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# *Physical Activity Promotion Among Underserved Adolescents: "Make It Fun, Easy, and Popular"*

Paula Louise Bush, MSc
Suzanne Laberge, PhD
Sophie Laforest, PhD

*There is a paucity of studies regarding noncurricular physical activity promotion interventions among adolescents, and even less such research pertaining to underserved youth. This article describes the development and implementation of a noncurricular, school-based physical activity promotion program designed for a multiethnic, underserved population of adolescents. The program's impact on leisure-time physical activity (LTPA) and on physical activity enjoyment (PAE) is also presented. The 16-week program, named FunAction, utilizes social marketing principles. Control (*n = *90) and intervention (*n = *131) students are assessed pre- and postintervention for levels of LTPA and PAE. Results indicate that although the program did not contribute to an increase in LTPA or PAE among intervention group students, participation in the program was elevated. This study offers preliminary evidence that noncurricular physical activity promotion programs that apply social marketing principles can be effective in engaging multiethnic, underserved adolescents in physical activity.*

***Keywords:*** *low socioeconomic status; social marketing; school; multiethnic*

It is a truism of health promotion that we must "make the healthy choice the easy choice" (Milio, 1981). To do so, it is necessary to provide readily available, appealing programs that focus on determinants of health, such as physical activity. With regards to promoting physical activity among adolescents, statistics indicate that we are falling short. In fact, in Canada, a mere 27% of boys and 14% of girls between the ages of 12 and 19 meet the international physical activity guidelines (Cameron, Craig, & Paolin, 2005). Moreover, adolescents in the province of Quebec, especially those of low socioeconomic status, are the least likely of all Canadian adolescents to meet these guidelines (Cameron et al., 2005).

Given that physical activity participation declines during adolescence (Cameron et al., 2005), promoting physical activity among youth populations is especially important. The school is a promising setting for physical activity promotion (Parcel, Kelder, & Basen-Engquist, 2000). Indeed, curricular school-based physical activity intervention studies have become increasingly popular in recent years (Baranowski, Anderson, & Carmack, 1998; Stone, McKenzie, Welk, & Booth, 1998). However, noncurricular school-based intervention studies have been particularly neglected in the literature (Jago & Baranowski, 2004).

To our knowledge, only five school-based noncurricular physical activity promotion studies designed for adolescents have been conducted (Engels, Gretebeck, Gretebeck, & Jimenez, 2005; Sallis et al., 2003; Simon et al., 2004; Stevens et al., 2005; Wilson et al., 2005). Among them is the Trial of Activity for Adolescent Girls (TAAG), which was designed specifically for girls and applied social marketing strategies (Stevens et al., 2005). Results of this study are not yet available. Another is the Students and Parents Actively Involved in Being Fit study (Engels et al., 2005), in which the

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***Authors' Note:*** *Please address correspondence to Suzanne Laberge, Department of Kinesiology, Université de Montréal, POB 6128, station Centre-ville, Montréal, Québec, Canada H3C 3J7; e-mail: Suzanne.laberge@umontreal.ca.*

### *The Authors*

***Paula Louise Bush,*** *MSc, is a PhD student in the department of Kinesiology and Physical Education at McGill University in Montréal, Québec.*

***Suzanne Laberge,*** *PhD, is a professor of physical activity promotion at Université de Montréal in Montréal, Québec.*

***Sophie Laforest,*** *PhD, is a professor of kinesiology at Université de Montréal in Montréal, Québec.*


authors measured indicators of physical fitness but not the level of physical activity. The Intervention Centred on Adolescents' Physical Activity and Sedentary Behaviour (ICAPS; Simon et al., 2004, 2006), and Middle-School Physical Activity and Nutrition (M-SPAN; Sallis et al., 2003) studies however did measure the impact of the program on the total level of voluntary physical activity. An increase was observed among the boys of the M-SPAN study and among both the boys and the girls of the ICAPS study. However, in these studies, the measure of voluntary physical activity included participation in program activities as well as LTPA practiced outside of the programs. Hence, it is difficult to asses the impact of these programs on the students' LTPA. The final study (Wilson et al., 2005) was the only one that focused on an underserved population. This quasi-experimental study implemented a student-centered physical activity program. During a 4-week period, 1 hr of moderate-to-vigorous physical activity was offered 3 days per week. The authors assessed overall physical activity on program and nonprogram days. Students in the intervention group demonstrated a greater increase in time spent in moderate and moderate-to-vigorous physical activity on all days.

The dearth of information pertaining to adolescent noncurricular physical activity programs is evident, especially for the economically disadvantaged. Therefore, for the present study, we developed and implemented a school-based, noncurricular, physical activity promotion program for a multiethnic, underserved population of eighth-grade students. The program, named FunAction, was based on principles of social marketing (Maibach, Rothschild, & Novelli, 2002); participation in program activities was entirely voluntary. Two research hypotheses were explored: (a) The supply of the FunAction program would entice 50% of the adolescent boys and girls to participate and (b) the supply of the FunAction program would have a positive impact on students' leisure-time physical activity (LTPA) and physical activity enjoyment (PAE). Note that in this study, LTPA is defined as physical activity practiced outside of both the FunAction program and the physical education classes.

## THE SOCIAL MARKETING APPROACH

Some principles of the social marketing approach (Grier & Bryant, 2005) were used in the design and implementation phases of FunAction. According to this approach, the intervention should be centered on the priority population; all decisions should be derived from their wants and needs. A second principle is that the benefits the population associates with the adoption of the behavior should be understood and emphasized. The barriers they face should also be identified and reduced. Care must be taken to ensure that the perceived benefits outweigh the perceived barriers. A third principle concerns population segmentation. The specific wants and needs of various segments should be taken into account when tailoring the program. A fourth principle indicates that appropriate communication channels should be identified and exploited. Finally, incentives and communication themes should be used to attract the priority population. The successful application of these principles relies on an initial analysis of the population as well as continual feedback from the population and the stakeholders.

## METHOD

### *Analysis of the Priority Population*

Throughout the intervention, participants made informal suggestions and requests. Moreover, participants were surveyed at the beginning and in the middle of the program regarding their physical activity preferences. Physical education teachers were also consulted regularly. They identified various ethnic and social subgroups within the student body and suggested appropriate activities to ensure cultural sensitivity. Consulting students and teachers also allowed us to identify two main barriers to physical activity participation. First, most students were either unavailable for or not interested in after-school activities. Therefore, all FunAction activities were scheduled during the lunch period. Second, the school was not equipped with shower facilities. This discouraged some students, so lower intensity activities were included in the program.

### *FunAction Program Description*

Because physical activity interventions designed for youth should include activities that are enjoyable (Bungum, Dowda, Weston, Trost, & Pate, 2000), every

**TABLE 1**
**Total Number of Sessions Offered for Each Activity**

| *Physical Activity* | *Number of Sessions Offered* |
|---|---|
| World Cup | 26 |
| Hip Hop | 13 |
| Kung Fu | 16 |
| Cardio-Surprise | 11 |
| African dance | 15 |
| Capoeira | 8 |
| Dance Dance Revolution | 40 |
| Outdoor soccer (girls only) | 4 |
| Walking–running | 3 |
| "Abdominator" | 11 |
| Weight training | 1 |
| Total | 152 |

effort was made to offer activities the participants would perceive as fun. During the first wave of the 16-week intervention, activities included African dance, Cardio-Surprise (a mix of aerobics and various dance styles), "Abdominator" (an exercise-ball activity), Kung Fu, Hip Hop, "World Cup" (a soccer and basketball tournament), Dance Dance Revolution, and Capoeira. Halfway through the implementation phase, program modifications were made given the popularity of activities, the availability of activity leaders, the participants' requests and survey responses, and also the advent of warmer weather. As a result, Capoeira, Kung Fu, Abdominator, and Hip Hop were cancelled, whereas an outdoor walking–running group, weight training, and outdoor girls' soccer were added. Overall, FunAction offered an average of 9 ± 2 activities each week for a total of 152 physical activity opportunities. Table 1 indicates the number of times each activity was offered.

### *Promotional Means*

FunAction included many promotional means, including a kick off event, three variety shows, and a rally. Also, throughout the intervention, each day's activity schedule was announced by students over the public address system. Schedules of program activities were also posted in each classroom. Photographs of students taking part in the various activities were posted under banners displaying the FunAction logo. Information relevant to program activities, coming events, and prizes were also posted under the banners. Educational leaflets including photographs of participants, World Cup results, and information about coming events were distributed at regular intervals. Incentives included FunAction T-shirts and prizes and were awarded according to participation and attitude.

### *Program Delivery*

All activities were led by kinesiology and other university students and were offered free of charge. With regards to the schedule, up to three different activities per day were offered 3 to 5 days per week. All activities were offered during the first 45 min of the 75-min lunch period. Because the gymnasium was small and available only 2 or 3 days each week, only the World Cup was held in this location. Moreover, the playground was a paved courtyard, so all other activities took place in classrooms. These classrooms could not accommodate large groups of students in motion, so activities were offered to a maximum of 12 students at a time.

### *Research Design*

FunAction took place in an underserved, multiethnic middle-school (Grades 7 and 8) in Montreal, Quebec, Canada. A quasi-experimental design was used to evaluate the impact of the program on LTPA and PAE. The intervention group consisted of the eighth-grade students ($n$ = 165). In view of the distinct sociocultural makeup of the student body, it was not possible to compare the study's participants to students from another school. Therefore, the control group consisted of the seventh-grade students in the same school ($n$ = 137). The fact that both study groups attended the same school allowed us to reduce the effects of various contextual factors. All students were exposed to the same physical, social, and organizational environments specific to the school. Pre- and postintervention data were collected via self-report questionnaires in December 2004 and June 2005, respectively.

Parental and student informed consent were obtained for 95% ($n$ = 157) of the intervention group students and 87% ($n$ = 119) of control group students. Because of student absences on pre- and posttest days, complete data sets were available for 90 control group students and 131 experimental group students. Table 2 presents some sociodemographic characteristics of the study groups. Note that the ratio of boys to girls in the control group was equally disproportional in the initial sample of 137 students, and no particular reason for this ratio was found.

The FunAction intervention was part of an exploratory pilot study requested by the Montreal school tax board. Although the sustainability of the intervention

**TABLE 2**
**FunAction Sample Description**

| | *Boys* | | *Girls* | |
|---|---|---|---|---|
| | *Control* | *Intervention* | *Control* | *Intervention* |
| *N* | 28 | 62 | 62 | 69 |
| Age (years) | | | | |
| Range | 11 to 14 | 13 to 15 | 11 to 14 | 13 to 16 |
| Mean[a] | 12.5 (0.6) | 13.9 (0.7) | 12.5 (0.6) | 13.8 (0.9) |
| Born outside of Quebec | 50.0% | 56.5% | 45.9% | 58.0% |
| *p*[b] | 0.73 | | 0.86 | |
| Mean[a] number of years in Quebec | 5.0 (3.0) | 7.5 (4.2) | 4.6 (3.2) | 6.0 (3.8) |
| *p*[c] | 0.72 | | 0.10 | |

a. Standard deviations are shown in parentheses.
b. $\chi^2$.
c. *F*.

was not the prime concern of the school tax board, we did submit a report with recommendations for the continuation of physical activity promotion. The study was approved by the multifaculty research ethics committee of the University of Montreal (ethics certificate no. ETH-2004-62).

### *Measures*

*Leisure-time physical activity* (LTPA) was assessed with an adapted version of a French translation of the 7 Day Physical Activity Recall (7DPAR; Santé Québec, 1999). Students were asked "During the last week, did you participate in sports or physical activities which made you sweat or breathe heavily?" They indicated the amount of time spent engaged in such LTPA, in increments of 15 min (0 to 14 min to 60 min or more), for each of the 7 preceding days. A score between 7 (0 to 98 min) and 35 (420 min or more) was calculated for each adolescent.

*Physical activity enjoyment* (PAE) was assessed with a French translation of an adapted version (Motl et al., 2001) of the Physical Activity Enjoyment Scale (PACES; Kendzierski & DeCarlo, 1991). In this study, a 4-point scale was used. A score between 14 (low level of PAE) and 56 (high level of PAE) was calculated for each student. Given that we translated the scale, we pretested it to establish content validity. Cronbach's alpha for baseline data was .89.

*Frequency of Participation* in FunAction activities was calculated for each student.

### *Data Analysis*

Our first hypothesis was that the supply of a noncurricular physical activity promotion program would entice 50% of the adolescent boys and girls to participate. To test this hypothesis, the number of participants and their participation frequency were calculated. Participants were then placed in either the low participation (present zero or one time; $n = 46$), the average participation (present two to eight times; $n = 45$), or the high participation (present nine times or more; $n = 48$) group. These groups were compared with one-way analysis of variance (ANOVA) to assess whether students with higher preintervention LTPA and/or PAE levels self-selected into the program. Contrasts were constructed to assess which groups were different. Comparisons were made by sex in each group ($\chi^2$).

Our second hypothesis was that the FunAction program would have a positive impact on students' LTPA and PAE. To test this hypothesis, we analyzed the impact of the supply of the program on the continuous outcome variables LTPA and PAE. Repeated measures ANOVAs were used to examine the interactions between group (control and intervention), time (pre- and postintervention), and sex. Furthermore, we analyzed the impact of participation in FunAction on LTPA and PAE. The difference between intervention group students' pre- and posttest LTPA and PAE scores was calculated and then correlated with frequency of participation. All analyses were conducted with SPSS (version 14; Pavkov & Pierce, 2006).

**TABLE 3**
**Comparison of Boys' and Girls' Participation**

| | *Boys* | *Girls* |
|---|---|---|
| Did not participate | 23 | 15 |
| Participated 1 or more times | 39 | 54 |
| $p$[a] | 0.53 | |
| Low participation (0 or 1 time) | 26 | 20 |
| Average participation (2 to 8 times) | 21 | 24 |
| High participation (9 to 34 times) | 15 | 25 |
| $p$[a] | 0.21 | |
| Mean[b] participation frequency (1 to 34 times) | 8.8 (7.6) | 9.4 (7.3) |
| $p$[c] | 0.72 | |

a. $\chi^2$.
b. Standard deviations are shown in parentheses.
c. *F*.

## RESULTS

### *Program Participation Frequency*

Given that participation in FunAction was voluntary, students' participation level varied. Over the course of the intervention, 63% of the boys and 78% of the girls participated in one or more activities. Among these participants, there is a trend toward a significantly greater number of girls than boys (Table 3). Moreover, results indicate that girls participated more frequently than boys; however, this difference is not significant (Table 3).

The total average weekly number of participants was 61 ± 20. However, because many students participated more than once each week, the actual average number of students present each week was 45 ± 12.

With regards to self selection, Table 4 displays the mean pretest LTPA and PAE scores of low-, average-, and high-participation boys and girls. Among the girls, no significant difference between groups for pretest LTPA, $F(2, 65) = 0.72$, $p = .49$, was observed. Therefore, girls were attracted to program activities regardless of their pretest LTPA levels. On the other hand, among the boys, one-way ANOVA results indicate a significant difference between groups for LTPA, $F(2, 59) = 8.46$, $p = .00$. Contrast tests reveal that low-participation boys had significantly lower pretest LTPA than both average- and high-participation boys, $t(59) = -2.92$, $p = .01$, and $t(59) = -3.19$, $p = .00$, respectively.

Regarding pretest PAE scores, no significant difference between girls' groups, $F(2, 64) = 2.94$, $p = .06$, was observed. Thus, FunAction was successful in engaging girls regardless of their pretest PAE. Among the boys, the difference between groups was significant, $F(2, 58) = 4.86$, $p = .01$. In fact, contrast test results indicate that low-participation boys had significantly lower pretest PAE scores than both their medium- and high-participation counterparts, $t(33) = -2.93$, $p = .01$, and $t(42) = -2.49$, $p = .02$, respectively.

### *Impact of Program Supply*

With respect to LTPA, univariate ANOVA results indicate that control and intervention group students

**TABLE 4**
**Mean[a] Pretest Leisure-Time Physical Activity (LTPA) and Physical Activity Enjoyment (PAE) Scores of Intervention Group Boys and Girls According to Three Levels (Low, Average, High) of Participation**

| | *Boys* | | | *Girls* | | |
|---|---|---|---|---|---|---|
| | *Low* | *Average* | *High* | *Low* | *Average* | *High* |
| LTPA | | | | | | |
| *n* | 26 | 21 | 15 | 20 | 24 | 24 |
| Score | 13.0 (5.1) | 19.6 (6.7) | 18.6 (5.7) | 12.9 (4.9) | 14.7 (6.0) | 14.6 (6.0) |
| *p* | | 0.00 | | | 0.49 | |
| PAE | | | | | | |
| *n* | 25 | 21 | 15 | 20 | 24 | 23 |
| Score | 45.0 (8.1) | 50.0 (5.4) | 50.2 (2.9) | 42.9 (9.3) | 45.5 (8.2) | 48.6 (5.4) |
| *p* | | 0.01 | | | 0.06 | |

a. Standard deviations are shown in parentheses.

**TABLE 5**
**Pre- and Postintervention Scores[a] of Leisure-Time Physical Activity (LTPA) and Physical Activity Enjoyment (PAE) for Control and Intervention Group Students**

| | *Full Group* | | *Boys* | | *Girls* | |
|---|---|---|---|---|---|---|
| | *Control* | *Intervention* | *Control* | *Intervention* | *Control* | *Intervention* |
| LTPA | | | | | | |
| *n* | 89 | 130 | 27 | 62 | 62 | 68 |
| Pre[b] | 16.3 (6.1) | 15.3 (6.2) | 18.4 (6.6) | 16.6 (6.5) | 15.4 (6.5) | 14.1 (5.7) |
| Post[b] | 18.7 (8.2) | 18.8 (8.2) | 20.8 (9.1) | 20.5 (8.7) | 17.9 (7.7) | 17.2 (7.2) |
| PAE | | | | | | |
| *n* | 89 | 123 | 27 | 59 | 62 | 64 |
| Pre[c] | 48.5 (6.0) | 46.8 (7.5) | 47.7 (6.0) | 47.9 (6.7) | 48.8 (6.1) | 45.7 (8.0) |
| Post[c] | 48.1 (6.2) | 45.9 (8.3) | 46.8 (5.9) | 46.2 (9.2) | 48.9 (6.2) | 45.5 (7.5) |

a. Mean scores; standard deviations are shown in parentheses.
b. LTPA score range: 7 to 35.
c. PAE score range: 14 to 56.

were not significantly different at the outset, $F(1, 215) = 2.88$, $p = .09$. No Group × Sex interaction was observed prior to the intervention either, $F(1, 215) = 0.10$, $p = .76$. The effect of the supply of the program on LTPA of control and intervention groups over time was assessed using repeated measures ANOVA. Descriptive statistics are presented in Table 5. Results indicate that LTPA increased for all students over the course of the intervention, $F(1, 215) = 34.99$, $p = .00$. However, there was no significant Time × Group interaction, $F(1, 215) = 1.19$, $p = .28$. Nor were there any significant Time × Group × Sex, $F(1, 215) = 0.24$, $p = .62$, or Time × Sex, $F(1, 215) = 0.11$, $p = .75$, interactions. Thus, although participants exhibited a significant increase in LTPA, this was not due to FunAction.

As pertains to pretest PAE, no significant difference was observed between control and intervention groups, $F(1, 214) = 2.10$, $p = .15$. No Group × Sex interaction was observed either, $F(1, 214) = 2.68$, $p = .10$. Furthermore, no significant variation in PAE scores over time for any of the students was observed, $F(1, 215) = 2.00$, $p = .15$. More importantly, no significant Time × Group interaction, $F(1, 208) = 0.31$, $p = .58$, was observed. The Time × Group × Sex, $F(1, 208) = 0.08$, $p = .78$, and Time × Sex, $F(1, 208) = 1.53$, $p = .22$, interactions were not significant either. These results indicate that the supply of the FunAction physical activity promotion program had no impact on participants' levels of PAE. It is noteworthy that all students reported relatively high levels of PAE prior to the intervention (Table 5). Thus, a lack of variation is expected.

### *Impact of Participation in the Program*

To assess the impact of the level of participation on students' LTPA, the increase in LTPA between pretest and posttest was calculated and correlated with participation frequency. The range of increase and mean increase in LTPA of intervention group students are shown in Table 6. No significant correlation between the increase in LTPA level and frequency of participation was observed in the full intervention group ($r = .03$, $p = .70$), among the boys ($r = .08$, $p = .56$), or among the girls ($r = .02$, $p = .90$). Participants' increase in LTPA levels is attributable to other factors unexplained by the present study.

Similar analyses were conducted to assess the impact of participation on PAE. Table 6 shows the range of variation and mean variation in PAE of intervention group students. No significant correlation between frequency of participation and change in PAE was observed in the full intervention group ($r = .00$, $p = .99$), among the boys ($r = .01$, $p = .94$), or among the girls ($r = -.05$, $p = .73$).

## DISCUSSION

The purpose of the FunAction project was to develop, implement, and assess the impact of a noncurricular school-based physical activity promotion program designed for a multiethnic population of low-income adolescents. Results concerning the hypothesis that the supply of a noncurricular physical activity promotion program would entice 50% of adolescent boys and girls to participate are favorable. During the 16-week

**TABLE 6**
**Mean[a] Difference Between Pre- and Posttest for Leisure-Time Physical Activity (LTPA) and Physical Activity Enjoyment (PAE) Scores of Intervention Group Students**

| | *Full group* | *Boys* | *Girls* |
|---|---|---|---|
| LTPA | | | |
| *n* | 130 | 62 | 68 |
| Range | –12 to 21 | –6 to 21 | –12 to 20 |
| Mean | 3.5 (6.3) | 3.9 (5.8) | 3.1 (6.7) |
| PAE | | | |
| *n* | 123 | 59 | 64 |
| Range | –36 to 22 | –36 to 22 | –19 to 20 |
| Mean | –0.9 (7.1) | –1.6 (8.6) | –0.2 (5.2) |

a. Standard deviations are shown in parentheses.

program, 63% of the boys and 78% of the girls participated in one or more activities. We believe this is a good level of participation given the implementation barriers we encountered and also given the barriers to being active faced by the students. Moreover, although not statistically significant differences, girls took part in greater numbers and with greater frequency than did boys. This is similar to the results observed in the ICAPS study (Simon et al., 2006). As pertains to participants' pretest levels of LTPA and PAE, the program appears to have had more success among the girls. Unlike the boys, female participants did not differ from female nonparticipants with regard to pretest LTPA and PAE levels. In other words, FunAction was successful in engaging girls, regardless of their preintervention LTPA and PAE levels.

Overall, results concerning female participants are intriguing as the literature consistently notes that adolescent girls are less physically active than adolescent boys (Barnett, O'Loughlin, & Paradis, 2002; Cameron et al., 2005). Perhaps, adolescent girls are less active because the types of physical activities generally offered are not as appealing to girls as they are to boys. In fact, in this study, girls seemed to prefer the dance and gender-segregated activities. Thus, it is feasible that the supply of such activities contributed to diminishing the gender gap generally observed.

Our second hypothesis was that FunAction would have a positive impact on students' LTPA and PAE. With respect to LTPA, both control and intervention group students reported significantly greater scores following the intervention. However, the supply of the FunAction program was not the cause of the increase. Two explanations for this result are possible. First, all study participants attended the same school and were, therefore, aware of the FunAction program. Hence, although control group students did not participate in program activities, FunAction may have motivated them to become more physically active. Second, given that pretest and posttest data were collected in winter and spring, respectively, it is possible that seasonal differences had an effect on all students' LTPA levels (Santos, Matos, & Mota, 2005). It is however worth noting that the posttest period was particularly hot and humid, and some authors have found that hot, humid conditions are a barrier to physical activity (Burton, Turrell, & Oldenberg, 2003). As pertains to students' PAE, no change was observed for either of the study groups. On average, all students reported relatively high levels of PAE (control = 48.6 ± 6, intervention = 48.8 ± 7.4 out of a maximum of 56) prior to the intervention. Thus, the lack of variation is not surprising. Finally, our results suggest that the level of participation in program activities had no impact on either LTPA or PAE levels. Regarding LTPA, it is likely that 16 weeks was insufficient to effect a change. Indeed, the M-SPAN (Sallis et al., 2003), TAAG (Stevens et al., 2005), and ICAPS (Simon et al., 2004) interventions were between 2 and 4 years in duration. Regarding PAE, our results are consistent with the findings of Wilson et al. (2005). These authors also used PACES (Kendzierski & DeCarlo, 1991) to assess PAE and observed no significant change over the course of their 4-week intervention. Again, it is plausible that the 16-week FunAction program was too short to produce a change in this variable, especially considering participants' elevated PAE pretest scores.

### *Limitations*

This study was not without limitations. The FunAction intervention lasted only 16 weeks and could not be maintained without our ongoing presence in the school setting. We recommend that future studies of this type be carried out over a minimum of 1 full school year. Ultimately, it would be preferable for such programs to become institutionalized in the school setting. We recognize, however, that this recommendation may not be realistic owing to insufficient or competing resources. Ideally, physical activity promotion interventions should use additional strategies designed to involve the students, their family, and their community in order to increase participation and help ensure program sustainability (Oliveira & García Bengoechea, 2005; Saunders & Moody, 2006). In addition, some students who did not participate in any activities explained that this was because they were shy or did not want to participate with students who were not part of their peer group. However, we did not conduct formal focus groups to further explore students' reasons for participation or lack thereof. Staten, Birnbaum, Jobe, and Elder (2006) state that social groups influence the activities and attitudes of youth and should be taken into account when developing, promoting, and implementing physical activity programs. Future intervention studies of this type should include a qualitative component to overcome this limitation.

### *Implications for Practice*

In keeping with principles of social marketing, the FunAction program aimed to increase the participants' LTPA by promoting a program of activities based on students' needs and aspirations. Involving the students and various school actors in the development and implementation of the program helped us to supply the adolescents with a program of meaningful physical activities and to promote the program in equally meaningful ways. Participation results indicate that these methods were effective in enticing adolescents to participate.

Furthermore, Maibach et al. (2002) underscore the need to reduce barriers. One barrier that some authors have identified for adolescents is lack of time (Allison et al., 2005; Dwyer et al., 2006). To develop the FunAction program, we worked with school actors to analyze our priority population and, as such, adapt our intervention. Through this process, a lack of time after school due to familial and scholastic obligations as well as part-time work was indeed identified as a barrier to physical activity participation. Accordingly, we scheduled all FunAction activities during the lunch period, and we feel that this contributed to the program's relative success. Moreover, in accordance with teacher recommendations, FunAction downplayed competition by rewarding participation and team spirit rather than competition and skill. In fact, competition and a sense that skill is needed have been identified by adolescents as barriers to physical activity (Allison et al., 2006; Dwyer et al., 2006). FunAction's success in engaging the priority population lends credence to these results.

### *Conclusion*

The FunAction study is the first study to develop and implement a physical activity promotion program among a multiethnic, underserved population of adolescents. As such, it contributes to the literature regarding noncurricular, school-based physical activity intervention studies designed for adolescents. Results of this study partially support our hypotheses because although the program had no significant impact on students' LTPA and PAE levels, most students participated in FunAction activities. Practitioners are encouraged to apply the principles and strategies used in the FunAction project to other physical activity promotion endeavors conducted in underserved middle schools in order to develop and promote physical activity programs that are "fun, easy, and popular" (Smith, 1999).

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