



Network for a Healthy California Nutrition Education Survey (NES)



Purpose of the Survey

This Nutrition Education Survey (NES) was developed to assess the impact of nutrition education delivered to food stamp eligible persons. The NES is a modular tool that contractors can customize to fit the specific nutrition education activities delivered as part of their SOW. It has sets of questions that will capture change in perceived peer behavior, perceived parental support, self-efficacy, outcome expectations, socialization-encouragement, access, consumption, physical activity, knowledge and preferences.

Questions 1-6 were adapted from Vereecken et al. (2005) to measure **perceived peer behavior**. The original survey was validated with 11-12 year olds in Belgium and the current version was adapted by the University of CA Los Angeles for students in the Los Angeles Unified School District. The original questions were changed to reduce the number of response categories and make the language appropriate for CA students. For example, the original survey included the question: How often does your best friend consume fruit? The response categories were: never, less than once a week, once a week, 2-4 days/week, 5-6 days/week, once a day, every day and every day, more than once. The adapted question reads: Does your best friend eat fruit everyday? There are three response categories: Yes, No, I don't know.

Questions 7 and 8 measure the child's **perceived parental support** (Vereecken, 2005). The original survey had four questions that measure this. For example: How often does your father eat fruit? Response categories were: never, less than once a week, once a week, 2-4 days/week, 5-6 days/week, once a day, every day and every day, more than once; don't have or see mother/father. The NES has two questions including: How often do your parents eat fruit? Response categories: never, a few days of the week, most days of the week, every day.

Questions 9-16 were taken from a study (Baranowski et al., 2000) of the Gimme 5 intervention and measure **self-efficacy** for asking and shopping for fruit and vegetables. These were validated with data from a three year outcome evaluation of 3rd-5th graders.

Questions 17-23 measure **outcome expectations** and were adapted from items developed by Reynolds et al. (2002) for 4th graders. The original 12-item scale was reduced to eight items to be more consistent with the content of HOTM. In Reynolds' original study, the questions were validated data were collected over a three year period from students at the end of their 3rd grade and beginning of their 5th.

Questions 24-31 measure **socialization-encouragement**. These were changed from parents on the original survey (Veerecken et al., 2005) to teachers. These will help gauge the influence of teachers on students.

Questions 32-33 These questions measure students' report of daily **access** to fruit and vegetables in the home. These were adapted from Hearn's work (1993) with 4th and 5th graders.

Questions 34-36 measure **consumption**. They were validated by Hoelscher et al. (2003) with 8th graders as part of the School and Physical Activity Nutrition Project (SPAN). Thiagarajah (2006) reported moderate to good reliability with 4th graders.

Questions 37-38 capture Physical activity. Prochaska et al. (2001) validated the 2-item PACE Survey with 12 year olds to determine the number of days children were active for at least 60 minutes. The response categories range from zero days to seven days.

Question 39 measures **preferences**. The items included on the preferences list, adapted from Domel's (1993), work with 4th and 5th graders were selected at random as an example of what might be included in that section of the survey. This section may be modified to measure change in the items featured or gauge the preferences of other fruit and vegetables.

When choosing the items to include it's important to remember that the HOTM Cycle I items (apples, pears, kiwifruit, sweet potatoes, oranges, broccoli, spinach, carrots, strawberries, salad greens, grapes and green beans) are well liked and well known, leaving little room for improvement. Given the high scores this section may not be a good measure of success. However, it might provide really interesting information about a group's actual preferences and familiarity for certain items, even if they are not featured in an intervention.

Questions 40-44 measure **knowledge**. Information imparted during nutrition education activities may be very unique to individual interventions. Many nutrition education activities do not naturally address the five knowledge questions included on the survey. Consequently they would not be a good measure of success. When including knowledge questions on a

survey it is important to ensure they match the information delivered in the intervention.

Questions 45-48 capture **demographic characteristics**. These can be used for analysis by gender, age, ethnicity and grade level and reporting to USDA.

References

- Baranowski T, Davis M, Resnicow K, Baranowski J, Doyle C, Smith M, Lin L, Wang DT. Gimme 5 fruit and vegetables for fun and health: Outcome Evaluation. *Health Education & Behavior* 2000; 27(1):96-111.
- Domel SB, Baranowski T, Davis H, Leonard SB, Riley P, Baranowski J: Measuring fruit and vegetable preferences among fourth and fifth grade students. *Prev Med* 1993; 22(6): 866-879.
- Hearn DH, Baranowski T, Baranowski J, Doyle C, Smith M, Lin LS, Resnicow K. Environmental Influences on Dietary Behavior Among Children: Availability and Accessibility of Fruits and Vegetables Enable Consumption. *Journal of Health Education* 1998; 29(1): 26-32.
- Hoelscher DM, Day RS, Kelder SH, Ward JL. Reproducibility and validity of the secondary level school-based nutrition monitoring student questionnaire. *J. Am Dietetic Association*: 2003;103(2)186-194.
- Prochaska, J.J., Sallis, J.F., & Long, B. A physical activity screening measure for use with adolescents in primary care. *Archives of Pediatric and Adolescent Medicine*: 2001 (155) 554-559.
- Reynolds K, Yaroch A, et al. Testing mediating variables in a school-based nutrition intervention program. *Health Psychol* 2002; 21(1): 51-60.
- Thiagarajah K, Bai Y, Lo A, Leone A, Shertzer JA, Hoelscher DM, Fly. Assessing validity of food behavior questions from the School Physical Activity and Nutrition Questionnaire. *J Nut Ed Beh*, Volume 38, Issue 4, July-August 2006; Pages S55-S55.
- Vereecken AC, Damme WV, Maes L. Measuring Attitudes, Self-Efficacy, and Social and Environmental Influences on Fruit and Vegetable Consumption of 11- and 12-Year-Old Children: Reliability and Validity. *J. Am Dietetic Association*. 2005; 105(2) 257-261.