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Recipe Checklist: A Tool to Aid Development of Recipes for Audiences with Limited Resources

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Recipe Checklist: A Tool to Aid Development of Recipes for Audiences with Limited Resources

Abstract

Recipes are popular vehicles in nutrition education. Significant time and resources are devoted to identifying, developing and distributing recipes in Extension nutrition education programs. A qualitative review of existing recipes found some recipes to be lacking in standardization. The authors review previous work about recipe development for limited resource audiences and present a comprehensive recipe checklist for Extension staff to better assess whether a recipe will be effective in programming.

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Introduction

Extension faculty devote significant program resources and time to identifying, developing, copying, and distributing recipes in nutrition education programs. Recipes are requested frequently by clients because they want a practical application of the nutrition messages that they are hearing in educational programs.

Typical sources of recipes for Extension educators are Extension publications from various states, cookbooks, magazines, and, increasingly, Web sites. A recent Lycos search using the key word "recipes" resulted in 14,502,926 Web sites, and a similar Google search resulted in 8,220,000 Web sites.

Unfortunately, many recipes may not be suitable for audiences with limited resources of education, time, and income, specifically clients in the Expanded Food and Nutrition Education Program (EFNEP) and the Food Stamp Nutrition Education Program (FSNEP). A review of a sample of recipes currently available to educators of limited resource audiences was conducted by the authors to determine best practices. A checklist incorporating these best practices and standardization guidelines was created to assist recipe developers.

Review of Literature: Criteria for Recipe Development

There is limited published information on recipe development for audiences with limited resources. Schuster (1997) developed criteria for recipe development for this target population. These criteria specify that recipes:

- Use low-cost, readily available ingredients;
- Use basic equipment and appliances;
- Be easy to read and follow;
- Be successfully tested by a minimum of three people; and

- Teach at least one Dietary Guideline principle.

Schuster (1997) reported that, if space permits, additional information is desirable, such as how to reduce the recipe in fat or sodium, fit the recipe into a menu for a meal, and include children in the preparation of the recipe. Including the nutrient content of the recipe, for selected nutrients and in a simple format, is also helpful.

Miller, Burgess, and Mason (1999) developed a cookbook for emergency feeding programs and audiences with limited-resources and used many of the same criteria as Schuster (1997). Additional criteria they used specified that the recipes:

- Are nutritious and tasty;
- Have a limited number of ingredients; and
- Are flexible so that the same basic recipe can be used with fresh, frozen, or canned food varieties.

To make the cookbook a teaching tool, nutrition information (the Food Guide Pyramid and serving sizes) and food safety information (cooking and storing temperatures) can be included. Miller, Burgess, and Mason (1999) tested recipes for clarity of instructions, taste acceptance, and ease of preparation. For many of their recipes, the ability to use a can opener was the main cooking skill required.

What Do Clients Want in a Recipe?

A qualitative study conducted by the National Live Stock and Meat Board (1993) explored consumers' preferences regarding recipe format and style. The eight focus groups were conducted in four cities with female heads of household ranging in age from 25 to 50, with a minimum annual household income of \$25,000. Results showed that participants preferred numbered or bulleted preparation steps and specific directions. Preparation time, the number of servings, the type and size of equipment/utensils, and nutrition information were also seen as helpful. Although the focus group participants were not drawn from a limited income audience, these elements were also found to be important with recipes that were field tested with a limited income audience in Minnesota (E. Schuster, personal communication, 2002).

Additional Recipe Guidelines

In addition to the criteria previously mentioned, recipes should follow basic recipe standardization guidelines, including specification of amounts, ingredients, and pan sizes to ensure a consistent product (American Association of Family and Consumer Sciences, 2001). This is especially important for audiences with limited resources who will find it harder to absorb the costs of a recipe that is not edible.

Review of Existing Recipes

Most of the 400 recipes reviewed were from organizations with experience in recipe development (Baker, Sargent & Frazier, 2001; Food & Health Communications, 2001; Texas Cooperative Extension, 2000; Steele, 1999). These recipes had many desirable features and met several, but not all, of the criteria specified previously. However, 20 recipes, developed by paraprofessionals at the local level, failed to meet many of the criteria for standardized recipes. For all recipes reviewed, the most frequent omissions were:

- Not including information on food safety;
- Not listing ingredients in the order used;
- Not specifying size of pans or bowls;
- Not specifying serving size;
- Not using simple cooking terms for audiences with limited reading ability; and
- Not including ways that children could participate in making the recipe.

The nutrient information ranged from a complete nutrient label (similar to those used on food products) to a simple phrase such as "High in Fiber" or "High in Vitamin C" for the recipes reviewed. None of the recipes or their supplemental materials referenced criteria for the classification of recipes into high or low nutrient categories. Criteria used by the Child and Adolescent Trial for Cardiovascular Health (CATCH) study may provide helpful quantitative guidelines for selected nutrients (Osganian et al., 1996).

From the information given, we were unable to evaluate the development processes of the recipes reviewed and if they included testing of the preparation by multiple people. In addition, we were unable to determine the extent of involvement of staff and clients in developing the recipes. A key "ingredient" that seems to be missing in recipe development is follow-up with the target audience to determine if the recipes are used and reactions to the recipes in terms of taste, cost, and ease of preparation.

Conclusions and Recommendations

Taking into consideration guidelines for the development of standardized recipes and features that are appropriate for audiences with limited resources, a checklist was developed to aid in the

Table 1.
Check Sheet for Development and Evaluation of Standardized Recipes for
Audiences with Limited Resources

I. Features of Standardized Recipes		
1. Name of recipe	Yes	No
A. Name gives a sufficient description of the major ingredient or preparation.		
B. Name is appealing.		
2. List of Ingredients	Yes	No
A. All ingredients are listed.		
B. Ingredients are listed in order in which they are used.		
C. Ingredients are listed as they are measured, e.g., words describing ingredients are in the correct place. Ex: cup chopped onion, not cup onion, chopped.		
D. Measurements are given in common fractions, e.g., 1/2 cup.		
E. Ingredients are listed in the easiest units of measure, e.g., 1/4 cup instead of 4 tablespoons.		
F. All measurements are spelled out, not abbreviated. Ex: cup, teaspoon, size can, etc. (e.g., 4-ounce can).		
G. Weights instead of measures are used when helpful, as for uncooked meat, poultry, fish, cheese, etc.		
H. Sizes of cans or boxes are specified, e.g., 2 packages (10 ounces each) of frozen green beans instead of 2 boxes.		
I. Brand names are avoided.		
J. Complete description of ingredients included, e.g., low fat, packed in syrup, reduced fat, etc.		
K. Types of products needed are specified. Ex: cake flour, all-purpose flour, dark corn syrup, etc.		
3. Directions for Combining Ingredients	Yes	No
A. Clear instructions are used for every step of combining and cooking the ingredients.		

B. Short sentences are used.		
C. Simple words are used to describe combining and cooking processes; i.e., "cook in a small amount of oil" instead of "sauté."		
D. Word pictures, such as "chill until syrupy" or "mixture thickens as it cools," or actual pictures are used.		
E. Size of pans or containers is stated, e.g., 9-inch round layer pans.		
F. Temperatures are given for recipes requiring the oven.		
G. Cooking times and preparation times are stated.		
H. Number and size of servings are included.		
I. Most efficient order of work is used to avoid extra bowls, cups, extra beating, etc.		
II. Features for Audiences with Limited Resources		
	Yes	No
1. Low-cost, readily available, and culturally acceptable ingredients are used.		
2. Only basic equipment and appliances are used.		
3. Recipes are easy to read and do (good use of print type, boxes).		
4. Recipes are flexible, accommodate fresh, frozen, or canned foods and give suggestions for substitutions.		
5. Recipes are successfully tested by a minimum of three people with varying food preparation skill levels.		
6. Total preparation time is 30 minutes or less.		
7. Five or fewer ingredients are used (unless special occasion or holiday).		
8. Recipes are tasty (don't use fat-free foods if they decrease taste).		
9. Tips are included on how children may help with recipe.		
III. Food and Nutrition Features		
	Yes	No

1. Recipes teach at least one Dietary Guideline concept.		
2. Criteria for fat and sodium (or other nutrients of interest) are met.		
3. Nutrition information given in simple terms (format ranging from a nutrition label similar to that found on food products to a simple "High in Vitamin C" note to the side of the recipe).		
4. How this food fits into the Food Guide Pyramid is shown.		
5. Tips on food safety are given.		
IV. Optional Features		
	Yes	No
1. Specific internal cooking temperatures recommended for food safety may be given if audience has thermometers and has received instruction on how to accurately take temperatures.		
2. Suggestions for how to use leftovers may be appropriate.		
3. General tips on time management in the kitchen, such as prepare ahead for the next meal, may be included in an introductory section in a recipe book.		
4. General tips on energy management in the kitchen may help keep energy costs low and avoid overly hot kitchens.		
5. Oil is substituted for margarine, butter, and shortening where possible to reduce saturated fat.		

Those developing recipes should also seek staff input during recipe development, asking such questions as the following.

1. What would appeal to your clients about this recipe?
2. What would *not* be appealing to your clients about this recipe?
3. What barriers might prevent your clients from trying this recipe? How sure are you that your clients will try this recipe (on a scale where 10 = very sure they will try?, 5 = undecided, and 1 = very sure they will NOT try)?
4. What does this information on nutrition mean to you? Do you think that your clients will understand this?

They should also seek input from clients both during recipe development and after recipes have been distributed. Questions to ask clients during recipe development include the following.

1. What appeals to you about this recipe?
2. What is *not* appealing to you about this recipe?
3. How sure are you that will try this recipe (on a scale where 10 = very sure I will try?, 5 = undecided, and 1 = very sure I will NOT try)?
4. What does this information on nutrition mean to you?

Questions to ask other clients (different clients from those who participated in the recipe-development phase) after recipes have been given to them include the following.

1. Did you try this recipe?
2. What appealed to you about this recipe and made you want to try it?
3. When you made the recipe, what were the results?
 - A. Did your family like it? Why or why not?
 - B. Was it easy to make? Why or why not?
 - C. Will you make the recipe again? Why or why not?
4. What does this information on nutrition mean to you?

Figure 1 shows a sample recipe that follows the guidelines in the checklist and has benefited from staff and client input.

Figure 1.
Sample Recipe

Fruit Salad

You will need:

- 2 bananas, peeled, and cut into bite size pieces
- 1 cup fresh strawberries, sliced or 1 package (10 ounces) frozen sliced strawberries
- 1 cup fresh orange slices or 1 can (11 ounces) mandarin oranges, drained
- 1 cup apple, chopped

What to do:

1. Wash your hands and clean your cooking area.
2. Wash bananas, strawberries, oranges, and apples.
3. Peel bananas and oranges.
4. Cut all the fruit according to recipe.
5. Place fruit in a large bowl and mix.

Yield: 10 servings (1/2 cup each)

High in Fiber & Vitamin C



Depending on age, children can help chop or mix fruit. Talk to children about the names, color, and number of pieces of each fruit.

Because recipes are the cornerstone of nutrition education programs, using a comprehensive checklist and series of questions to develop and evaluate recipes can ensure that program resources are used efficiently and that client adoption is maximized.

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