

# Fruit Rainbow: Healthy Eating for People with Developmental Disabilities - Phase I Report

Program Title: **Fruit Rainbow**

Principal Investigator: **Martin R. Sheehan , Ph.D.**

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## *Project Aims*

This Phase 1 had three primary goals: 1) to develop the first module (Unit 1) of a 12-module multi-sensory program designed to increase the consumption of fruits, juices, vegetables and low fat foods by adults with mental retardation, 2) to develop assessment instruments for adults with mental retardation to be used in Phase II to evaluate outcomes and 3) to evaluate user acceptance of the first module. In addition to these activities, we also conducted a review of the finished Phase I module by a local panel of experts. This review is reported on below, in Additional Evaluative Activities.

## *Tasks*

*Develop Unit 1 Of The Eat Right For Long Life Curriculum.*

*Initial development.* Project staff worked on the design of an integrated Activity Book and DVD/video module. The initial goals set for this unit were to promote an increase in the consumption of fruits and to encourage the accessibility and availability of those fruits in the home. A preliminary draft of the script and Activity Book exercises was developed for discussion and evaluation with focus groups.

*Focus groups .* Although our original intent was to recruit focus group participants from urban and rural settings, in response to reviewer comment, we changed the makeup of these groups. We sampled adults with mental retardation who lived in a variety of settings (with their parents or in foster homes, in group living situations and independently or semi-independently), and caregivers who were parents and group home staff. We conducted four focus groups with 24 people; 12 adults with mental retardation and 12 parents/group home staff.

*Focus Groups A and B .* These focus groups consisted of 4 women and 8 men with mental retardation who lived in a variety of settings: 1 lived at home, 2 lived in foster homes, 3 lived in group homes and 6 lived independently or semi-independently. All were non-Hispanic and Caucasian.

Topics for these groups covered what was typically eaten for snacks, how much fruit and vegetables were commonly eaten, what barriers kept them from eating more fruit and vegetables, types of junk/fast food eaten, naming high fat/low fat foods, naming high calorie/low calorie foods, and whether appearance or health was the primary concern driving dietary choices. Participants were also given a verbal description of the script and asked to comment.

Responses from these focus groups indicated that while these adults were generally aware that fruits, vegetables and juices were healthier snack choices than the foods they commonly ate for snacks (junk food, cookies, ice cream, chips), there were three main barriers that kept them from eating more of these healthy foods: they weren't motivated to prepare them, they didn't like the taste, and they liked junk food better. However, these participants also said that eating more fruits and vegetables would help them avoid illness and live longer. Improving health rather than improving appearance was the primary concern for these participants. In general, responses from these groups led the research team to conclude that the materials for this project did not have to focus as much on educating this sample about the benefits of a healthier diet, but rather on motivation and skills related to including more of these foods in their daily diet.

*Focus Groups C and D.* These focus groups consisted of 12 caregivers (3 parents, 9 group home staff), 9 women and 3 men. All were non-Hispanic, one was African-American. Topics for this group included a review of the Module 1 script and questions on food choices, shopping and eating habits, and barriers to eating fruits and vegetables.

While a number of these participants had low fat snacks available, only three mentioned fruit as a common snack item. Barriers cited included clients not having the skills to prepare fruits (e.g. using a knife), fruit spoiling before it's eaten, and a history of sugary food being used as positive reinforcement. They thought that the script was very realistic, and that the adults they worked with would become engaged in the video. They also indicated that their clients were generally aware of nutritional information, but, even with that knowledge, still made poor choices.

Responses from these groups led the research team to similar conclusions as those from Focus Groups A and B: materials in the module could focus less on nutritional knowledge in favor of motivation. In addition, we should emphasize activities that increased food preparation skills and goal setting to change dietary habits.

*Produce the first module (Eat Right for Long Life) of the curriculum .*

The project team produced a two-part, 20-minute introductory video and a companion Activity Book designed to be used interactively (For samples, see *Appendix C - Product*). The video presents a storyline involving a group of friends with MR who face a crisis due to over-consumption of unhealthy high-fat foods. Using an array of techniques (dramatic storyline, quick-paced editing; action, animation, colorful fantasy sequences, and skill-building routines), the video (Part 1) presents reasons for increasing consumption of fruits, and (Part 2) models ways to incorporate fruit into the diet and be assertive in asking for fruit. Previous experience with this audience has convinced us of the value of displaying believable characters in real-life situations. Consequently, the three main characters in the presentation are portrayed by individuals with MR engaged in everyday activities in actual settings (bowling alleys, hospital, and grocery store). Despite the realistic treatment, the story also presents engaging fantasy sequences with costumed fruit characters to reinforce concepts and knowledge. Cartoon illustrations of these characters and animated sequences are also used to engage viewers and reinforce concepts. The companion Activity Book is a colorful, 17-page, 8.5 x 11 workbook with instructions, video-interactive exercises, *in vivo* taste-testing exercises, goal-setting activities, problem-solving exercises, skill rehearsals, knowledge-recall exercises, and recipes for snacks, meals and desserts. To encourage trying new fruit outside the confines of the lesson, we included a full-color, 21-page fruit poster and a set of stickers. Users are encouraged to post the sticker on the refrigerator and add a sticker next to a fruit when a new one is tried. The project team, with assistance from Dr. Cullen, an expert in the area of nutrition with extensive experience in the *Gimme 5* project, developed the materials for the curriculum.

#### *Modify and evaluate face validity of the assessment instrument.*

For Phase I, we developed a structured interview for adults with mental retardation to measure three primary outcome variables (intake of fruits, vegetables, juices [FJV] and low fat foods [LFF], food preparation skills and access to the kitchen, and self advocacy for FJV/LFF), two secondary outcome variables (general nutritional knowledge, preferences for FJV/LFF), and four mediating variables (availability of FJV/LFF, peer influence, autonomy in food choices and self-efficacy). The final draft of this interview can be found in *Appendix A - Instruments*.

The first step in developing this interview was to determine how to adapt items from the 1-day Food Recognition Form, Nutrition Knowledge Questionnaire, Low Fat/Fat Free Food Preference Questionnaire, and Determinants of Food Behavior Questionnaire. A working group consisting of five interviewers employed by IRIS Media who were experienced at interviewing adults with mental retardation, the Research Associate, and the Research Methodologist modified and drafted new items, outlined initial interview protocol, and developed photo flash cards for measuring knowledge of and preferences for fruits, vegetables and juices. Six working drafts were produced before the first pilot interview was conducted. In addition to developing items for the interview, we also developed several procedures for measuring serving size to be pilot tested during the interviews: using different size plates/bowls, using different size bags filled with dry pasta noodles, and using different size measuring cups.

#### *Pilot Interviews.*

We initially planned to have one interviewer conduct the pilot interviews, making notes during the interview about problematic items. However, we changed that plan, using instead a two-interviewer protocol, with one interviewer administering the interview and a second observing and taking notes. Interviewers were given latitude to rephrase questions and modify procedures as needed. After an interview, the primary interviewer recorded the results of the food identification and preference tasks and both interviewers wrote a narrative report answering these general questions: 1. What is your overall impression of how well this interview worked for both the person being interviewed and the interviewer? 2. How long did the interview take? 3. What was the worst problem? 4. Any other problems that stand out? 5. What were the easiest/best parts of the interview? 6. What method was used to determine serving size? 7. How did the card sorts go? 8. What ideas do you have about how to improve the interview? 9. Summarize and/or list language changes made in the interview and/or alternate forms of questions that were used. 10. Other comments?

We conducted three to four pilot interviews with each version of the instrument (10 pilot interviews in total). After each round of pilot interviews, the working group reviewed the written reports and then met to modify items and procedures as needed before the succeeding round of pilot interviews. Multiple changes were made in what questions were asked, how questions were phrased and how the food recognition and preference tasks were conducted.

### *Conclusions and Recommendations*

#### *Primary Outcome Variables.*

1. Intake of FFV/LF. We attempted to determine intake with a series of questions asking the subject what they had eaten for each meal and snack throughout the day. While most subjects could recall meals eaten in the current day, since the interviews were taking place in the afternoons, we had to ask them to recall dinner from the previous day. None of the subjects could accomplish that task. In addition to this issue, determining serving size also was a problem. None of the procedures we piloted was without problems. Recommendation: Instead of using the interview for measurement of intake, we will ask the adult and the learning partner to keep a daily day food diary modeled after that developed by Rotatori and Fox (1981).

- Food preparation skills and access to the kitchen. We developed 13 questions which cover these areas. All subjects were able to answer them. Recommendation: Maintain these questions as part of the interview.
- Self-advocacy for FJV/LFF. The questions we developed to measure this variable appear in sections dealing with grocery shopping and ordering meals in restaurants. All subjects were able to

answer these questions. Recommendation: Maintain these questions as part of the interview.

#### *Secondary Outcome Variables.*

1. General Nutrition Knowledge. We tried several questions to measure this variable: asking whether subjects thought a meal they'd just described was healthy, whether they could think of any ways to make it healthier, and what foods in general did they consider healthy or not healthy. During the first and second round of pilot interviews, it became clear that the word "healthy" was not understood in the same way by all subjects. Many interpreted it as serving size, as in "healthy serving", while others didn't seem to have an understanding of the concept at all. When asked how to make meals more healthy, we most often received no response. Recommendation: Keep only two questions about healthy foods in general, and provide an explanation of what we mean by healthy before asking those questions. Responses to these questions will be scored by counting the number of correct responses.

- Preferences for FJV. To determine which FJV subjects were familiar with, had tried and preferred, we developed a set of photographic flash cards with pictures of 19 different fruits, 27 vegetables and 9 juices. Our original procedure was to ask subjects to sort the pictures into three categories: fruits that they liked, fruits they had tried and didn't like, and fruits they hadn't tried. This procedure was repeated for vegetables and juices at different points in the interview. However, after the first round of pilot interviews, it was clear that subjects preferred a flash-card type procedure, with the interviewer holding up each card, asking if the subject knew what it was, if they liked it, and if not, if they had tried it. This procedure also had the positive effect of streamlining these sections of the interview. We were somewhat surprised to find that subjects were familiar with most of the foods and reported that they had tried and liked most of these foods. Of 19 fruits, the mean number liked was 16; of 27 vegetables, 19 were liked and of the 9 juices, 6 were liked.

Recommendation: Maintain these sections in the interview. Although many potential subjects may not show any change on these variables, these sections provide some variety to the interview and subjects appeared to enjoy the tasks. In addition, we may be able to use these sections to show differential change for subjects who haven't tried many FJV.

#### *Mediating variables.*

1. Availability of FFJ. We developed two questions for this variable both of which were well-received by both subjects and interviewers. We will maintain these questions in the interview.

- Peer influence. Based on previous research, we developed questions to try to account for peer influence in food choices. We asked subjects who they ate meals with and what those people had to eat. However, during the pilot interviews, it became clear that our subjects didn't attend to what other people ate and couldn't recall what those other people ate. Based on the 10 pilot interviews, these subjects either aren't aware of being influenced by peer behavior or since they don't appear to be paying attention to what their peers eat, they aren't influenced by their behavior.

3. Autonomy in food choices. We developed questions for almost every section of the interview to measure how much autonomy our subjects exercised in making choices about what they ate for meals and snacks.

4. Self-efficacy. Since the curriculum will be teaching subjects to make healthier, low fat choices in restaurants and fast food outlets, we decided to focus our measures of self-efficacy on those types of choices. The questions we developed appeared to work well. Recommendation: Peer influence does not appear to be a factor for these subjects; those questions will be dropped. However, questions relating to the other three mediating variables will be maintained in the interview.

#### *Additional recommendations.*

Although we attempted to develop standard questions and stems, for interviewing this population, interviewers have to be given some flexibility and latitude to use different language if it's apparent the interviewee doesn't understand the language in the interview or is interpreting it incorrectly. For instance, when we asked about "healthy" food, some people interpreted that as "healthy servings" and told us about the size of the servings they ate instead of the kind of food they ate. In some places in the interview, we've provided alternative phrasings and words, but even those might not work in all cases. Interviewers should be trained so they fully understand the intent of the questions and what kind of information we're looking for, and then be given the latitude to make changes, ad lib, if necessary.

Since some of our subjects were unable to recall or report on food choices, we recommend that these interviews be done with both the subject and an informant. The role of the informant will be to verify answers to some questions and to assist the subject with recalling and reporting in areas such as food preparation skills and food choices in restaurants and fast food outlets.

#### *Conduct a consumer satisfaction evaluation of the module with adults with mental retardation and direct support staff.*

Our original proposal called for evaluating the module with adults with mental retardation who lived in group home settings and their direct support staff. However, in response to reviewer recommendations about including individuals living with their parents, we modified the participants for the evaluation. Thus, we recruited and obtained evaluations from all targeted consumer groups: adults in group homes and direct support staff, adults living at home and parents.

### Subjects.

Participants were recruited from IRIS Media's database of people who had indicated an interest in participating in evaluation studies of our products. Thirty potential participants were identified and called to solicit their participation. Twenty agreed to participate: 5 adults living at home or semi-independently, 5 parents, 5 adults in residential programs and 5 direct support staff. One dyad of adult and parent failed to attend the evaluation session; one direct support staff also failed to attend. The final N for the evaluation was 17: 4 dyads consisting of a parent and an adult child, 4 dyads consisting of a direct support staff person and a resident of their program and one additional group home resident.

*Demographics.* All the adults with mental retardation were non-Hispanic and Caucasian; 6 were female, 3 male. They ranged in age from 22 to 51 (mean age 33.5, s.d. 10.8). Three lived at home with their parents, 4 lived in a group home, 1 lived semi-independently with their parent providing assistance, 1 lived semi-independently with the residential program providing assistance.

The four parents were all female, non-Hispanic and Caucasian, ranging age from 51 to 66, (mean age 60, s.d. 6.5). Half had 1-3 years of college, one had a B.A., and one had completed some post graduate work. Three of the four direct staff were female, all were non-Hispanic and Caucasian, ranging in age from 24 to 40 (mean age 30, s.d. 7.1). Three had 1-3 years of college, one had a B.A. They ranged from 3 months to 6 years experience working with adults with mental retardation (mean=3.1 years; s.d 2.5) and from 3 months to 6 years at their current jobs (mean=2.2 years; s.d. 2.7).

### Measures.

Four instruments were developed for this evaluation: a user satisfaction interview for adults with mental retardation, a user satisfaction questionnaire for parents and direct support staff, and two brief follow up telephone interviews, one for adults with mental retardation and one for parents and direct support staff. See the *Appendix A - Instruments* for copies of these instruments. Items for the user satisfaction instruments were developed to cover 5 broad factors related to user satisfaction: 1) Stimulation (Were the module and materials sufficiently stimulating to gain and maintain the audience's interest?), 2) Comprehension (Were the messages easily comprehensible, the instructions clear and the Activity Book well designed?), 3) Acceptability (Were the module and materials designed well for this population?), 4) Ownership (Did the audience feel the language and images reflected their everyday situations?), and 5) Persuasiveness (Were the messages sufficiently convincing to achieve attitudinal and behavioral change?) Answer options for the adults with mental retardation were on a 3-point Likert-type scale to accommodate these participants' discriminatory competencies. Items for the parents and direct support staff used a 5-point Likert-type scale, except for two items which used a 10-point scale and six which used a binary scale.

In general, scales from these instruments were scored as the mean of the items in the scale. Two items from the interview for adults with MR were reversed (questions 3 and 9) to preserve directionality of the scale (i.e. high scores indicating positive responses). The Persuasiveness scale for Parents and Staff was scored as the sum of Yes responses to 5 binary items.

### Procedures.

Two evaluation sessions were scheduled, one for adults and their parents and one for adults with direct support staff. These sessions lasted approximately two hours. Participants were instructed to work as teams (adults with their parent or a staff person). Each dyad was given a copy of the workbook; the video program was shown to the group as a whole and paused in the appropriate places for the dyads to complete pages in the workbook.

Table 1 - Adults with Mental Retardation

Maximum Score = 3.0

	Mean	s.d.
<b>Stimulation</b>	2.80	0.18
Did you like the video?	2.90	0.33
Did you get bored with the video? (reverse coded)	3.00	0
Did you like the worksheets?	2.70	0.50
Did you like doing the worksheets?	2.80	0.44
Would you like to do more programs like this?	3.00	0
Would you like to see more videos like this?	2.90	0.33
<b>Comprehension</b>	2.50	0.25
Did you understand the video?	2.70	0.50
Were the worksheets hard to do?	2.30	0.71
<b>Acceptability</b>	2.60	0.52

Do you think your friends would like it?	2.60	0.52
<b>Ownership</b>	2.30	0.44
Are the people in the video like you?	2.40	0.53
Do the people in the video talk like you?	2.10	0.78
<b>Persuasiveness</b>	2.50	0.59
Do you think you should eat more fruit?	2.60	0.79
Do you think you will eat more fruit?	2.40	0.74
Will you ask for more fruit?	2.60	0.79
<b>Effectiveness for asking skills</b>	2.10	0.83
Did you learn anything new about asking for what you want?	2.10	0.83

At the end of the session, adults with mental retardation were interviewed by trained research staff; parents/staff completed a consumer satisfaction questionnaire. One of the group home residents arrived without a participating staff person; that resident worked through the program in tandem with another dyad. The staff person, however, only completed one user satisfaction evaluation. Approximately one week after the session, each participant was called to administer a brief telephone interview. Participants were paid \$40.00 for completing the assessment activities, and each dyad was given a copy of the video program and workbook.

#### Results.

*Adults with Mental Retardation.* In general, these participants rated the materials as highly stimulating and acceptable to them and their peer group. They reported comprehending the main messages in the module, and being persuaded to change their dietary habits to include more fruit. Scores on the Persuasiveness scale were somewhat lower than expected because 3 of the participants reported already having a lot of fruit in their diet. Table 1 displays the means and standard deviations for the scales and the items making up the scales.

*Parents.* Parents rated these materials very highly on all dimensions of user satisfaction. In addition, their mean rating of the overall quality of both the video and the Activity Book was 8 (s.d. .82 and .58, respectively) on a scale of 1 to 10. One parent commented, "I think the video was well done. It was colorful, eye-catching, and had situations my daughter could relate to. I liked the variety applicable to different living situations and different people's temperaments." Another wrote: "The video was good, the acting great, and it got the message across. The Activity Book is colorful and is presented in easy to understand format. I like having DD actors!" Table 2 displays the means and standard deviations for the user satisfaction scales and the items making up the scales.

Table 2 - Parents

Maximum Score = 5.0

<b>VIDEO</b>	<b>Mean</b>	<b>s.d.</b>
<b>Stimulating for Parents</b>	4.50	0.43
How much did you like the session?	4.80	0.50
Did the video grab your interest?	4.30	0.50
Did the video keep you interested?	4.50	0.58
<b>Stimulating for Child</b>	4.50	1.00
Did the video grab your child's interest?	4.50	1.00
Did the video keep your child's interest?	4.50	1.00
<b>Comprehension for Parents</b>	4.30	0.50
How clear were the main messages?	4.30	0.50
Did the information make sense?	4.30	0.50
<b>Comprehension for Child</b>	4.00	0.82
How clear were the messages to your child?	4.00	0.82
Did the information make sense to your child?	4.00	0.82
<b>Ownership</b>	4.40	0.75
Did the people in the video seem real?	4.50	1.00
Did the people in the video sound natural?	4.30	0.96

<b>WORKBOOK</b>		
<b>Comprehension</b>	4.60	0.28
Quality of the workbook design	4.50	0.28
How well do activities match the video?	5.00	0.00
Were the activities useful?	4.50	0.58
Were the instructions easy to understand?	4.80	0.50
Was it difficult to ?fill in the blanks??	4.30	0.96
Was it difficult to do ?Fruits I Want to Eat??	4.80	0.50
Are the goals and homework realistic?	4.30	0.50
Do the recipes seem easy to understand?	4.80	0.50
<b>OVERALL PROGRAM</b>		
<b>Acceptability</b>	4.80	0.50
How well were these materials designed for parents to use at home?	4.80	0.50
<b>Ownership</b>	4.50	0.41
Is this program something you would do at home?	4.50	0.58
Would you recommend these materials to other parents?	4.50	0.58
<b>Persuasiveness</b>	3.75	0.96
Did the program increase your knowledge of reasons to eat fruit? - 50%		
Did the program convince you to help your child eat more fruit? - 100%		
Do you think the program motivated your child to eat fruit? - 100%		
Did the program increase the importance you place on your child eating more fruit? - 50%		
Do you think your child learned anything new about asking for what s/he wants? - 75%		

Table 3 - Direct Support Staff

Maximum Score = 5.0

<b>VIDEO</b>	<b>Mean</b>	<b>s.d.</b>
<b>Stimulating for Staff</b>	4.80	0.32
How much did you like the session?	5.00	0.00
Did the video grab your interest?	4.50	0.58
Did the video keep you interested?	4.80	0.50
<b>Stimulating for Resident</b>	4.90	2.50
Did the video grab the resident ?s interest?	4.80	0.50
Did the video keep the resident?s interest?	5.00	0.00
<b>Comprehension for Staff</b>	5.00	0.00
How clear were the main messages?	5.00	0.00
Did the information make sense?	5.00	0.00
<b>Comprehension for Resident</b>	4.60	0.48
How clear were the messages to the resident?	4.80	0.50
Did the information make sense to the resident?	4.50	0.58
<b>Ownership</b>	4.60	0.48
Did the people in the video seem real?	5.00	0.00

Did the people in the video sound natural?	4.30	0.96
<b>WORKBOOK</b>		
<b>Comprehension</b>	4.53	0.24
Quality of the workbook design	5.00	0.00
How well do activities match the video?	5.00	0.00
Were the activities useful?	4.00	0.82
Were the instructions easy to understand?	4.30	0.96
Was it difficult to "fill in the blanks"?	4.50	0.58
Was it difficult to do "Fruits I Want to Eat"?	4.80	0.50
Are the goals and homework realistic?	4.30	0.50
Do the recipes seem easy to understand?	4.50	0.58
<b>OVERALL PROGRAM</b>		
<b>Acceptability</b>	4.80	0.50
How well were these materials designed for staff to use with clients?	4.80	0.50
<b>Ownership</b>	4.90	0.25
Is this program something you would do with residents?	4.80	0.50
Would you recommend these materials to other staff?	5.00	0.00
<b>Persuasiveness</b>	3.50	1.73
Did the program increase your knowledge of reasons to eat fruit? - 75%		
Did the program convince you to help residents eat more fruit? - 75%		
Do you think the program motivated residents to eat fruit? - 50%		
Did the program increase the importance you place on the resident to eat fruit? - 100%		

*Direct Support Staff.* Direct support staff rated the materials as being highly stimulating, easy for their clients to comprehend, and well designed for them to use with residents in their programs. They rated the overall quality of the video as 9 and the Activity Book as 9.5 on a scale of 1 to 10 (s.d. 0.82 and 0.58, respectively). Written comments were uniformly positive: "The video was entertaining, the disco song and fruit dancing was catchy, the hospital scene got people's attention." "It gives good tips on healthy eating and assertiveness in getting more fruits in your diet." "I could see many of my clients finding the video informative." Table 3 presents the means and standard deviations for the user satisfaction scales and the items making up the scales.

*Follow Up Phone Interview .*

In addition to the user evaluation activities described above, we conducted a brief phone interview, approximately one week after each session, with each participant. This interview was designed to assess whether the participants had viewed the video, completed more pages in the workbook, increased their consumption of fruit and carried out any of the suggested homework activities. Of the 17 original participants, 15 completed the phone interview: 3 direct support staff, 4 parents, and 9 adults with mental retardation. Results from both settings (family homes and group homes) were similar. A third of the staff and half the parents reported watching the video at least one more time, while 78% of the adults with MR had watched the video again. Some of this discrepancy is due to the fact that some of the adults were in semi-independent living situations, so that neither parents nor staff may be aware of whether they'd watched the video. On the other hand, two-thirds of staff, parents and adults with MR agreed that they had done more worksheets in the workbook, and two-thirds of staff and 100% of parents and adults with MR reported they were using the fruits poster to track fruit consumption.

Similarly, two-thirds of the staff and 75% of the parents reported the adult with MR was eating more fruit, and two thirds of the adults with MR also reported increased consumption of fruit. However, while two-thirds of the staff reported making some of the recipes in the workbook, only 1 parent (25%) and 3 (33%) of the adults with MR had done so, though one parent said they had purchased the ingredients, but hadn't made the recipe yet.

It is also notable that 1 of the staff reported that the resident had shared the video with 2 other residents, and that everyone in that house liked the stickers and the chart. The other residents were also asking for their own workbooks. One parent also reported that her child had shared the video with her roommate. One staff person and two parents also commented that the adults with MR were trying fruits they'd never been interested in before (mangos, grapefruit and homemade applesauce).

*Additional Evaluation Activity .*

A panel of experts, consisting of 8 representatives from local agencies serving adults with mental retardation, was convened to evaluate the video and workbook. Agencies represented included residential and vocational programs, local schools, the Lane County DD agency, and the City of Eugene Specialized Recreation Department. Job titles of people making up this panel included a registered nurse, 3 program directors, and 4 service coordinators and program supervisors. All were Caucasian; 1 was male.

Participants watched the first module and inspected the accompanying workbook. Project staff developed a brief questionnaire (see *Appendix A - Instruments*) which participants completed. After completing the questionnaire, the Primary Investigator led a short debriefing discussion. Responses on the questionnaire and during the ensuing discussion indicated an enthusiastic and very positive response to the materials. All participants rated the video highly as being stimulating, comprehensible, and persuasive. They also rated the materials highly on questions related to acceptability and 75% indicated they would "probably" or "definitely" use the program in their agency. Several participants wrote comments on their questionnaires; one person indicated she found the video "informative, wonderful, fun, delightful, visually and auditorily (sic) enjoyable". Another commented: "If this is part of a full nutritional package, YIPPEE!" Table 4 summarizes the numerical results from the questionnaire.

### *Discussion*

One important goal of this project was to develop an assessment instrument for adults with mental retardation to measure both outcome and mediating variables related to the consumption of FJV/LFF. In Phase I, we completed an interview instrument and accompanying materials to be used for a face to face interview with the target adult and an informant. This interview covers all critical variables except actual consumption. During the process of developing this instrument, it became clear to us that few adults with mental retardation could reliably report on either food consumed for an entire day or the serving size of the food they recalled eating. In Phase II, we will develop a simple food diary, patterned after one previously developed for adults with mental retardation, to be used by both the target adult and a learning partner to record intake of FJV/LFF using serving size guidelines. We also learned, in the process of creating and testing this interview that peer influences, mediating variables we previously thought were important, did not appear influential in this population. We have dropped those variables from our measures.

The results from the user evaluations clearly indicate that this product was very well received by all our targeted consumer groups (parents, direct support staff and adults with MR). They uniformly rated the materials as stimulating, engaging, well done for the target population, and highly motivational. Results from the follow-up phone call support these ratings, with many of the participants continuing to use the video and workbook. We did not expect that such a brief intervention would lead to a change in fruit consumption, but we were surprised to discover that 75% of the adults with MR reported, at the follow up phone call, including more fruits in their diets.

Both direct support staff and parents indicated they could use these materials in their unique situations, even when the adult with MR was living semi-independently. Representatives from local agencies serving adults with MR also had a positive response to the materials, and indicated they'd use the program in their agencies.

Although we had relatively small samples for our evaluation activities, the uniformity of positive responses and the unexpected finding of behavior change signify that we have developed a product that is well received by our targeted consumers and effective for our target population. We believe these results provide adequate justification for continuing with development of the complete curriculum.

*Table 4 - Panel of Experts*

Maximum Score = 5

<b>VIDEO</b>	<b>Mean</b>	<b>s.d.</b>
<b>Stimulation</b>	4.4	.052
Did the video grab your interest?	4.4	0.52
Did the video keep your interest?	4.4	0.52
<b>Comprehension</b>	4.9	0.18
How clear were the main messages?	5.0	0
Did the information make sense?	4.9	0.35
<b>Acceptability</b>	4.4	0.49
Were the people in the video realistic?	4.6	0.52
Did the way people talked seem natural?	4.3	0.71
<b>Overall quality of video</b>	8.9	1.1
<b>Persuasiveness</b>		
Would this video motivate residents to start eating more fruits? - 86%		

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### **Related Principal Investigators**

∴ [Martin R. Sheehan, Ph.D.](#)