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PREFACE

The Exercise and Nutrition Health Education Curriculum is based on the successful outcomes of the innovative Health Promotion Program for Adults with Developmental Disabilities at the University of Illinois at Chicago (UIC). This 12-week exercise program includes exercise, nutrition, and health education components. The goals of the program are to: 1) improve fitness; 2) increase knowledge about healthy lifestyles; and, 3) teach family, staff, and friends how to support participants to achieve these goals.

The benefits of health promotion activities have been well-documented for the general population. However, individuals with developmental disabilities, for the most part, have not been included in health promotion activities. For people with disabilities, changes in lifestyle and environmental conditions may have the same potential to improve physical, mental, and social functioning, and prevent the onset of lifestyle-related conditions, as they do in the general population. Thus, health promotion programs designed for adults with disabilities are necessary.

In order to better understand ways to promote healthy lifestyles among adults with developmental disabilities, this program includes several research projects. They are being conducted at UIC in the Department of Disability and Human Development by the Rehabilitation Research and Training Center on Aging with Developmental Disabilities (RRTCADD), Center for Health Promotion (CHP); and, the Roybal Center on Health Maintenance. Funding is provided by the National Institute on Disability and Rehabilitation Research (NIDRR), Center for Disease Control and Prevention, and the National Institute on Aging. The Principal Investigators for the Health Promotion Program for Adults with Developmental Disabilities are Tamar Heller, Ph.D., Professor, Director of the RRTC and James H. Rimmer, Ph.D., Associate Professor, Director of the Center for Health Promotion.

Participants in the Health Promotion Program for Adults with Developmental Disabilities participate in a comprehensive program consisting of exercise activities, nutrition and cooking classes, peer support, and health education classes.

1. The exercise program was developed by an exercise physiologist and includes an hour of physical activity to improve fitness. Emphasis is placed on cardiovascular endurance, muscle strength, and flexibility. Participants are taught how to properly use the equipment and exercise safely.
2. The nutrition and cooking classes was developed by a registered dietician and are held for one hour, three times per week. The modules consist of tips on healthy eating and food preparation, examination of eating routines and food labels, shopping tips, and selecting healthy foods from restaurant menus.
3. The health education classes met for one hour, three days per week. The sessions consist of activities helping participants to: understand their attitudes toward health, exercise and food; find exercises that they like to do and set goals; gain skills and knowledge about exercises and healthy eating; support each other during the course of the class; and, identify places in their community where they can exercise regularly.

To date, the Health Promotion Program for Adults with Developmental Disabilities has been tested on four groups of 29 participants from six different vocational and residential agencies in Illinois. Results demonstrate the following:

- increased muscle strength and flexibility;
- greater life satisfaction and less loneliness;
- increased exercise knowledge;
- more positive attitudes toward exercise;
- greater support from family members for exercising; and,
- decreased number of barriers preventing participants from exercising.

PREFACE, continued

The Exercise and Nutrition Health Education Curriculum is based on the following premises:

- people with disabilities have a right to receive education and services that promote their health;
- people can contribute to their own well-being by becoming knowledgeable about their health and health resources, and, by becoming active participants in health promotion activities;
- health promotion is not a form of social control, but must be based on the needs and lifestyle preferences of individuals; and
- support from caregivers and increased access to exercise activities promote exercise adherence.

The curriculum incorporates the following concepts that affect a participant's ability to change health behaviors: *self-efficacy*,^{3,4} *social support* (including caregiver support), *self-advocacy*, *choice-making*, and *leadership development*. This builds on the *Person-Centered Planning for Later Life: A Curriculum for Adults with Mental Retardation*¹⁹ and *Making Choices as We Age: A Peer Training Program*.²⁰ An emphasis is placed on knowledge related to the benefits of exercise and good nutrition, available exercise and nutrition options in the community, personal choices regarding one's preferred lifestyle, and support from friends and relatives.

The curriculum is a 12-week program with three 1-hour sessions per week. Each session covers a specific topic. However, the sessions are designed to build upon the previous lessons and some of the topics may overlap with earlier sessions. This allows participants to continuously review material throughout the program.

The format of the curriculum manual encourages you to reproduce just those parts you need at a particular time. In addition, a CD with participant handouts and worksheets that accompany each session is available. We encourage duplication of the handouts and worksheets so each participant will have a personalized notebook. Each session contains a facilitator script and references, along with participant handouts and worksheets.

CURRICULUM DESIGN

The Exercise and Nutrition Health Education Curriculum is based on the 5 stages of change in the Transtheoretical Model of Change - *precontemplation*, *contemplation*, *preparation*, *action*, and *maintenance*.^{1,2} Each stage move along a continuum of readiness to change and includes specific topics designed to provide participants with options for changing their behavior.

- Phase 1 - *Precontemplation Stage*** - People are often unaware or under-aware of the need to change their behavior. The sessions focus on increasing the participant's understanding of health and exercise, along with making decisions about one's health.
- Phase 2 - *Contemplation Stage*** - People are aware that they should change their behavior and are seriously thinking about change, but, have not made a commitment to take action. In this section, participants consider lifestyle change and assess their exercise and nutrition behaviors.
- Phase 3 - *Preparation Stage*** - People are ready to take action and change a specific behavior. Classes focus on setting goals and examining barriers and influences that may affect their ability to exercise or eat a more nutritious diet.
- Phase 4 - *Action Stage*** - People are taking action and have changed their behavior(s). Participants are exercising and trying to include healthy foods in their diets. Classes focus reinforcing new behaviors to maintain their exercise and nutrition goals.
- Phase 5 - *Maintenance Stage*** - People are considering ways to prevent relapse. Classes focus on reviewing what they've learned and different ways to continue with their program.

USING THE EXERCISE AND NUTRITION HEALTH EDUCATION CURRICULUM

STARTING YOUR EXERCISE AND NUTRITION HEALTH EDUCATION PROGRAM

Who: Adults with developmental disabilities

What: Health promotion program including exercise and nutrition education classes

Where: Home, work, or community activity center

When: Morning, afternoon, or early evening

Size: 8 to 10 participants

How: We recommend having at least 2 facilitators for the classes.

The curriculum was developed as a 12-week program with three 1-hour sessions per week. Its design encourages trainers to customize the program and workbooks for each trainee.

It may be useful to divide each session into an educational piece followed by exercise and/or cooking activities. While this is not a structured exercise program, the curriculum includes various activities that can be modified to fit your teaching style and the needs of your participants. After the program is over, people can begin or continue doing activities that they tried during the course of the health education program. Lastly, we recommend using parts of the curriculum to provide health education for caregivers and other support persons.

TIPS FOR STARTING AN EXERCISE ACTIVITY PROGRAM

A fitness program should include a variety of activities that people enjoy doing.⁵ For example, on Monday, Wednesday, and Friday you may want to walk briskly for 30 minutes, lift weights for 20 minutes, and do flexibility exercises for 10 minutes. Riding a stationary bike, swimming, dancing or doing an aerobic video can be substituted for walking. Prior to starting an exercise program, you should consider the following steps.

- Step 1 Get an okay from a healthcare provider.**⁵ Make sure that people can safely begin exercising and will not aggravate any existing health conditions by regular exercise activity. The healthcare provider may recommend specific tests depending on the person's age and physical condition to determine any limitations in doing physical activities.
- Step 2 Start slowly.** Increasing activity throughout the day, when added to a structured exercise program, can increase a person's fitness level and consume more calories, if he/she is trying to lose weight. (For example, don't use a remote control device, use stairs instead of elevators, do stretching exercises while watching T.V.)
- Step 3 Choose the right program.** Find an activity that fits the needs and interests of the individual. Make sure that the activity is accessible for people with disabilities.
- Step 4 Exercise a minimum of 3 days a week for at least 30 minutes.**
- Step 5 Keep the program fun and rewarding.** People must have fun doing the exercise activity in order to continue with their exercise program. Expose people to a variety of activities that they can do with their friends and/or family members or by themselves
- Step 6 Foster fitness among staff and caregivers.** People are more likely to engage in exercise activities if they see people participating in fitness programs.

TEACHING STRATEGIES

Several strategies are used throughout the curriculum. The strategies are characterized by processes of **choice, self-determination, self-efficacy, self-advocacy, self-learning, and self-care**. Implementation emphasizes two primary concepts: 1) maximum individual involvement in the planning and implementation exercise goals, and 2) health promotive rather than curative activities. Additional strategies that are used to teach the curriculum include problem-solving techniques, conflict resolution, and role playing. *These strategies may be used in each of the classes depending on the group and the individual style of the instructor.* Strategies to facilitate the learning process include:

- 1) **Problem-solving** is a strategy that is not directly addressed in the curriculum but is recommended for the facilitator as an underlying approach in each of the sessions. The problem-solving or decision-making approach provides participants with the skills and attitudes necessary to become life-long learners. In order for problem-solving to work in the classroom, the facilitator needs to:
 - have objectives that can be accomplished through the use of the process;
 - set the tone for the progress of the class by ensuring that participants are relaxed, and the atmosphere is calm, non-threatening, and non-judgmental;
 - practice the principles and reinforce them with the participants at every opportunity; and
 - maintain the right to not use inappropriate solutions to problems.
- 2) **Conflict-resolution** is another strategy used throughout the curriculum as an underlying approach to teaching the content of each session. Conflict is a clash of opinions, needs, or wants between individuals or groups. The result of a conflict may be positive or negative. When handled correctly, conflict can lead to growth within individuals or groups. It can help participants see that their needs and wants may be different from those of others and that this may result in disagreements. Conflict resolution can help people understand that the person with whom they are having a disagreement has the right to their needs and wants. Moreover, each person has the right to be accepted regardless of his or her point of view. Lastly, conflict resolution can help participants identify positive ways of resolving conflict such as demonstrating a willingness to discuss the situation to clarify the problem and trying to search for a solution that is agreeable to each person.
- 3) **Role playing** is another strategy that may be used by the facilitator to teach the curriculum content. The reason for using role playing is to introduce the content with the participants' actual health experiences.

Initially, ask for volunteers or select participants who are likely to talk and act, and who can follow general instructions related to the role or situation for the first few sessions. In the role playing exercises, have participants look for specific points or identify with the feelings of the actor in the role play. Participants' interest, involvement, and learning is easier when they have a specific task. Encourage people to explore and to express themselves freely. Address all remarks to the characters by name and have the participants terminate a scene that is finished or is not moving.

Use open-ended questions to encourage group participation in the discussion. Focus the discussion on the feelings, thoughts and actions of the characters and on the purposes and consequences of their actions. Help the participants relate the experiences to situations that they might have or will encounter. After the participants have completed the role play, commend everyone for their efforts. Discuss what you thought was good about the role play and then suggest areas for improvement. Make sure that each participant has an opportunity to participate in a role-play situation.

USING THE CURRICULUM, continued

EVALUATION OF PARTICIPANT PERFORMANCE

The exercise and nutrition curriculum was designed to foster responsible, positive attitudes toward healthy behaviors for people with developmental disabilities. While these are long term goals that may be difficult to assess, we can evaluate growth towards the goals. The purpose of the evaluation is to measure growth in participant knowledge, skills, and attitudes toward exercise and nutrition behaviors as well as improved social-emotional well-being. We recommend doing an evaluation at the beginning and at the end of the program.

The assessment tools that we used for the project were pilot tested and adapted for people with developmental disabilities and were tested for their reliability and validity. These tools may not be appropriate for people with more severe cognitive disabilities.

Lastly, wherever possible, peer and self-evaluation should be encouraged. Help participants learn to evaluate themselves. Peer evaluation is an important part of the curriculum. If possible, solicit information from support persons to assist in the evaluation of participant progress with the objectives.

INSTRUMENTS

The following tools are the instruments that we used to measure the objectives for the curriculum. They have been included in the curriculum for your use.

SCALE	Reliability	Test - retest Correlation
	n=29	n=29
1. Energy Fatigue Scale ⁶	.63	.44*
2. Jette Pain Measures ⁷	.86	.40*
3. Life Satisfaction Scale for Adults with Developmental Disabilities ^{8,9}	.81	.60**
4. Choice-Making Scale ¹⁰	.77	.66**
5. Knowledge Scale ^{8,10}	.66	.56**
6. Exercise and Activity Inventory ¹¹	NA	NA
7. Exercise Perception Scale ¹²	.79	.72**
8. Barriers Scale ¹³	.73	.55**
9. Exercise: Social/Environmental Support Scale ¹⁴	.76	.48**
10. Self-Efficacy Scale ¹⁵	.91	.52**
11. Community Integration Scale ^{16,17}	NA	.63**

Overall interrater reliability = .95

* (p < .05)

** (p < .01)