Exploring the Relevance of the Personal and Social Responsibility Model in Adapted Physical Activity: A Collective Case Study

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The purpose of this study was to examine the application of the Personal and Social Responsibility Model (PSRM) in an adapted physical activity program. Although the PSRM was developed for use with underserved youth, scholars in the field of adapted physical activity have noted its potential relevance for children with disabilities. Using a collective case study, we explored the relevance and perceived benefits of the PSRM in an adapted martial arts program. Participants were five male children with spastic diplegic cerebral palsy. Data sources included observational field notes, medical records, and interviews with participants’ physicians, therapists, and parents. The following themes were generated from the data: increased sense of ability, positive feelings about the program, positive social interactions, and therapeutic relevance. These results indicate that the PSRM can be made relevant to children with disabilities, especially when coupled with appealing and therapeutically relevant content.

Key Words: empowerment, adapted physical education, martial arts, cerebral palsy

The original focus of adapted physical activity was improved physical function and rehabilitation (Mutrie, 1997; Pensgaard & Sorenson, 2002; Winnick, 2002). However, such programs are now challenged to provide more than therapeutic activities. They are recognized for their potential to promote well-being, enhance self-worth, and foster empowerment (Mutrie, 1997; Pensgaard & Sorenson, 2002; Sherrill, 1997; Winnick, 2002). To better address these elements, scholars in the field have turned their attention to psychological constructs such as self-efficacy.

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self-esteem, self-determination, and empowerment (Biddle, 1997; Kosma, Cardinal, & Rintala, 2002; Pensgaard & Sorenson, 2002; Sherrill, 1997). While these concepts provide a framework for analyzing the impact of programs, it is equally important that we study their application. Theory has limited potential to impact individuals with disabilities if it cannot be translated into practice. A model or theory proposed to guide research in adapted physical activity does not necessarily provide guidance in the realm of practice. Without concrete strategies and principles to guide instruction, practitioners may have difficulty implementing programs that provide maximum benefit to participants.

There is an established model for teaching physical activity that employs many of the strategies called for in the adapted physical activity literature. The Personal and Social Responsibility Model (PSRM), developed by Hellison (2003) for use with underserved youth, has been recognized as an exemplary approach to motivating and empowering youth (Bain, 1998; Jewett, Bain, & Ennis, 1995; Steinhardt, 1992). Its effectiveness in promoting personal and social responsibility among underserved youth is supported by empirical studies and program evaluations (Cutforth & Puckett, 1999; DeBusk & Hellison, 1989; Hellison & Walsh, 2002; Hellison & Wright, 2003; Kahne, Nagaoke, Brown, et al., 2001). The value orientation and practical strategies of this model claim to empower participants by providing them with active roles and meaningful choices in a democratic learning environment. The value orientation and characteristics of the PSRM (Hellison, Cutforth, Martinek, et al., 2000, p. 46) include the following:

1. Treat students as whole people, with emotional, social, and physical as well as intellectual needs and interests.
2. Recognize students as individuals with a voice, capacity for decision-making, as well as unique struggles and strengths.
3. Create a psychologically and emotionally safe environment for growth and learning.
4. Establish a personal connection and pedagogical relationship with students.
5. Empower students and give them as much responsibility as they are able to manage.
6. Implement these ideas through the medium of fitness, sport, games, and other human movement activities.

The key responsibility levels (Hellison et al., 2000, p. 38) are as follows:

1. Respect the Rights and Feelings of Others—This includes controlling anger and doing no harm, resolving conflicts peacefully, and including everyone in the activity.
2. Effort—This includes trying hard, focusing on improvement, and persisting in difficult tasks.
3. Self-direction—This includes making choices, working independently, as well as setting and working toward goals.
4. Helping Others—This includes putting others’ needs before your own, providing leadership, helping and prioritizing group welfare.
5. Outside the Gym—This involves the transfer of the previous levels into other settings.
These responsibilities are generally promoted in programs using a set format (Hellison et al., 2000). This basic class format consists of awareness talk, physical activity, group meeting, and reflection time. The class begins with an awareness talk. This may last only a few minutes, but it gives the instructor an opportunity to go over the plan for the day and remind participants of their responsibilities in the program. During the physical activity, which constitutes most of the class time, the instructor must incorporate the responsibility levels. For instance, students should be given opportunities to make choices, work independently, take on leadership roles, include everyone, and resolve conflicts peacefully. Toward the end of the class, several minutes should be reserved for the group meeting and reflection time.

In the group meeting, participants have the opportunity to provide feedback. They can comment on things they did and did not like as well as make suggestions. This is also a time for them to consider how the group did with their responsibilities overall. This is not meant to be a time for blaming or pointing out flaws. It gives the group a chance to debrief and identify opportunities for improvement. Finally, in reflection time the participants are asked to consider their own behavior. Without threat of repercussions, they are encouraged to honestly reflect on the various levels of responsibility and determine how they did on this particular day.

The PSRM was developed through Hellison’s work with underserved youth in urban environments. While children with disabilities face different struggles, they are similar in that they have greater needs than most children due to circumstances beyond their control. Moreover, they frequently struggle with life skills related to how they conduct themselves and treat others (Lavay, French, & Henderson, 1997; Loovis, 2002). Leaders in the field of adapted physical education have noted the relevance of the PSRM (Lavay et al., 1997; Loovis, 2002; Sherrill, 1998).

Wright (2001, 2002) has documented the successful application of the PSRM in martial arts programs for over 100 children with a variety of disabilities. For 5 years these programs were offered through a community-based pediatric therapy clinic in the Midwest. Formative program evaluations, as well as feedback from parents and therapists, were consistently positive. In addition to physical benefits, improved social skills and self-esteem were anecdotally attributed to these programs.

In the current study we explored the relevance of PSRM for learners with disabilities. The purpose was to examine the application of PSRM in an adapted martial arts program. Many physical educators consider modified martial arts practice an appropriate activity for children with disabilities (Lieberman & Houston-Wilson, 2002; Winkle & Ozmun, 2003). Health care professionals and researchers have associated physical and psychological benefits with adapted martial arts programs, including those using Tai Chi (Hain, Fuller, Wiel, & Kotsias, 1999; Wolf, Barnhart, Ellison, & Coogler, 1997; Wolf, Barnhart, Kutner, et al., 1996; Woods, 2002). The therapeutic relevance of this program and perceived benefits were examined using a collective case study. Two research questions were addressed: Does the PSRM appear to be relevant and beneficial for children with disabilities? Does the modified martial arts content appear to be relevant and beneficial for participants?
Method

Design

As the goals of adapted physical activity programs evolve, so must the research methods used to study them. A series of articles in a special issue of Adapted Physical Activity Quarterly (1998, Vol. 15, Issue 3) challenged our assumptions about research in this area and called for greater variety in terms of method. The design used in this project was a collective case study. Case study research allows for an in-depth analysis of an individual, a program, or some other bounded entity (Yin, 1989). This general approach can serve various functions. In the current project we took an instrumental approach to case study. This means that a case is explored to enable a better understanding of an issue that is external to the case. According to Stake (2000), “A researcher may jointly study a number of cases in order to investigate a phenomenon, population, or general condition. I call this collective case study. It is instrumental case study extended to several cases” (p. 437).

Setting and Participants

The Developmental Martial Arts Program (DMAP) was offered through the pediatric outpatient unit of a rehabilitation hospital in the U.S. Midwest. This study was approved through the institutional review board of the hospital’s academic affiliate, a major university in the Midwest.

DMAP classes were taught each Monday for 13 weeks, beginning in May and ending in August 2002. Students were separated into two small groups based on age. The first group included five younger children ages 4 to 8 while the second group included seven older children ages 9 to 11. Each group met for a 45-min period once a week. The first author was the primary instructor and taught every class with the help of an assistant instructor and one of the two participating physical therapists who was familiar with the students’ therapeutic goals. Twelve children participated in the program, nine boys and three girls. All had cerebral palsy.

Participation in the study was voluntary. All DMAP students received the same benefits and engaged in the same activities regardless of their decision to participate in the study. Seven DMAP students (six boys and one girl) originally enrolled in the study, but complete cases could not be developed for two, due to sporadic attendance. Data were collected for the five study participants who gave verbal assent, whose parents/guardians gave their consent, and who attended at least seven classes. This group was diverse in terms of racial and ethnic background. All five study participants were boys and had spastic diplegic cerebral palsy. To assure anonymity, the participants, their parents, and the health care professionals are referred to using fictitious names.

James is an African American boy. At the time he was enrolled in the DMAP, he was 7 years old, wore ankle foot orthoses (AFO), and ambulated with crutches. He attended physical therapy on a regular basis. His normal therapy schedule included one 45-min session per week. James is shy but has no intellectual impairment resulting from his disability.

Brandon is a Chinese American boy. At the time of this study he was 5 years old, wore AFOs, and ambulated without assistive devices. He attended physical therapy, occupational therapy, and speech therapy on a regular basis. At the time of
the DMAP he was going to physical therapy twice per week. Brandon has no intellectual impairment resulting from his disability.

Jerry is an African American boy. At the time of the DMAP he was 11 years old, wore AFOs, and ambulated without assistive devices. Jerry had been receiving physical therapy on a weekly basis; however, he was not receiving therapy while participating in the DMAP. Jerry has no intellectual impairment resulting from his disability.

Omar is an Arabian American boy. He was 11 years old at the time of the study, wore AFOs, and ambulated with crutches. During the school year Omar received physical therapy, occupational therapy, and speech therapy. During the summer he was receiving physical therapy only. Omar has marked intellectual impairments resulting from his disability.

Gary is an African American boy who joined the DMAP approximately one month after the other boys. He was 4 years old, wore AFOs, and ambulated without crutches at the time of the study. Gary received physical therapy, occupational therapy, and speech therapy. He was scheduled to have eye surgery to correct oculomotor problems often associated with cerebral palsy. In addition, Gary has pronounced difficulties with attention and slight intellectual delays.

Program Description

The PSRM value orientation, class format, and responsibility levels were integrated into the DMAP. To build a personal connection with each student, the instructor made a point of checking in before and/or after class. This was an informal chance to see how things were going, engage in small talk, and provide individual attention to each student. The awareness talk was a quick meeting at the beginning of each class. During this part of the class the students sat on the floor with the instructor, assistant instructor, and physical therapist. The instructor reviewed the plan for the day, incorporated students’ ideas, and reminded the students of their responsibilities and/or goals from the previous session. Younger students and those with intellectual impairments received concrete reminders regarding responsibilities such as maintaining self-control, paying attention, working hard, and helping out.

During the physical activity portion of the class, students were given opportunities to take on various responsibilities. Generally each was asked to choose and lead a warm-up exercise. This gave the students an opportunity to work on their leadership skills. They were coached to speak in a loud, clear voice when teaching and to encourage their peers. Next, the basic martial arts techniques were practiced. These basic movements, such as punches, kicks, and knee strikes, are contained in virtually all traditional Asian martial arts. All students were encouraged to choose a technique, demonstrate it, and lead their peers in practicing it. Some students had to be prodded to make their choices, but they all eagerly took on the leadership role.

After practicing techniques in the air, students took turns striking a target pad. Techniques were modified to fit their physical abilities. For instance, those with balance difficulties were given hands-on support when striking the pad. When students struggled with coordination, the instructor encouraged them to slow down the difficult movements and focus on correct form until they became more com-
fortable. As students became proficient with the basic movements, the instructor increased the level of challenge to keep them motivated. Basic moves were strung together in combinations. If students were struggling with the basics, they were given the choice of practicing them rather than taking on a new challenge.

Students were given opportunities to work as partners. Although they usually needed assistance, students held target pads for each other. Some cooperative partner drills, based in Tai Chi, were taught. These drills involved physical contact but not impact. The partner work always came with reminders about being respectful and having good self-control so that nobody would be hurt. Partners were encouraged to help each other and provide positive feedback.

The physical activity concluded with an obstacle course. The course incorporated skills from the day’s lesson and movements such as rolling, climbing, and maintaining a balanced stance while pushing over a freestanding pad. These obstacle courses were fun, yet provided significant challenges in terms of locomotion, coordination, and motor planning. Toward the end of the program, students were actively involved in choosing the elements for the obstacle course. This gave them an opportunity to vote and make group decisions.

After the physical activity, everyone gathered on the floor for the group meeting and reflection time. This gave the students a chance to tell the instructor and their peers what they thought of class. It was also a chance to ask questions, make suggestions, and evaluate the group’s performance. During reflection time the students evaluated their performance in terms of the responsibility levels. At this point the instructor provided feedback or encouraged students to set a goal to work on at home or in the next class. For instance, the instructor frequently encouraged Gary to work on effort and participation because of his attending issues. James, who had excellent focus, was encouraged to take on more active leadership roles to overcome his shyness. Despite his cognitive impairments, Omar was routinely praised in these discussions for making supportive comments and encouraging his peers during the activities. The level of reflection and discussion varied depending on a student’s intellectual abilities. For those with lower abilities, questions or prompts were related to concrete examples. Most weeks, by student request, the class ended with a traditional martial arts “kiai” cry, executed in unison as the group performed a technique.

**Data Collection**

The primary instructor documented student progress in a variety of ways. This documentation included lesson plans, observational field notes, an observational checklist of responsible behaviors, and a skill development checklist. The weekly lesson plans noted the order of activities, practice drills, and material to be taught. After each lesson, notes were made to indicate any deviations from or modifications to the plan. Observational field notes were used to document the individual behavior, dialogue, and group interactions each week. Both exemplary behavior and problematic situations were described. An observational checklist, structured around the PSRM responsibility levels, was used to assess participant behavior (see Chart 1). A separate checklist was used to assess skill development (see Chart 2). This skill development checklist helped the instructor assess the degree of coaching and/or modification required for each technique. Both checklists were administered twice, once toward the middle and once toward the end of
### Chart 1  Observational Checklist for Responsible Behavior in the Developmental Martial Arts Program

<table>
<thead>
<tr>
<th>Responsible Behavior</th>
<th>Description</th>
<th>Always</th>
<th>Most of the time</th>
<th>Some of the time</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Control</td>
<td>Student does no harm to others and includes everyone</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participation</td>
<td>Student will try every activity and take on various roles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effort</td>
<td>Students tries hard in every task and focuses on improvement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decision-Making</td>
<td>Student will engage in individual and group decisions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independence</td>
<td>Student will stay on task without direct instruction or supervision</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leadership</td>
<td>Student will help, encourage others, and offer positive feedback</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflection</td>
<td>Student can evaluate self/group performance in a meaningful way</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfer</td>
<td>Student can apply responsibility concepts to other contexts</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
the program. This information was used to document progress, establish goals, and provide feedback.

Permission was granted to view the participants’ medical records. This included therapists’ progress notes relevant to established clinical goals. Also reviewed were results from two reliable and valid clinical inventories commonly used to assess children with cerebral palsy: the Gross Motor Functional Measure (Russell, Rosenbaum, & Gowland, 1993), and the Berg Balance Scale (Kembhavi, Darrah, Magill-Evans, & Loomis, 2002). Selected items from each scale were used to assess each participant early in the program. These assessments were administered by the physical therapists and used to determine therapeutic goals and serve as a reference point for evaluating improvement.

We employed qualitative interview techniques to better understand the meaning of this experience for students, as seen through the eyes of their physicians, therapists, and parents (Rubin & Rubin, 1995; Seidman, 1998). All interviews were structured and geared toward program evaluation. According to Rubin and

| Chart 2 Skill Development Checklist in the Developmental Martial Arts Program |
|-------------------|-----------------|-----------------|-----------------|-----------------|
| Skill             | Mastery         | Proficiency     | Emerging        | Comment         |
| Attention Stance  |                 |                 |                 |                 |
| Bow               |                 |                 |                 |                 |
| Fighting Stance   |                 |                 |                 |                 |
| Palm Strike       |                 |                 |                 |                 |
| Knee Strike       |                 |                 |                 |                 |
| Straight Punch    |                 |                 |                 |                 |
| Front Kick        |                 |                 |                 |                 |
| Hammer Fist       |                 |                 |                 |                 |
| Knife Hand        |                 |                 |                 |                 |
| Elbow Strike      |                 |                 |                 |                 |
| Forward Stance    |                 |                 |                 |                 |
| Push              |                 |                 |                 |                 |
| Horse Stance      |                 |                 |                 |                 |
| Blocking          |                 |                 |                 |                 |
Rubin (1995), “With qualitative evaluation interviews, the researcher learns in depth and detail how those involved view the successes and failures of a program or project” (p. 6). Because the second author did not teach in the DMAP program, she conducted all interviews. We reasoned that participants would be more at ease discussing the program honestly with an individual who did not have such an obvious stake in it.

The two referring physicians were each interviewed one time during the course of the study. Interviews were conducted in the physicians’ offices and lasted approximately 30 minutes each. These interviews took place toward the beginning of the DMAP program and focused on the needs of children with cerebral palsy and the rationale for referring them to the DMAP. The physicians were asked if they expected the DMAP to complement physical therapy.

Both participating physical therapists had an active role in the program. Their perspectives and observations were integrated in the planning of the weekly lessons. In addition to their ongoing involvement and several informal interviews throughout the program, each participated in one formal interview toward the end of the program. These formal interviews were conducted in private and lasted 30 to 60 minutes. Interviews began with a series of general program evaluation questions regarding safety, enjoyment, and overall satisfaction with the program. These were followed by case-specific questions. Each therapist identified the cases she knew well enough to discuss. The case-specific questions had to do with perceived benefits in three areas: physical, personal, and social. Physical therapists were also asked open questions regarding the relevance of the DMAP to children with cerebral palsy. In some cases informal follow-up interviews were used to clarify specific points.

Each week, in all cases, the parents of at least one of the participants brought him to class and stayed in the immediate area to observe. Toward the end of the program these parents were asked to participate in a one-time interview. Parent interviews were conducted in private, usually in a room adjacent to the DMAP class, and generally took 30 to 45 minutes. Parents were first asked the general program evaluation questions and then specific questions about the program’s impact on their child. These questions focused on perceived benefits in three areas: physical, personal, and social. Parent interviews ended with an open question about their reasons for bringing their child to the program.

**Data Analysis**

Data were analyzed using inductive analysis and constant comparison (Denzin & Lincoln, 2000; LeCompte & Preissle, 1993; Ryan & Bernard, 2000). Lesson plans, field notes, observational checklists, therapist notes, medical and administrative records, as well as the Gross Motor Functional Measure (GMFM) and Berg Balance Scale results were compiled to create individual cases. Interviews were tape-recorded and transcribed. Detailed notes were made immediately following the interviews. Each case included the child’s demographic background and therapeutic goals. The child’s progress and interactions in the program were described, highlighting the relevance of the PSRM and the types of modification necessary. Finally, benefits noted by the child’s parents and therapists were summarized.

Themes emerged primarily from the parent and therapist interviews. Data were initially organized around three questions asked in these interviews regard-
ing perceived benefits in physical, personal, and social development. The initial themes related to physical development were improved balance and coordination, and improved function in daily activity. The initial themes for personal development were improved confidence, increased willingness to try, and enjoyment. The initial themes for social development were improved social skills and importance of peer influence. Through subsequent analysis, these were revised until four distinct themes emerged that could be applied meaningfully to each case: (a) increased sense of ability, (b) positive feelings about the program, (c) positive social interactions, and (d) therapeutic relevance.

Data Trustworthiness and Credibility

Trustworthiness and credibility are evaluative criteria applied in many qualitative studies (Denzin & Lincoln, 2000; Lincoln & Guba, 1985). In the current study we established trustworthiness through triangulation. Multiple data sources and multiple perspectives provided a comprehensive view of the phenomenon being studied. In generating themes related to program benefits, triangulation involved parent and therapist interviews as well as instructor field notes and observational checklists. Credibility was established primarily through member check.

After the raw data were compiled and summarized, they were shared with each family and the therapists. In one case an interview was repeated, at the request of the family, because they felt it did not accurately reflect their views. Peer debriefing was also conducted among all members of the research team. Other attempts to establish credibility included the search for disconfirming evidence and cross-checking by the first and second authors. The search for disconfirming evidence did result in the inclusion of data that reflected doubts regarding benefits.

The fidelity of the PSRM implementation was assessed weekly. The instructor had 6 years of experience using the PSRM under the direction of Don Hellison. In weekly lesson plans and field notes, the instructor documented consistent use of the PSRM class format, empowerment strategies, and value orientation. The assistant instructor was also experienced in using the PSRM and provided a peer review to confirm the fidelity of the PSRM implementation.

Limitations

The main limitation in this study is the absence of participant interviews. It is problematic to represent the meaning of an individual’s experience without giving him or her a voice in the research process (Denzin & Lincoln, 2000). However, in this study we chose not to interview participants for two reasons. First, three of them were very young, ranging from 4 to 7 years of age. Second, two participants had notable cognitive impairments related to their disability. For these reasons we decided to focus on the perceptions of the parents and therapists. Other limitations are related to the intervention and other data sources. An intervention period longer than 13 weeks would have provided more opportunity for impact. Additional interviews could have strengthened the data. Systematic collection of pre and post data using the GMFM and Berg Balance Scales would have allowed us to provide clinical evidence for changes in balance and coordination.
Results and Discussion

This section is presented in five parts. First is a summary of the anticipated benefits identified by the physicians and therapists. This section will familiarize the reader with the therapeutic goals common among children with cerebral palsy. The remaining four parts of this section will explicate the themes that emerged: increased sense of ability, positive feelings about the program, positive social interactions, and therapeutic relevance.

1. Anticipated Benefits

Both referring physicians, Dr. Walsh and Dr. Born, and the two participating physical therapists, Ms. Munday and Ms. Richards, discussed the clinical relevance of this program in their interviews. Both physicians agreed that ambulation was one of the first considerations in referring a child with cerebral palsy to therapy. If a child was preambulatory, the goal would be for him or her to become ambulatory. If the child was already ambulating, the goal would be to correct gait deviations, reduce stumbling, and improve overall functioning. Both physicians referred to strength, coordination, and balance when describing the goals of therapy. The physical therapists shared this perspective. Both physicians agreed that adapted martial arts, in conjunction with therapy, would be an effective combination. They noted that the martial arts program would probably be more fun for children than traditional therapy. Both felt this would provide a motivating factor not present in the traditional therapeutic setting.

2. Increased Sense of Ability

This theme was identified in each of the five cases. The therapists often referred to increased confidence in performing techniques. The most common manifestation was a willingness to take on challenges or try things that would normally seem too daunting. Ms. Richards had worked with James in one-on-one physical therapy and drew a contrast between the two settings. In her words,

He gets nervous about doing certain things [in therapy] where he wants you to help him but he may not necessarily need the help. In karate class, seeing the other kids do it, he still gets a little nervous but he’s more willing to try something without help because it’s centered around karate rather than a therapist telling him what to do.

Ms. Richards also noted that, like many of the students, Jerry seemed more confident in his physical abilities. She described him as being “willing to try things at a higher level.”

Parents also referred to an increased sense of ability in the program. Some indicated that the program promoted a sense of empowerment. James’ mother said he was realizing, “There are things that go on that normal kids with no disabilities do that he can enjoy also. This helps him out the most. His brother and other kids can take karate, and so can he.” Gary’s mother also saw improvements in this area. She noted that he was proud of what he was learning. She said he would often “show off” his techniques at home.
3. Positive Feelings About the Program

Parents of all five children made some mention of fun, excitement, or enjoyment in describing their child’s feelings about the program. James’ mother explained her reasons for bringing him to this class by saying, “Because it does complement his physical therapy and it is fun, as well as helpful to him with his therapy. He likes it and enjoys it.” Brandon’s mother said, “It’s important, the more variety of therapy he gets, the more well-rounded his treatment is. The broader the treatment program is, the more beneficial it is. And it’s something he enjoys. It’s hard to refuse bringing him when he enjoys it. It’s good for him.”

Omar’s mother explained the significance that this special activity had for her son. She said, “I don’t want his sister or brother to be in a private karate class. This has really helped him a lot. Even during the week when they do things that he can’t do, we mention the karate thing. I tell him that he does karate and they don’t.”

In contrast to the statements made by Omar’s mother, Jerry’s father explained that his son was not always motivated to come to the program, stating, “He’s happy about it. Some weeks he’s a lazy little preteen and doesn’t want to come, but for the most part he’s gung ho about karate and I don’t want to be the reason keeping him from it.”

4. Positive Social Interactions

For the younger participants and those with higher cognitive impairments, the development of appropriate social skills was frequently noted. Ms. Munday noted that the program gave Brandon the opportunity to work on age-appropriate skills such as taking turns and waiting. She stated, “Karate class gives him a good sense of limits.” Ms. Richards thought the program was good for Omar socially. She said, “I think he’s gotten better at listening, raising his hand when he wants to talk, focus more and follow what [the instructor] has to say. He’s very conscious of the other kids and what they are doing.” She noticed that he became less impulsive and did not interrupt others as frequently. His mother echoed these comments, saying, “His teachers always complain about him having a hard time waiting. All teachers describe how he fusses about waiting, but he is waiting here for karate.”

Although she did not see changes in social skills, Ms. Munday stated that the group dynamic included elements that Gary needed: The “dynamic in-group helps Gary to understand the social rules like taking turns and respecting limits.” Gary’s mother felt more strongly on this point. She felt he was paying more attention to other students and being influenced in a good way by them:

He’s better since he’s been coming here, and we get to see a little more when we come here. When they’re doing punches, they’re watching one child do the punches, so he has to wait his turn and he tends to want to volunteer every time. He can wait now for other people, so that’s an improvement.

For some participants, the social dimension meant more than the development of appropriate behaviors. Both his therapist and his father agreed that the program had enhanced Jerry’s social development. Ms. Richards observed that he seemed less shy and was willing to speak up and participate more actively. Jerry’s father noted that he was more willing to do these things in the DMAP than in other group settings, explaining, “Here, he’s one and the same, on the street he’s different. So here he can let some of his inhibitions down, he is in an environment truly
of his peers.” And although Gary struggled with basic social skills, his mother also noted the salience of working with peers:

I like that he is in a class with other kids who have motor problems and that there is a range of disabilities—some kids are worse and some are better, but it’s all okay. He tried a mainstream karate class and it didn’t work out. Being in a karate class with his peers allows him to see what other kids with disabilities can do and be comfortable in class.

While most children seemed to derive some social benefits from the program, this was not true for all. James was already very mature and not lacking in social development when he entered the program. Neither his mother nor his therapist could attribute any changes in this regard to the program.

5. Therapeutic Relevance

Parents and therapists noted physical improvements in all but one case. Due to his young age and attention issues, Gary made little physical progress in the program. While no changes were seen, his mother agreed that the content was relevant because he needed to improve motor skills and balance. In the other cases, improvements were noted in physical abilities such as balance and coordination and in functional skills such as standing and walking independently.

Ms. Munday said she thought Brandon’s balance and coordination had improved, noting that he was “able to maintain one-leg standing for longer time than before” and was “more conscious of his body space or, spatial awareness, also coordination of upper and lower extremities.” Both physical therapists assessed James’ progress and noted improvements in his ability to stand independently. Ms. Richards also said that he could take more independent steps and get up from the floor with greater ease. James’ mother agreed that she had seen physical improvements. In addition to balance, she mentioned that his upper body and legs seemed stronger and that he was able to stand more upright.

When first asked to evaluate Jerry’s physical improvement, Ms. Richards was not sure what gains had been made. Subsequently she reviewed his previous performance on selected items from the GMFM and administered them again. In a follow-up interview she identified increases in several indicators of balance and coordination related to walking, running, and jumping. Jerry’s father had similar perceptions. He felt that Jerry’s balance had improved and he attributed this to the work on various stances. He also noted improved upper-body strength.

Ms. Richards assessed Omar’s progress and agreed that she had seen physical improvement in his balance. She said, “He loses his balance less often and maintains his balance more. He’s getting up from the floor a little easier.” As she did with Jerry, Ms. Richards reviewed a previous GMFM assessment and repeated those same measures. She then reported increases in indicators of balance and coordination related to walking, running, and jumping.

Conclusions and Implications

A collective case study was used to examine the relevance and perceived benefits of the PSRM in an adapted physical activity program. Our two guiding research questions were: Does the PSRM appear to be relevant and beneficial for children with disabilities? Does the modified martial arts content used in this pro-
gram appear to be beneficial for participants? Results yielded four distinct themes that could be applied meaningfully to each of the five cases: increased sense of ability; positive feelings about the program; positive social interactions; and therapeutic relevance. These themes not only inform the guiding research questions but also appear to be consistent with previous research.

The themes of increased sense of ability, positive feelings about the program, and positive social interactions address the relevance and benefit of the PSRM for children with disabilities. Positive social interactions and positive feelings about participating in PSRM programs have been noted in studies on applications with underserved youth (Cutforth & Puckett, 1999; DeBusk & Hellison, 1989; Hellison & Walsh, 2002; Hellison & Wright, 2003; Kahne et al., 2001). In addition to these themes, the notion of an increased sense of ability confirms the prediction that the PSRM can provide particularly meaningful experiences for children with disabilities (Loovis, 2002; Sherrill, 1998; Wright, 2001, 2002).

While the participants in this program and their needs differed from those in most PSRM programs, the same responsibilities and empowerment strategies proved effective. Because of their disability, some participants had difficulty with the first PSRM responsibility, respecting the rights and feelings of others. Omar and Gary, for example, struggled with disruptive and inappropriate behaviors. Gary’s mother indicated that he had become less disruptive and better at taking turns in the DMAP. In Omar’s case, his mother and therapist both felt that he had become less impulsive and less likely to interrupt others in the DMAP. The second PSRM responsibility, effort, also seemed relevant in this program. This level includes participating, trying hard, and persevering in difficult tasks. Ms. Richards commented that both James and Jerry seemed more willing to take on difficult challenges and try harder in the DMAP than they were in other settings.

The third PSRM responsibility, self-direction, includes making group decisions, and individual choices. Some participants like Jerry and Brandon were quite shy when they entered the program. Toward the beginning they were reluctant to make choices and contribute their ideas in group discussions. By the end of the program both had become more comfortable about making choices and expressing their opinions. The entire group became more actively involved in making decisions as the program progressed. Toward the end of the program, students would frequently make group decisions by voting. For instance, the group would vote to decide whether they would rather use the last 10 minutes of class to learn a new technique or do an obstacle course.

The first three responsibility levels established a safe, noncompetitive, democratic, and task-oriented learning environment. In these ways the DMAP was consistent with the value orientation of the PSRM (Hellison et al., 2000). The fourth PSRM responsibility level, helping others, seemed particularly relevant to participants. This level includes leadership, empathy, and teaching. Children with disabilities often have unsuccessful experiences in sport and physical activity (Hutzler, Flies, & Chacham, 2002). It is a rare but salient experience for many of them to see themselves as a role model or leader in such a setting (Wright, 2001, 2002).

Regardless of physical or cognitive impairments, all students were able to take on leadership roles. Although Omar struggled with basic social skills and cognitive tasks, he was consistently identified as a role model for empathy and compassionate behavior. Because of their shyness, Brandon and Jerry required
more nudging than the others to take on teaching roles at first. However, they both became more comfortable and confident in this role as time progressed.

It was apparent in this program that the core responsibility levels of the PSRM were made relevant to participants. Each participant brought unique strengths as well as struggles to the program and required an individualized approach. This is why program leaders must come back to the basic value orientation of the PSRM. It is essential to view each child as an individual, which is the key to making the PSRM levels relevant to him or her. This is the case whether working with underserved youth or children with disabilities. The responsibility levels must be applied with sensitivity and flexibility rather than rigidly imposed upon the participants.

While the themes discussed above related primarily to the PSRM, the remaining theme of therapeutic relevance is more directly related to the adapted martial arts content. As anticipated by the physicians and therapists interviewed in this study, gains in balance and coordination were identified as the most common improvements. These results are consistent with anecdotal reports by health care professionals regarding the therapeutic relevance of martial arts practice (Woods, 2002). Research on Tai Chi, originally a martial art, has also revealed improved balance and postural control in older adults (Hain et al., 1999; Wolf et al., 1996; 1997). While the content and population differed in this study, similar physical benefits may have been observed due to the emphasis on biomechanics and the repetitive nature of practice. Results of this study indicate that the appeal and therapeutic relevance of martial arts were an integral part of this experience.

Based on these results, we suggest that effective implementation of the PSRM has the potential to promote an increased sense of ability, a positive learning experience, and positive social interactions. This seems especially likely to occur when coupled with appealing and therapeutically relevant material. As demonstrated in this study, the PSRM value orientation, responsibility levels, and class format can be applied directly in an adapted program. While the implementation may be catered to fit programmatic needs, it is important to remember that successful implementation of the PSRM hinges on the basic assumptions and value orientation of the instructor (Hellison et al., 2000). For a student to take on responsibilities and feel empowered in an adapted physical activity program, instructors must be willing to relinquish some of their control and share some of their power. This subtle but yet critical shift in thinking may be the largest obstacle to successful implementation.

References


