CHAPTER 7

The *Fit WIC* Activity Kit: Tools for Overcoming Barriers to Active Physical Play

How To Fit Fit WIC Vermont Into Your Community

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Chapter 7

The *Fit WIC* Activity Kit: Tools for Overcoming Barriers to Active Physical Play

How To Fit Fit WIC Vermont Into Your Community

7.1 The Rationale Behind Fit WIC Vermont

WIC staff have observed that many parents of overweight children deny either that their child is overweight or that their child's overweight is a problem: There is a "parental disconnect" around the issue of childhood overweight. Focus groups conducted by the *Fit WIC Vermont* Project Team with WIC parents revealed

that many think that physical activity is important for their preschool-aged children but they don't know what types or amounts are appropriate.

WIC staff indicated to the *Fit WIC Vermont* Project Team that they would like more positive counseling approaches that will not make parents feel defensive or hostile. The also would like more information and more effective educational materials on overweight prevention. Staff felt that <u>all</u> WIC participants could benefit from



The goal of Fit WIC Vermont is to increase active, physical playtime through a family-based intervention

strategies that focus on movement and physical activity.

The *Fit WIC Vermont* Project Team designed an intervention that addresses the concerns expressed by their staff. The overall goal of *Fit WIC Vermont* is to increase active, physical playtime and decrease sedentary time for three- and



four-year olds through a family-based intervention. The Project Team developed a tool, the *Fit WIC* Activity Kit, to overcome barriers to, and increase opportunities for, active physical play. The *Fit WIC* Activity Kit allows WIC staff to bypass the parental disconnect around overweight and obesity and to address the issue in a manner that is received positively and does not engender defensiveness or resentment in overweight participants.¹ At the same time, it serves as a preventive measure for normal weight children.

Using the concepts of Social Cognitive Theory (described later in this chapter) Fit WIC Vermont educates parents about the importance of teaching physical activity skills to their children. The Kit provides them with the hands-on, self-directing tools to increase opportunities for, and reduce barriers to, active playtime.

Self-directed education outside of the WIC site is especially important for participants in a rural state like Vermont. Face-to-face visits for WIC certification occur only every 6 months; between visits, participants receive a quarterly newsletter and are asked to attend at least one interim nutrition education class. WIC food packages are home-delivered to participants four times per month in order to overcome food access problems (e.g., lack of transportation and only a few major supermarkets in many of Vermont's rural villages and towns).

Fit WIC Vermont was designed to minimize disruption to the existing WIC site activities and requires no additional staff. The *Fit WIC* Activity Kit offers families an ongoing, in-home opportunity for continued and self-directed education.

In *Fit WIC Vermont*, the self-directed education provided by the Activity Kit is also reinforced at the WIC site, through the use of classes developed by the Project Team and described in the *Fit WIC* <u>Educator's Guide</u>.

¹ Please refer to the text box, "WIC Principles on Physical Activity..." on p. 41 for further guidance on the topic of physical activity in WIC education.



7.2 The Heart of *Fit WIC Vermont*-How Does It Work?

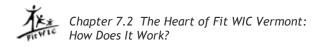
Fit WIC Vermont, the heart of which is the *Fit WIC* Activity Kit, is a familybased intervention that can stand alone. However, it can be strengthened by reinforcing messages given at the WIC site and in other community settings. This intervention would work well in conjunction with broader community-based interventions such as those described in other chapters of this manual (*e.g., Fit WIC California, Fit WIC Virginia*).

The *Fit WIC* Activity Kit, developed by the Vermont Project Team and described below, is a collection of items designed to lower a variety of barriers to physical activity that were revealed in focus groups with Vermont WIC mothers. These barriers included bad weather, lack of transportation, lack of knowledge of activity opportunities, lack of planning skills, and concerns about "hyper" behavior, safety and cost.

7.2.1 What Is In the Fit WIC Activity Kit?

The Activity Kit includes an instructional book, <u>Fit WIC Activities</u>, for parents. (This book can be downloaded from the Fit WIC website; see Section 7.5). It is divided into five, user-friendly sections that build on the theme of reducing barriers to, and increasing opportunities for, active play:

- Section 1: Parent's Pages describes what is appropriate physical activity for preschoolers and includes a preschoolers' "Activity Pyramid";
 Section 2: Quiet Times describes ways to aid transition and settle children after they have played actively;
- Section 3: Everyday Activities and Play offers ideas for unstructured playtime;



Section 4: Skill-building Physical Play outlines skill-building activities and games in five major categories that parents can use for more structured play;

Section 5: Special Outings and Exploring lists community facilities that families can utilize for active play.

Ideally, parents will read through all sections, but sections are designed so that each can stand alone. *Fit WIC Activities* has tabs for each section for ease of use, as well as attractive formatting and illustrations to make it inviting to read.

The Activity Kit also includes play items for children: a beach ball, a set of bean bags, a roll of masking tape to mark off play areas on the floor, a storybook depicting active family alternatives to television watching, and a cassette tape of children's play songs. Other printed materials such as maps and bus



Weather can be perceived by some families as a barrier to active, physical play.

schedules were also included as part of the original intervention. All the play items and activities in the Activity Kit are developmentally appropriate for threeand four-year old children. The Project Team has provided a list of suppliers from whom you can order these items for you own kit production (*see Section 7.5*). A photo of the Activity Kit as it was used in the Vermont intervention project is shown on page 118.

7.2.2 Social Cognitive Theory: What Is It and How Does It Fit In?

The Activity Kit contents were developed and chosen based on Social Cognitive Theory concepts. This theory describes personal behavior as a dynamic interaction between environment, the behavior of others and personal factors.



According to Social Cognitive Theory, people learn not only through their own experiences but also by observing the actions of others and the results of those actions. This theory is often used as the backbone of behavioral interventions.

Table 7.2 outlines the concepts of Social Cognitive Theory and how the Vermont *Fit WIC* Activity Kit addresses each of them. For a more detailed explanation of the important concepts of Social Cognitive Theory, please see one of the references listed in Section 7.5.

Table 7.2. Social Cognitive Theory Concepts and Vermont Fit WIC Materials

Concepts	Objectives/Activities	Vermont Fit WIC Tools
Environment - Factors physically external to the person	Provide specific information and suggestions for activities for children in the community; support and encourage physical activity in the WIC sites	 <u>Fit WIC Activities</u>: Special Outings and Exploring Vermont Map WIC Quarterly Newsletter Second Nutrition Contacts Office Displays
Situation - Person's perception of the environment	Promote physical activity as inexpensive and something that can be planned ahead or done at the spur of the moment, something that can be short or longer in duration, something that doesn't require special sport equipment	 <u>Fit WIC Activities</u>: Parent's Pages, Everyday Play, Skill-building Play, Special Outings and Exploring Playtime Favorites music cassette tape
Behavioral Capability - Knowledge and skill to perform a given behavior	Provide detailed descriptions of how to do age appropriate physical activity skills	 <u>Fit WIC Activities</u>: Skill-building Play Masking tape, beach ball, bean bags
Expectations - Anticipated results or outcomes of a behavior	Model positive outcomes of physical activity for active families	• <u>Berenstain Bears and Too Much TV</u> book
Expectancies - The values that the person places on a given outcome, incentives	Explain benefits and value of physical activity for young children; provide incentives	 <u>Fit WIC Activities</u>: Parent's Pages Children Growing Healthy booklet Participants keep all Activity Kit contents
Self-control - Personal regulation of goal directed behavior or performance	Provide chart for planning and logging activities	• Fit WIC Activity Calendar
Observational Learning - Adoption of a behavior that occurs by watching the actions and outcomes of others' behavior	Provide opportunity to see active kids in a positive light	 Second Nutrition Contacts <u>Fit WIC Educator's Guide</u>
Reinforcements - Responses to a person's behavior that increase or decrease the likelihood of reoccurrence	Promote self-initiated rewards and provide external reinforcement	 WIC Newsletter Second Nutrition Contacts Office Displays Activity Calendar
Self-efficacy - The person's confidence in performing a particular behavior	Increase parental confidence in teaching their children to be physically active	• <u>Fit WIC Activities</u> : Parent's Pages, Skill- building Play
Emotional Coping Responses - Strategies or tactics that are used by a person to deal with emotional stimuli	Provide parents problem solving and stress management skills	• <u>Fit WIC Activities</u> : Parent's Pages, Skill- building Play, Quiet Times
Reciprocal Determinism - The dynamic interaction of the person, the behavior and the environment in which the behavior is performed	Provide multiple avenues to behavioral change	• The entire <i>Fit WIC</i> Activity Kit package



For your project, you may choose to compile an Activity Kit just as it is presented here, or you may want to select your own contents to tailor it to your community. If you do choose to make changes in the Activity Kit contents, try to include items that address all of the concepts of the Social Cognitive Theory outlined in Table 7.2 to maintain its effectiveness.

The cost for this project is primarily that of purchasing the components of the Activity Kit. This cost will vary depending on the parts of the Activity Kit you choose to use or substitute, suppliers used, quantities purchased, etc. It may be helpful to note that the cost is nearly all in supplies rather than staff or space expenses. This may enhance the feasibility of getting additional funding via grants or other outside funding sources. For a more detailed discussion of cost, see Lessons Learned in Section 7.4.

7.2.3 The Key Ingredient: Fit WIC Activities

The most important component of the Activity Kit is the book, <u>Fit WIC</u> <u>Activities</u>, since it addresses most of the Social Cognitive Theory concepts, including environment, situation, behavioral capability, expectancies, self-efficacy and emotional coping responses. <u>Fit WIC Activities</u> can stand alone; however, providing the play items with the book increases the likelihood that the activities will actually be done. They are simple items that many families may already have or could afford to buy, but by including them as part of the Activity Kit, you are sending the message that they have a specific role in the child's skill-building play activities.

Best Practice: If you build your own kit, be sure to include a component for each of the Social Cognitive Theory concepts in Table 7.2.



Best Practice: Pilot test your activity kit with a small group of target participants for acceptance and effectiveness if you make substantial changes from the Vermont Activity Kit.

If you choose to use a physical activity intervention modeled after the one presented here, there are a few things that you should keep in mind:

- The Activity Kit was designed for use in Vermont, a largely rural state with distinct seasonal changes and snowy winters. You may want to amend some of the text in the book, <u>Fit WIC Activities</u>, to fit your community and climate. Since the book is available in electronic form on the Web, this can be easily done.
- If your WIC population has cultural groups that have indigenous children's games that promote physical activity, you may want to include these in the Skill-building Physical Play section of <u>Fit WIC Activities</u>.
- To write your own Special Outings and Exploring section for your <u>Fit WIC</u> <u>Activities</u> book, which helps parents seek out activities in their own communities, you will want to assess your community's resources for low cost, family-friendly physical activity opportunities. To help your staff conduct such a community assessment, refer to the work sheets provided (see Section 7.5). As an alternative, you may choose to make the Special Outings and Exploring section generic; a model for this is also provided (see Section 7.5).

7.2.4 How To Distribute the Fit WIC Activity Kit

The manner in which the *Fit WIC* Activity Kit is distributed to WIC participants may impact its acceptance and utilization. For the *Fit WIC Vermont* intervention, *Fit WIC* staff distributed the Activity Kit at one-to-one WIC certification visits, after nutrition counseling. All WIC-eligible families with threeand four-year old children in the chosen sites were invited to participate in the



intervention, regardless of their child's weight status. Along with the Activity Kit, participants received a brief verbal explanation of its contents, purpose and use.

To replicate this program at your site, you could easily have WIC staff distribute the activity kits during the nutrition education portion of the certification interview. Including education on early childhood physical activity along with the nutrition education could enhance the use of the Kit by the participants. Other options for distribution include giving out the Activity Kit at second nutrition education contact classes or voucher pick-up education sessions.

- Best Practice: Distribute the Activity Kit to the families of <u>all</u> three- and four-year olds, not just those who are overweight or at risk of overweight.
- Best Practice: In order to help staff maximize their impact on participants when they distribute the Kit, provide involved staff with some training in early childhood physical activity, stages of development and learning styles. Several excellent resources for this information are given in Section 7.5. In order to plan an effective training program for staff, you might want to survey them about their attitudes, perceptions and training needs regarding preschool physical activity and overweight. A sample questionnaire is provided (see Section 7.5).

7.2.5 Using Support Activities To Reinforce Your Message

Support activities for the *Fit WIC* Activity Kit distribution were developed by the Project Team to reinforce the Social Cognitive Theory concepts of environment, behavioral capability and observational learning. Repeated exposure to positive physical activity messages is a key to sustainability and successful behavior change. For example, the Project Team developed and has provided a single page physical activity handout (*Fit WIC Activity Pyramid*), which reinforces material in <u>*Fit WIC Activities*</u>, for distribution to physicians, Head Start and



childcare providers and at health fairs (*see Section 7.5*). In participating sites, staff created waiting room bulletin board displays using the *Fit WIC* materials and developed a physical activity page featuring *Fit WIC* messages for the quarterly WIC participant newsletter (*see Section 7.5*).

To enhance education outside the WIC site, the Project Team also created the <u>Fit WIC Educator's Guide</u>, a series of physical activity lesson plans for teaching groups. The <u>Educator's Guide</u> is appropriate for WIC staff, Head Start, Expanded Food and Nutrition Program (EFNEP), childcare providers, and any other organizations involved in educating young children and their parents (*see Section* 7.5). The Fit WIC Project Team also sent letters to local pediatricians to inform them of the Fit WIC Project (*see Section* 7.5 for a sample letter).

Best practice: Develop reinforcing messages that participants will be repeatedly exposed to through all your WIC venues, such as displays, second nutrition education classes, newsletters, websites, etc.



7.3 The Impact of *Fit WIC Vermont*: Evaluation

As part of the program development process, the *Fit WIC Vermont* Project Team did extensive pre- and post-testing in both control and intervention groups to assess factors that affect family physical activity. They included questions about outdoor play-time and TV watching time; mothers' attitudes and beliefs regarding various aspects of child physical activity; barriers to physical activity; parental perceptions of their child's level of physical play skills; and level of parental involvement in their child's playtime. In addition, the pre-test included items on children's social and emotional behavior and sleep patterns, and on maternal characteristics including stress and depression.

To evaluate the effectiveness of the Fit WIC Activity Kit, the Project Team

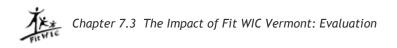
assessed the use and acceptance of the Activity Kit and measured its effect on selected pre-test parameters. They analyzed data from the intervention site post-testing, and found that the Activity Kit was very well received by the participating families. Nearly all of the mothers reported using the Activity Kit when they first received it and planned to continue using it in the future. The rate of usage was very good during the first



The Fit WIC Activity Kit as it was used in the Vermont intervention study.

two weeks following distribution. Three to five months later, at the time of the post-test, usage had dropped somewhat, but the Kit was still used frequently.

Mothers reported improvement in their child's active play skills, such as jumping or throwing, during the several months of the test period. They also reported they had improved in their own ability to teach their child play skills. They also felt it was easier to settle their child down after active play.



The responses to an open-ended request for comments about the Activity Kit demonstrated a broad scope of effect. Mothers responded that the Kit helped them connect with their child; inspired new ideas for activities to do with their child; and reminded them of the importance of physical activity and play. Weather was the only barrier to physical activity that was reported frequently, and study participants appreciated that the skill-building games could be played indoors or outdoors.

While the most common responses were that the Activity Kit was "great" or

"wonderful," a few mothers stated that the Activity Kit would have been more useful if they were not already doing most of the things suggested. This small group said that the Activity Kit would be more useful for "less-experienced" moms. However, other experienced mothers with several children said that the Activity Kit was

It's great! I had been so concerned about him learning things that I forgot to make it fun. The kit helped. Fit WIC Participant

Just taking the time, and learning, just a few minutes a day helps improve their skills. Fit WIC Participant

It made my child curious and anxious to try new things.... Fit WIC Participant

useful for them because it was adaptable to big families with a wide range of ages and interests.

The Project Team recommends that you include in your intervention an evaluation of Activity Kit usage and of the progress achieved by the child in play skills development. While the Project Team also attempted to measure outdoor playtime and TV watching time, readers should be aware that there were many inherent difficulties in trying to quantify data that is based on parents' recollection of the amount of time their child spent in various activities. A suggested evaluation tool is provided (*see Section 7.5*).



7.4 Lessons Learned by the *Fit WIC Vermont* Project Team

 If you make changes in the Fit WIC Activity Kit, be sure to pilot test the new kit before distributing it on a large scale.

The *Fit WIC Vermont* Project Team found that pilot testing early in the development process was especially valuable. A test of the initial version of the Activity Kit with a small group showed that *Elmocize*, a children's exercise videotape originally included, was perceived by parents to be only marginally effective for preschoolers. Eliminating it afforded a cost savings, but it was difficult to select a replacement item that would model positive outcomes as recommended by Social Cognitive Theory concepts *(see Table 7.2)*. The storybook, *The Berenstain Bears and Too Much TV*, was chosen to fill this role.

Keep an open mind and watch for unexpected benefits! Don't underestimate your participants!

The *Fit WIC* Activity Kit presented a variety of strategies to overcome weather as a barrier to outdoor play. Nonetheless, post-test data indicated that weather remained the major barrier to outdoor play for families. Although *Fit WIC* <u>Activities</u> presented skill-building games as outdoor activities, indoor variations were also described and mothers reported that their children did more of the activities indoors rather than outdoors. Thus, an unexpected positive outcome of the project appears to have been to increase indoor active playtime. This may be especially beneficial since weather is a barrier to outside play in many regions of the country.

 If time and resources allow, spend time with your participants going over the Activity Kit components, and demonstrating how to use them. It will pay off in positive results!



The standard protocol in distributing the *Fit WIC* Activity Kit was to give only a brief explanation of the Kit and its contents, in order to minimize disruption to the normal flow of activities at the site. However, at one small WIC site, an extended demonstration of play skills was conducted with the children and mothers. An unexpected impact of this teaching and modeling was seen later, when these families reported much greater use of the Activity Kit than in other intervention families. Accompanying the distribution of the Activity Kit with a more extended demonstration of the Kit components will very likely benefit your participants.

 Put Fit WIC everywhere! Develop supportive activities and team-up with other community agencies to offer as many reinforcing messages as possible.

Because the Project Team was trying to test only the Activity Kit and minimize confounding effects from other sources, they purposely did not develop collaborative partnerships to help spread the *Fit WIC* messages and materials. In your program implementation, you could use as many partners and avenues for exposure as possible. Some of the other *Fit WIC* Project Teams have developed materials that might be helpful for working with the community.

Using your imagination and creativity, you can meet your goals and meet your budget.

The *Fit WIC* Activity Kit as distributed in the intervention was very well received by participants. However, the Project Team recognized the need to minimize cost while continuing to include items addressing all of the Social Cognitive Theory concepts. For statewide distribution, a less expensive plastic mesh bag with a drawstring closure in place of the canvas tote bag was chosen. A less expensive wire bound book replaced the original, loose-leaf, *Fit WIC Activities*. The new, wire-bound format is smaller and easier to use.

Table 7.4 shows the cost of the Activity Kit's components. For statewide implementation of the program, Vermont was able to significantly lower the



original cost, just by making a few minor changes in packaging and printing, and by ordering in larger quantity. A list of the suppliers of these items is provided *(see Section 7.5).* If you choose to tailor the *Fit WIC* Activity Kit, you might find appropriate items in catalogs for preschool supplies and/or physical education equipment, and toy and music stores.

Component	Cost per item used in the Project Team's implementation (For 300 kits, as shown on p. 135)	Cost per item to be used in Vermont's statewide implementation of <i>Fit WIC</i> <i>Vermont</i> (For 7,500 kits, as shown on p. 59)
Fit WIC Activities	\$9.47 (full-sized pages in 3- ring binder)	\$3.71 (slightly reduced size, spiral- bound)
<i>Playtime Favorites</i> cassette tape	\$3.20	\$3.20
Beach ball imprinted with <i>Fit WIC</i> logo	\$1.57	\$1.09 (better price per piece by ordering larger quantity)
Carrying bag	\$2.69 (imprinted cloth tote)	\$0.26 (mesh bag)
Bean bags- set of three	\$1.50	\$1.60 (improved quality)
60 yard roll of 1" masking tape	\$0.92	\$0.92
<u>The Berenstain Bears and</u> <u>Too Much TV</u>	\$2.60	\$2.60
Children Growing Healthy booklet	\$0.59	\$0.59
Total	\$22.54	\$13.97

Table 7.4 The Cost of the Fit WIC Activity Kit Components



7.5 Where You Can Get Tools, Assistance and More Information About *Fit WIC Vermont*

1. Program Specific Tools and Forms

The following tools will help you implement *Fit WIC Vermont* and are available at the *Fit WIC* link on *WIC Works* website: www.nal.usda.gov/wicworks/index.html (accessed 10 Jan 2003).

- Fit WIC Activities book
- Activity Kit item suppliers
- □ Community assessment work sheets (3): Community assessment; Community assessment—Physical Activity (PA); Community assessment--facilities
- Generic Special Outings and Exploring section for <u>Fit WIC Activities</u>
- Staff training and attitudes questionnaire
- □ Sample letter to physician, describing *Fit WIC* program
- Sample of WIC newsletter and inserts
- **D** Tool for evaluating the success of your project (Activity Kit evaluation form)
- The <u>Fit WIC Educator's Guide</u>, which provides physical activity lesson plans for WIC nutritionists and other educators
- *Fit WIC* Activity Pyramid (front and back)

2. People to Contact

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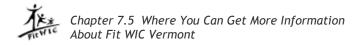
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3. Helpful References

For more details on methods and results from the Project Team

For references to additional reports from the Five-State *Fit WIC* Project, see Chapter 10.1, *Resources Specific to the Five Fit WIC Programs*. Reports made after the publication of this manual will be available or referenced on the *Fit WIC* link on the WIC Works website: <u>www.nal.usda.gov/wicworks/index.html</u> (accessed 10 Jan 2003).

On Social Cognitive Theory

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On Young Children and Physical Activity

For journal references and helpful websites, see Chapter 10.6.7.