

Measuring Health and Nutrition Knowledge

We used responses from two sets of questions in the DHKS to develop measures of mothers' knowledge of health and nutrition. The first set of questions aimed to capture the "nutrient content knowledge" (NCK) of the respondents (table 3). Respondents were asked a series of questions about sources and occurrence of dietary fiber, cholesterol, and fat in common food items. For example, respondents were asked to identify which of two foods has the higher fiber content: fruit or meat, cornflakes or oatmeal, popcorn or pretzels. In general, there was broad agreement between the HEI and nutrient samples. However, respondents were more successful at correctly answering some questions than others. For example, over 90 percent of respondents from all samples knew that wheat bread has a higher fiber content than white bread but only 33 percent knew that liver has more cholesterol than T-bone steak. Other questions probed knowledge about different kinds of fat and the types of foods that contain fat and cholesterol. The NCK measure represents the number of correct answers a respondent gave to 21 such questions. Respondents in the HEI studies answered about 15 questions correctly while those in the samples for the nutrient intake analysis answered about 16 correctly. The second set of questions to assess mothers' knowledge of health and nutrition was aimed at their "diet-health awareness" (DHA). These questions take the general form: Have you heard about any health problems that might be related to how much of a particular nutrient (such as fat, fiber, salt, and so forth) a person eats? Nine such questions from the DHKS and their percent "yes" are listed in table 4. The DHA variable is the sum of positive responses for the nine questions. This measure is similar to Kenkel's (1991) health knowledge measure in a study of adult smoking, alcohol use, and exercise behavior. The average "awareness" level was about six for the mothers in all samples (tables 1 and 2).

Table 3—Nutrient content knowledge questions and percent responses

| Question/answer | Correct responses by mother | | | |
|---|-----------------------------|-----------|-----------------|-----------|
| | HEI phase | | Nutrients phase | |
| | Ages 2-5 | Ages 6-17 | Ages 2-5 | Ages 6-17 |
| | <i>Percent</i> | | | |
| Which has more fiber? | | | | |
| <u>Fruit</u> or meat | 81.8 | 82.7 | 82.8 | 83.9 |
| Cornflakes or <u>oatmeal</u> | 80.2 | 82.5 | 81.4 | 83.7 |
| <u>Whole-wheat bread</u> or white bread | 92.9 | 93.3 | 93.2 | 93.4 |
| Orange juice or an <u>apple</u> | 77.9 | 76.0 | 77.3 | 76.1 |
| <u>Kidney beans</u> or lettuce | 53.6 | 55.6 | 59.0 | 58.7 |
| <u>Popcorn</u> or pretzels | 68.5 | 73.8 | 69.0 | 72.6 |
| Which has more cholesterol? | | | | |
| <u>Liver</u> or T-bone steak | 33.1 | 38.5 | 34.7 | 41.0 |
| <u>Butter</u> or margarine | 83.8 | 86.1 | 84.9 | 87.4 |
| Egg whites or <u>yolks</u> | 79.2 | 81.6 | 82.3 | 82.2 |
| Skim milk or <u>whole milk</u> | 95.5 | 97.6 | 96.5 | 97.1 |
| Which has more fat? | | | | |
| <u>Regular hamburger</u> or ground round | 86.7 | 89.6 | 87.8 | 89.9 |
| Loin pork chops or <u>pork spare ribs</u> | 71.8 | 76.0 | 72.1 | 76.0 |
| <u>Hot dogs</u> or ham | 66.6 | 63.4 | 64.8 | 63.7 |
| <u>Peanuts</u> or popcorn | 89.6 | 92.2 | 90.4 | 93.3 |
| Yogurt or <u>sour cream</u> | 87.3 | 86.2 | 87.3 | 87.5 |
| <u>Porterhouse steak</u> or round steak | 52.3 | 54.5 | 53.5 | 55.7 |
| <u>Ice cream</u> or sherbet | 93.8 | 96.1 | 92.8 | 96.1 |
| Roast chicken leg or <u>fried chicken leg</u> | 98.1 | 97.8 | 98.0 | 97.8 |
| Which kind of fat (saturated, <u>polyunsaturated</u>) is more likely to be a liquid rather than a solid? Or are they equally likely to be liquids? | 26.9 | 29.0 | 24.9 | 29.1 |
| Is cholesterol found in vegetables and vegetable oils, <u>animal products</u> , or all foods containing fat or oil? | 35.1 | 35.7 | 32.3 | 37.1 |
| If a food is labeled cholesterol-free, is it also low in saturated fat, high in saturated fat, or <u>either</u> ? | 64.9 | 60.8 | 65.7 | 61.7 |
| | <i>Number</i> | | | |
| Number of children | 308 | 538 | 458 | 853 |

Note: Correct answers are underlined.
 Source: 1989-91 Diet and Health Knowledge Survey.

Table 4—Mothers’ responses to questions about their diet-health knowledge

| Question | “Yes” responses by mother | | | |
|---|---------------------------|-----------|-----------------|----------------|
| | HEI phase | | Nutrients phase | |
| | Ages 2-5 | Ages 6-17 | Ages 2-5 | Ages 6-17 |
| Have you heard about any health problems that might be related to how much: | | | | |
| | | | | <i>Percent</i> |
| Fat a person eats? | 70.8 | 74.0 | 72.9 | 75.7 |
| Saturated fat a person eats? | 57.5 | 61.9 | 55.5 | 60.9 |
| Fiber a person eats? | 47.1 | 51.3 | 46.3 | 51.8 |
| Salt a person eats? | 81.5 | 88.8 | 82.1 | 86.7 |
| Calcium a person eats? | 63.6 | 63.9 | 61.6 | 63.8 |
| Cholesterol a person eats? | 85.7 | 85.9 | 83.0 | 85.5 |
| Sugar a person eats? | 80.5 | 80.9 | 79.0 | 80.9 |
| Iron a person eats? | 54.9 | 52.0 | 53.3 | 50.4 |
| A person is overweight? | 87.0 | 90.9 | 87.6 | 90.5 |
| | | | | <i>Number</i> |
| Number of children | 308 | 538 | 458 | 853 |

Source: 1989-91 Diet and Health Knowledge Survey.