Food Service Management Institute (NFSMI) Web-site. This file consists of 226 recipes divided into nine categories: “Grains/Breads,” “Desserts,” “Main Dishes,” “Salads and Salad Dressing,” “Sandwiches,” “Sauces, Gravies, and Seasoning Mixes,” “Soups,” “Vegetables,” and “Breakfast” (NFSMI, 2014).

While there have been several studies throughout the years identifying and investigating factors that impact student participation and satisfaction with the NSLP (Asperin, Nettles, & Carr, 2008; Asperin, Nettles, & Carr, 2009; Fogleman, Dutcher, McProud, Nelken, & Lins 1992;
Gilmore, Hutchinson, & Brown, 2000; Hutchinson, Gilmore, & Brown, 1998; McConnell, Matta, & Shaw, 1997; Meyer & Conklin, 1998; Roseman & Niblock, 2006), there appears to be a dearth of research investigating the acceptability or satisfaction with USDA recipes by students or other SN stakeholders.

The purpose of this study was to explore SN professionals’ perceptions, preferences, and needs pertaining to USDA recipes and R4HK competition recipes for meeting the 2012 USDA meal pattern requirements. To achieve this, the project was divided into two phases. In phase I, an expert panel of eight SN professionals convened to identify the major issues related to SN professionals’ preferences of USDA and R4HK recipes for meeting the USDA meal pattern requirements. In phase II, findings from the expert panel were used to develop an online survey. The survey was sent to a random sample of 2,100 SN directors, representing the seven USDA regions, to achieve the study goals and objectives.

The response rate to the survey was 23.4% (N = 511). The majority (72.4%) of respondents indicated that 49% or less of the foods prepared at the SN program were from scratch. District enrollment appears to play a role in the level of food preparation/processing in a school district. As the size of the school district increased, the prevalence of scratch food preparation decreased significantly [Chi square value (N = 551, df = 15) = 44.06, p <.001].

The majority of SN directors (74.6%) indicated that they used USDA recipes, and most (64.4%) said they modified the USDA recipes to meet their needs. District enrollment appears to play a significant role in the usage of USDA recipes. As enrollment size increased, usage of USDA recipes significantly decreased [Chi square value (N = 511, df = 2) = 22.53, p <.001].

District enrollment size had a significant and inverse relationship with SN directors’ perceived value of the USDA recipes regarding several operational issues. School nutrition
directors from the smallest school districts (district enrollment under 1,000) were significantly more likely to rate the USDA recipes as excellent or good for meeting their needs for participating in the Summer Food Service Program \( [F(5, 99) = 3.28, p = .009] \), the Fresh Fruit and Vegetable Program \( [F(5, 83) = 3.89, p = .003] \), and breakfast in the classroom \( [F(5, 54) = 6.15, p < .001] \), when compared to SN directors from the largest school districts (district enrollment of 25,000 or greater). Further, SN directors from the smallest school districts (district enrollment under 1,000) were significantly more likely to rate the USDA recipes as excellent or good for meeting their needs for complying with the USDA regulations for sodium \( [F(5, 276) = 2.54, p = .036] \) when compared to SN directors from the largest school districts (district enrollment of 25,000 or greater).

District enrollment size also played a significant role in SN directors’ perceived value of the USDA recipes regarding the following customer service issues: trendiness, regional appropriateness, and cultural diversity. School nutrition directors from the smallest districts (district enrollment of less than 1,000) rated the “trendiness” of USDA recipes significantly higher than directors from districts with enrollments of 1,000 - 9,999 \( [F(5, 286) = 3.51, p = .004] \). “Regional appropriateness” ratings for USDA recipes were significantly higher for school districts with enrollments of less than 1,000 compared to those with enrollments of 1,000 - 2,499 and 5,000 - 9,999 \( [F(5, 280) = 3.28, p = .007] \). “Cultural diversity” ratings for USDA recipes were significantly higher for school districts with enrollments of less than 1,000 compared to those with enrollments of 1,000 - 4,499 and 25,000 or more. \( [F(5,277) = 3.80, p = .002] \).

Only 17.5% of respondents reported they used R4HK. The reason most often cited for not using R4HK was, “I did not know about R4HK” (60.1%).
The results of this study suggest the following conclusions: there is a strong need for USDA recipes; school district size has a significant effect on the usage of USDA recipes; the current USDA recipe file has several perceived strengths; and there are several potential opportunities for improving the USDA recipes. Based on these conclusions, the following recommendations are suggested:

- Develop a greater variety of breakfast recipes, especially recipes that support breakfast carts and breakfast in the classroom.
- Develop a greater variety of regional produce recipes to support local farm-to-school initiatives.
- Develop a greater variety of vegetable recipes to support the new meal pattern requirements pertaining to dark green and red/orange vegetables and legumes.
- Develop more fruit recipes to support the “no added sugar” and “no syrup” meal pattern restrictions that apply to fruit juice, canned fruit and frozen fruit.
- Conduct research studies to:
  - Evaluate stakeholder (student, parent, teacher, SN director, SN staff, and school administration) acceptability of the USDA recipes;
  - Identify ways of adapting the *USDA Recipes for Schools* to better meet the “trends of today;”
  - Identify ways of adapting the *USDA Recipes for Schools* to better meet the cultural and regional preferences of stakeholders in a variety of settings (i.e., metropolitan and rural areas, and districts with small, moderate, and large enrollments).