



Evaluation of Marathon Kids®

FINAL REPORT

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EXECUTIVE SUMMARY

Background & Objectives: In January 2008, The University of Texas School of Public Health-Austin initiated a two-year evaluation study of the Marathon Kids® Program under a subcontract with Marathon Kids® and with funding from the Michael & Susan Dell Foundation. The overarching aims of the evaluation were to:

- 1.) assess the impact of participation in the Marathon Kids program on physical activity engagement and related psycho-social factors (student athletic identity, social support for physical activity, outcome expectations for physical activity, and self-efficacy for physical activity) in public elementary school children in Texas;
- 2.) assess the impact of Marathon Kids on fruit and vegetable consumption and related psycho-social factors (social support and self-efficacy fruit and vegetable consumption) in elementary school children in Texas; and
- 3.) evaluate the process of implementation of Marathon Kids, including the factors that facilitate and impede implementation of the program.

Methods: A multi-method approach was employed to evaluate the impact and process of Marathon Kids that included:

- a quasi-experimental study of physical activity, fruit and vegetable consumption, and psycho-social related factors in 4th and 5th grade students in 7 public elementary schools in Houston Independent School District (ISD) (4 Marathon Kids schools and 3 comparison schools) and 8 schools in Round Rock ISD using a self-administered questionnaire and pedometer assessment (n=1,084 students). The study was based on a nonequivalent control group design;
- a cross-sectional study of 4th grade students from 35 public elementary schools in Central Texas in spring 2008 (n =1,199) and spring 2009 (n=1,803) to assess student participation in and satisfaction with Marathon Kids based on a self-administered questionnaire;
- a cross-sectional study of school faculty in central Texas (n=119) via an online survey to assess program implementation and satisfaction with Marathon Kids;
- a self-administered parent questionnaire to assess social support for child physical activity, participation in and attitudes toward Marathon Kids (n = 1081 in November 2008 and n = 640 in February/March 2009).
- semi-structured interviews with school staff implementing Marathon Kids to explore the process for implementing Marathon Kids (n=10 teachers in 2008 and n=15 teachers in 2009).

Quasi-experimental Study Analyses: In assessing the impact of Marathon Kids, we employed two analytic strategies. The first examined students who had individually enrolled in the Marathon Kids program. The second analytic strategy examined schools that enrolled in the Marathon Kids program. In the student enrollment analyses, we compared 4th and 5th grade students who enrolled in Marathon Kids with same aged students who did not enroll in Marathon Kids, regardless of whether their school had signed up for and adopted the program. Student enrollment in the absence of school enrollment

can occur because Marathon Kids provides opportunities for individual families to enroll in the program, even when the school has not adopted the program. Student enrollment without school enrollment is problematic because of potential selection biases that influence both enrollment and outcome measures. Accordingly, for student enrollment analyses, we included a measure of parent support for physical activity at baseline as a measure of selection effects. We examined the primary outcome variables in 15 socio-economically diverse schools in Houston and Round Rock. In addition to selection effects, the models adjusted for gender, ethnicity, school location (Houston/Round Rock), and school economic disadvantage.

In the school enrollment analysis, we compared 4th and 5th grade students from 5 low-income (mean economic disadvantage: 80.5%) schools in Houston and Round Rock with same grade students from 3 low-income schools in Houston that were not participating in Marathon Kids (mean economic disadvantage: 89.9%). Because of non-equivalencies in baseline levels in outcome variables between control and treatment schools, analyses adjusted for baseline estimates for the primary variables of interest as well as gender, ethnicity, school location, and school economic disadvantage. For both analytic strategies, we assessed differences between Marathon Kids participants and controls for each outcome based on a comparison of the pooled mean from three measurement periods post-Kick Off event. Mixed-effect regression methods were used to model adjusted pooled means.

Findings: The following is a synopsis of the primary findings:

- Students who enrolled in Marathon Kids were found to engage in a higher mean number of times of running for the three pooled post-Kick Off event measurement periods compared to their peers who did not enroll in Marathon Kids (mean = 4.22 vs. 3.97 times, respectively. $p=.035$), with a standardized effect size of 0.08.
- Students in low-income schools that enrolled in Marathon Kids also engaged in a higher mean number of times of running over the three pooled measurement periods compared to students in schools that did not enroll in Marathon Kids (mean = 4.70 vs. 4.29, respectively. $p=.045$), with a standardized effect size of 0.11.
- Students who enrolled in Marathon Kids were found to eat fruits at school more often (mean = 3.10 vs. 2.98, respectively for MK and non-MK students, with 1 = never eat at school and 4 = eats most of the time. $p=.0093$) and to report having vegetables at home more often (mean = 3.52 vs. 3.42, respectively for MK and Non-MK students. $p=.0087$) compared to non-participants. While mean scores of *general fruit and vegetable consumption* were higher for Marathon Kids participants in the student enrollment and school enrollment analyses, none reached statistical significance at .05 (although several reached marginal significance at $p < .10$).
- Students attending Marathon Kids schools reported a higher mean value for athletic identity (global score) ($p=.002$), athletic appearance ($p=.04$), and physical activity competence ($p=.02$). No significant differences were found for the subscale of physical activity importance ($p=.26$), and no significant differences in athletic identity by Marathon Kids enrollment were found in the student enrollment analyses.

- Students who enrolled in Marathon Kids were found to have a higher mean parent social support score over the three measurement period time points post-Kick Off event compared to non-participants (mean=27.30 vs. 26.75 on a scale of 6 to 30 points (highest support), $p=.03$). No significant differences were found for friend or teacher support for PA for either student enrollment analyses or school enrollment analyses or for parent support for PA in the school enrollment analyses.
- With regard to fruit and vegetable consumption, Marathon Kids participants reported a higher mean score of parent social support for fruit and vegetable consumption compared to nonparticipants (combined mean score for three posttest measures: 9.05 vs. 8.81, respectively. $p=.005$). We also found higher parent support for fruit and vegetable consumption in the school enrollment analyses, although these results were not significant ($p=.07$) (Figure 4B). No significant differences in friend or teacher support for fruit and vegetable consumption were found between participants and nonparticipants for either the student enrollment comparison or school enrollment comparison.
- For both the student enrollment and school enrollment comparisons, Marathon Kid students reported a significantly higher mean of physical activity self-efficacy at the three-measurement period post-Kick Off event compared to students not enrolled in Marathon Kids ($p=.04$) or not attending Marathon Kids schools ($p=.002$). Students that attended schools enrolled in Marathon Kids were also found to have significantly higher positive outcome expectations for physical activity compared to students attending non-Marathon Kids schools ($p=.006$).
- Overall, 4th and 5th grade students from the quasi-experimental study reported high levels of satisfaction with the program, with 69% reporting the highest level of satisfaction on a 3-point scale. While satisfaction was high overall, Hispanic (74.9%) and African American (64.3%) students reported a higher satisfaction than white students (58.5%), $p<.01$. In addition, a higher percentage of students who spoke Spanish with parents reported the highest satisfaction with the program compared to English speaking students (78.0% vs. 66.8%, $p<.01$).
- The majority of students (85.6%) reported intentions to participate in Marathon Kids again in the coming year.

Two separately funded cross sectional surveys of central Texas children offered triangulation of the Marathon Kids main evaluation findings¹. At both measurement periods in April 2008 and April 2009, 4th grade students who reported having completed their mileage log during the respective school year reported a higher mean number of days of vigorous physical activity participation (mean= 4.31 vs. 4.06 in 2008, $p=.14$ and mean= 4.63 and 3.95 in 2009, $p<.001$), and outdoor play (mean = 4.20 vs. 4.09 days in 2008, $p=.77$ and mean = 4.54 and 3.84 in 2009, $p<.001$). Mean number of hours of TV watching, on the other hand, was lower at each time period for students who completed their mileage log, with mean hours = 1.68 vs. 2.24 hours in 2008, $p=.008$, and 1.69 and 1.99 hours in 2009, $p=.013$ for students who completed and didn't complete their mileage log, respectively. Parents of Marathon Kids participants

¹ Items related to Marathon Kids were included in the Michael and Susan Dell Foundation funded Travis County CATCH elementary school project which assessed 4th grade children in central Texas.

also reported a higher mean number of times of running and walking in the past 7 days compared to children whose parents indicated they were not participating in the program ($p < .05$).

Discussion: In this evaluation, we found statistically reliable positive effects of the Marathon Kids program on running and psycho-social related factors such as athletic identity, parent social support and physical activity self-efficacy in children from diverse socio-economic and ethnic backgrounds. While support for the program among school teachers was high overall, some aspects of the program would benefit from further refinement, such as increased promotion of the fruit and vegetable program goals and further support for implementation of the school garden component. The appeal of the program among diverse participants was underscored by the similar participation rates across socio-economic subgroups in most of the Marathon Kids activities, including the celebratory events at the beginning and end of the program and the completion of the mileage and fuel logs. With the highest satisfaction for the program reported by Hispanic and African American children as well as children from Spanish-speaking families, these findings provide an important basis for further dissemination of the program to ethnically and economically diverse children, families and schools.

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INTRODUCTION

Background

Childhood obesity in the United States has more than doubled since the 1970s (Ogden *et al.* 2007), with recent estimates indicating that 16.3% of U.S. children and adolescents are obese² (Ogden *et al.* 2008). In Texas, obesity has reached unprecedented proportion in certain ethnic minority groups, with an obesity prevalence of 30% or more of Hispanic boys and African American girls and over 20% of Hispanic girls and African American boys (Hoelscher *et al.* 2004). Physical activity and healthy eating are two key behaviors for maintaining healthy weight in children that also confer a range of additional health benefits. Children's participation in regular physical activity has been found to be associated with improved cardiovascular and musculoskeletal health, better mental health and emotional well-being outcomes, and prevention of chronic diseases such as obesity, hypertension and type 2 diabetes (IOM, 2005; USDHHS, 1996). Fruit and vegetable consumption has been associated with a reduced risk of stroke and possibly other cardiovascular disease, a reduced risk of site-specific cancers, and a reduced risk of type 2 diabetes (USDA, 2008).

Despite the numerous health benefits associated with regular physical activity and fruit and vegetable consumption, local and national estimates indicate a large percentage of U.S. children are not meeting national health recommendations for these behaviors. Approximately two-thirds of U.S. high school students (65.3%) did not meet national recommendations of 60 minutes of physical activity per day for five or more days per week, and only 21.4% had eaten fruits and vegetables 5 or more times per day based on the latest Center for Disease Control and Prevention's (CDC) Youth Risk Behavior Survey (CDC, 2007). In elementary school students, a national study of physical activity based on accelerometer data found that only 42% of children ages 6 to 11 engage in 60 minutes or more of moderate-to-vigorous physical activity on five or more days per week (Troiano *et al.*, 2008).

National and state-level estimates indicate a need for increased opportunities for physical activity engagement in children both during and outside of school time. Although schools provide an important context for promoting physical activity in children (IOM, 2005), physical education class (PE) may provide only a limited contribution to national physical activity recommendations of 60 minutes of PA on most days of the week (USDHHS, 2008) given the infrequency with which PE class is provided in some school districts as well as the limited time children spend in moderate to vigorous physical activity (MVPA) during PE class. Results from a recent study in 35 of 97 elementary schools in Travis County, Texas, for example, indicate that 4th grade children spend only 39.1% of their two to three days of PE lesson time per week in MVPA (Hoelscher *et al.*, unpublished data)—findings comparable to a study of 3rd grade students from 10 sites throughout the United States (Nadar *et al.*, 2003).

Because children have been found not to compensate for physical activity after school when PA opportunities are restricted during the school day (Dale *et al.*, 2000), additional opportunities to engage children in moderate-to-vigorous physical activity both during and outside of school are needed. Research from a CDC national study of children aged 9 to 13 years indicated that 61.5% do not participate in any organized physical activity during their non-school hours and that 22.6% do not engage in any free-time physical activity (CDC, 2003). In Texas, baseline findings from a representative study of 4th grade children from 35 central Texas elementary schools indicated that over half of children (56.6%) did not engage in 30 minutes of PA for 5 days or more of the past 7 days and that 64.5% did not

²At or above the 95th percentile of the 2000 sex-specific Centers for Disease Control and Prevention BMI-for-age growth charts.

meet the 5-a-day recommendation for fruit and vegetable consumption (Hoelscher et al., unpublished data). Clearly, increased efforts are warranted to promote PA and fruit and vegetable consumption in children living in Texas and the broader U.S. both during school and nonschool time.

In addition to the importance of promoting physical activity and healthy eating with Hispanic and African American children based on their higher prevalence of obesity (Hoelscher et al., 2004), efforts to promote physical activity with children from lower socio-economic status are also needed due to their higher risk for obesity (IOM, 2005, pp.60-61) and lower physical activity participation compared to children of higher socio-economic status (Powell et al, 2004; Gordon-Larsen et al, 2006). Programs with evidence of effectiveness are specifically needed for schools that serve economically disadvantaged children given the limited evidence on interventions to promote physical activity in children from low socio-economic backgrounds (van Sluijs et al., 2007).

Overview of the Evaluation & Study Aims

Marathon Kids® is a free, nonprofit program that promotes running and walking, healthy eating, and schoolyard gardening for children in grades K through 5 and their families. Founded in 1996 in Austin, Texas, Marathon Kids currently operates in 7 sites throughout the United States: Austin, Dallas, Houston, Harlingen, Los Angeles, Baltimore, and Chicago. In addition, a pilot project was launched in 2008 with the Navajo Nation in Window Rock, Arizona. Marathon Kids is both a school and community-based program that is implemented primarily by school and community volunteers. A small paid staff of four people based in Austin, Texas coordinates program efforts and fundraises to support core program materials and activities.

In January 2008, The University of Texas School of Public Health-Austin initiated a two-year evaluation study of the Marathon Kids® Program under a subcontract with Marathon Kids® and with from the Michael & Susan Dell Foundation. The overarching aims of the evaluation were to: 1.) assess the impact of participation in the Marathon Kids program on physical activity engagement and related psycho-social factors (student athletic identity, social support for physical activity, outcome expectations for physical activity, and self-efficacy for physical activity) in public elementary school children in Texas; 2.) assess the impact of Marathon Kids on fruit and vegetable consumption and related psycho-social factors (social support and self-efficacy of fruit and vegetable consumption) in public elementary school children in Texas; and 3.) evaluate the process of implementation of Marathon Kids, including the factors that facilitate and impede implementation of the program. As an exploratory aim, we also assessed the impact of Marathon Kids on children's weight status as measured by Body Mass Index (BMI). The following report presents the findings of this evaluation along with recommendations for strengthening the current delivery of Marathon Kids®.

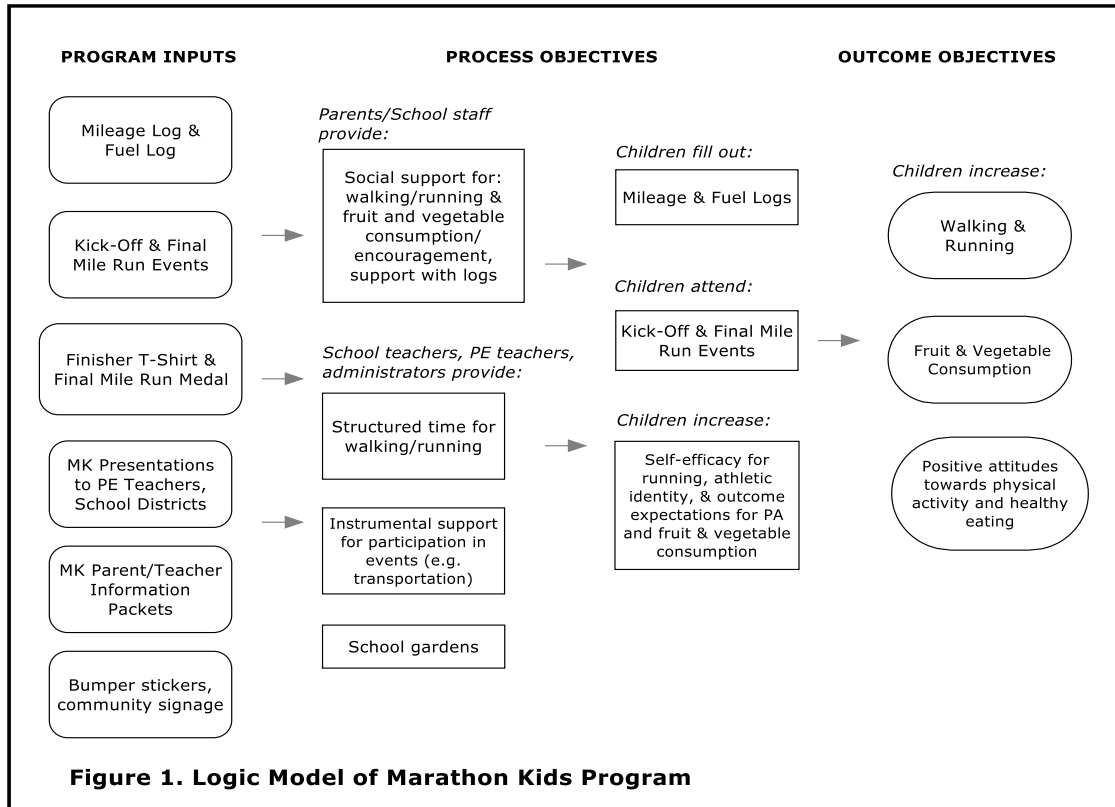
DESCRIPTION OF MARATHON KIDS®

The core program activities of Marathon Kids center around a ~6-month walking/running and fruit and vegetable consumption program for children in grades K-5 and their families. During the program, students track the number of miles they walk or run along with the number of fruits and vegetables they eat by coloring in their Marathon Kids Mileage Log and Marathon Kids Fuel Log, respectively. Successful completion of Marathon Kids is based on walking or running 26.2 miles over a ~6-month period and eating fruit or vegetables 5 times a day for 26 days per month. Students can

perform these activities at both school and home. In many schools, structured time is provided during recess, PE class, or during other periods of the school day for students to walk or run with the aim of helping students work toward their 26.2 mile goal. In some schools, teachers assist students with the tracking of their miles and fruits and vegetable consumption. A key feature of Marathon Kids is the celebration of children and family physical activity and healthy eating through the Kick-Off and Final Mile Run events, which cap the 6-month program. These events are often held at highly visible public venues, such as university or city football stadiums. Local and national celebrities such as mayors, entertainers, professional athletes, police chiefs, and others often host the capstone events. Students who complete the program receive a ‘finisher’ t-shirt, and those who attend the Final Mile Run receive a medal.

Recruitment of Marathon Kids: Schools and school districts are invited to participate in Marathon Kids via presentations to PE teachers and school districts provided at the beginning of the school year. In addition, school faculty learn about Marathon Kids via word of mouth as well as institutionalization of Marathon Kids in specific schools that has taken place over time. Once a school decides to participate in the program, information packets are sent to parents of elementary school students to sign their child up for the program. Sign-up sheets are then returned to the student’s teacher, and the teacher sends the total number of students participating in the program to staff at Marathon Kids. Students who attend schools that do not formally participate in the program also have the opportunity to sign up directly with Marathon Kids. All students and families are welcome to attend the Kick-Off and Final Mile Run events, regardless of whether the student’s school participates in the program.

Figure 1 presents a logic model of the core program inputs, process objectives, and outcome objectives of the Marathon Kids program. The core components and strategies of the Marathon Kids address key elements of ecological frameworks for promoting health. Sallis and colleagues’ (2006) Ecological Model for Active Living, for example, posits that four key environments shape physical activity behavior: *the information environment*, *the social cultural environment*, *the policy environment*, and *the natural/built environment*. Under the *information environment*, Marathon Kids increases awareness about the program via easily recognizable logo and bumper stickers, community signage such as advertising on buses, Marathon Kids t-shirts, parent and teacher information packets, widely publicized kick-off and final-mile run events, and presentations to school districts and PE teachers. Within the *social cultural environment*, Marathon Kids fosters social support for the key target health behaviors via promoting teacher and parent encouragement for health behaviors as well as instrumental support for filling out the Marathon Kids mileage and fuel logs to track walking/running and fruit & vegetable consumption. In some schools, instrumental support is also provided via transportation to Marathon Kids events. Marathon Kids also fosters social reinforcement for walking/running and fruit and vegetable consumption via the kick-off and final-mile run events, which include social reinforcement from public role models such as nationally recognized singers, athletes, and public figures; promotion of school gardens; and social recognition of completion of program goals via final mile medal awards and finisher t-shirts. Lastly, Marathon Kids targets the *policy environment* through promoting scheduled time for walking and running during PE class time and other times of the school day.



We hypothesized that participation in the Marathon Kids program would also positively impact key intrapersonal factors of children related to physical activity and healthy eating, specifically: children's *athletic identity* (Anderson 2004; Anderson et al., 2006, 2008), *self-efficacy* for engaging in walking and running and fruit and vegetable consumption, and *positive outcome expectations* for physical activity participation. Athletic identity self-concept has been found to be positively associated with physical activity in children and adolescents (Anderson et al., 2009). Self-efficacy and outcome expectations are key constructs for engagement in a given behavior posited by Social Learning Theory (Bandura, 1986; Baranowski et al., 1997).

METHODS

Impact Evaluation Design

We conducted two separate studies to evaluate the impact of Marathon Kids on elementary school students' physical activity and healthy eating behaviors (Aims 1 & 2): 1.) a quasi-experimental study of 7 public elementary schools in HISD (4 Marathon Kids schools and 3 comparison schools) and 8 schools in Round Rock ISD (all Marathon Kids schools) ("Study A"); and 2.) a cross-sectional study of 4th grade students in Central Texas in Spring 2008 and Spring 2009 (n = 35 schools) ("Study B"). For the first study (Study A), a nonequivalent control group pretest/posttest evaluation design was used to evaluate the impact of Marathon Kids on key outcomes (i.e., running/walking, fruit & vegetable consumption). Under this study, we assessed 4th and 5th grade children in 7 elementary schools in HISD and 8 elementary schools in Round Rock ISD at four time points during the school year: in October/November

2008 (preceding and immediately following the Kick-Off event), in December 2008 and February 2009 (interim measures), and in April 2009 (posttest).

Two analytic strategies were applied to evaluate impact under Study A. For the first strategy (“student-level analyses”), we compared the prevalence of key program target behaviors in 4th and 5th grade students who signed up to participate in Marathon Kids with the prevalence of key health behaviors in students of the same age group who did not sign up to participate in Marathon Kids during the 2008-09 school year (see Figure 2). Given the potential for a self-selection bias, with those students who signed up for Marathon Kids being potentially more inclined to engage in running, our second analytic strategy was conducted at the school level, in which we compared the prevalence of key target health behaviors in students in schools that participated in Marathon Kids with students in schools that did not participate in Marathon Kids during the 2008-09 school year- regardless of whether the individual student signed up to participate in Marathon Kids. For the school-level analytic strategy, we compared the prevalence of health behaviors in 3 low-income schools in HISD and 2 low-income schools in Round Rock ISD that participated in Marathon Kids with the prevalence of health behaviors in 3 low-income schools in HISD that did not participate in Marathon Kids during the 2008-09 school year (Figure 3). Schools were considered ‘low-income’ if they had >65% school composition of economically disadvantaged students based on Texas Education Agency data.

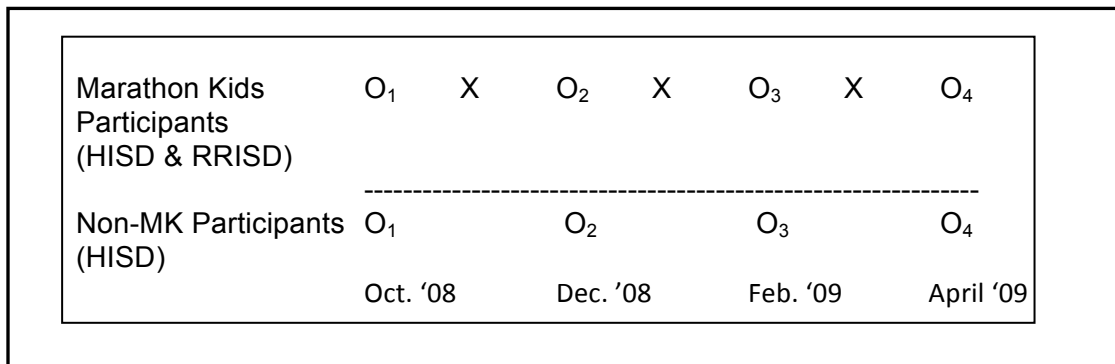


Figure 2. Study A: **Student-Level** Evaluation Design. Based on 15 schools from HISD & RRISD.

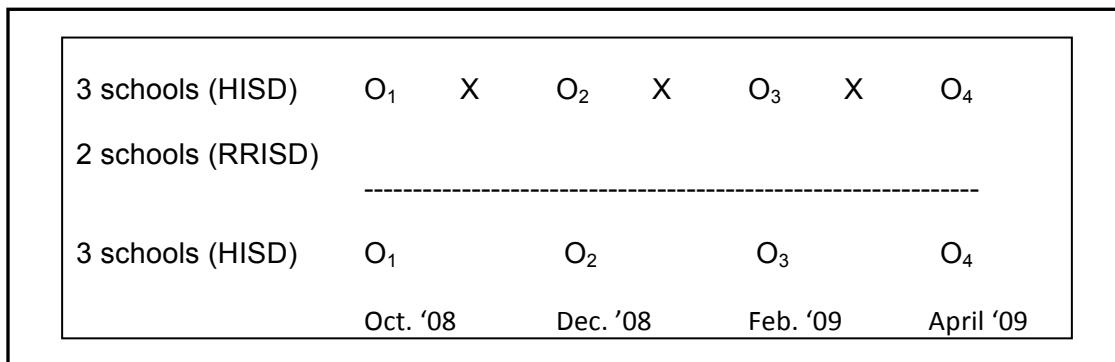


Figure 3. Study A: **School-Level** Evaluation Design comparing low-income Marathon Kids (n = 5 schools) and Non-Marathon Kids schools (n = 3 schools). “X” represents Marathon Kids.

For the cross-sectional study (Study B), we surveyed 4th grade students in four districts in Travis County (Austin Independent School District (ISD), Pflugerville ISD, and Manor ISD and Del Valle ISD (2009

only)) who are currently participating in the four-year Travis County CATCH study. Based on a representative sample of 4th grade students in Travis County, this study aimed to evaluate the percentage of students who participated in Marathon Kids, their satisfaction with the program, and the association of Marathon Kids participation with physical activity and healthy eating outcomes. While the quasi-experimental design in Study A allowed us to assess the impact of Marathon Kids on a smaller sample of students across several times points, a post-test only cross-sectional study design in Study B allowed us to evaluate the effect of Marathon Kids across a larger and ethnically and socio-economically diverse sample of elementary school students in central Texas. Data collection for this study design took place approximately 1.5 to 2 months post-Final Mile Run in spring of 2008 and spring of 2009.

Process Evaluation Design

In addition to the evaluation of the impact of Marathon Kids on physical activity, diet and psycho-social outcomes, we evaluated the process of implementing Marathon Kids to: develop a better understanding of how Marathon Kids is being implemented in schools, assess fidelity of implementation with regard to carrying out the core activities of Marathon Kids as proposed in the program logic model, assess satisfaction with the program among program stakeholders, and identify both barriers and facilitating factors with the aim of ongoing fine-tuning of the program. Five primary data collection methods and data sources were used for the process evaluation of Marathon Kids:

- Personal interviews with PE teachers from the 15 Marathon Kids schools to assess implementation of the specific aspects of the program;
- A self-administered questionnaire with 4th and 5th grade students in the 12 participating Marathon Kids schools in Houston and Round Rock to assess student participation in specific aspects of the Marathon Kids program along with satisfaction with the program;
- A self-administered questionnaire with parents of 4th and 5th grade students from the 15 participating schools in study A to evaluate participation in and attitudes toward the program;
- An online survey with PE teachers and Marathon Kids school coordinators from 8 school districts in Houston and Central Texas to assess implementation, satisfaction, barriers and recommendations for strengthening the program; and
- In-depth, face-to-face interviews with school staff to learn more about strategies for implementing the program at the school level and to explore barriers and opportunities for strengthening the program.

Study Sample (Impact Study)

Study A: Quasi-experimental study of 4th and 5th grade students. We evaluated the impact of Marathon Kids in students from 4th and 5th grade (mean age: 10 years) attending school in Houston ISD (HISD) and Round Rock ISD (RRISD), Texas. Seven schools from HISD and eight schools from RRISD were recruited for this study. In selecting the sample, schools in HISD and RRISD were stratified by percent composition of economically disadvantaged students according to high, medium and low strata. A list of schools implementing Marathon Kids was then obtained from Marathon Kids staff in Austin, reviewed by the PE coordinator from each school district, and verified by the Marathon Kids Evaluation Project Coordinator (e.g., PE teacher) from the selected schools. In HISD, one high economically disadvantaged school ($\geq 90\%$), two medium economically disadvantaged schools ($\geq 60\%$ to $\leq 89\%$) and one low economically disadvantaged school ($< 60\%$ disadvantaged) were randomly selected from the list of

Marathon Kids schools and then matched with non-participating Marathon Kids schools from the previous year. Schools were matched on economic disadvantage as the primary factor, followed by size and ethnic composition. Due to the promotion of Marathon Kids during the year of the study by HISD's PE Coordinator, we were not able to recruit an economically better off school that was not implementing Marathon Kids. As such, our sample includes: 2 high economically disadvantaged schools (1 Marathon Kids, 1 comparison), 4 medium disadvantage (2 Marathon Kids schools and 2 comparison), and 1 low economic disadvantage (Marathon Kids).

In RRISD, all elementary schools indicated participation in Marathon Kids for 2008-09. The original evaluation design aimed to compare students in high and low implementing Marathon Kids schools. In assigning schools to these categories, we obtained both 2008 records of participating Marathon Kids schools, the number of students who completed the program, as well as input from the Round Rock ISD Assistant Athletic Director, who helped confirm the categorization into 'high' and 'low' implementing schools. Because RRISD has a lower level of student economic disadvantage, the following categories were developed to classify schools: high economic disadvantage ($\geq 70\%$), medium disadvantage ($\geq 30\%$ to $< 70\%$) and low economic disadvantage ($< 30\%$). In reviewing the process evaluation data, we found that the original Marathon Kids categorization of schools did not hold true as students in the 'low implementing' schools were found to be equally engaged with the program as students in the 'high implementing' schools. As such, we opted to analyze this sample at the student and school enrollment levels as described above.

Study B: Cross-sectional study of 4th grade students in central Texas. This sample formed part of the Travis County CATCH study, which is based on a representative sample of high, medium, and low income schools in Travis County, with a greater composition of lower income schools ($> 60\%$ economically disadvantaged students). For the CATCH study, schools were stratified by economic disadvantage and randomly selected from all elementary schools in AISD, Pflugerville ISD, Manor ISD, and Del Valle ISD. For the current study, we surveyed 4th grade students in spring 2008 and spring 2009. In spring 2008, a total of 32 schools and 1,199 4th grade students were included in the survey from spring 2008, with the following districts/schools participating: AISD (n=29 schools), Pflugerville ISD (n = 2), and Manor ISD (n=1 school). Of these schools, five schools had higher socio-economic status population ($< 60\%$ economically disadvantaged students), 15 schools had medium socio-economic status ($\geq 60\%$ to $< 90\%$ economically disadvantaged), and 12 had lower socio-economic status ($\geq 90\%$ economically disadvantaged students). In spring 2008, the sample included 4th grade students (n = 1,572) from a sample of 35 public elementary schools (30 schools $> 60\%$ economically disadvantaged student composition) from four central Texas independent school districts (ISDs) (Austin ISD, Del Valle ISD, Manor ISD, and Pflugerville ISD).

Human Subjects. All 4th and 5th grade students from the 15 study schools in Study A and all 4th grade students in the 35 study schools in Study B were invited to participate in a self-administered survey along with measurement of height and weight. Participation in the study was totally voluntary and confidential. University and school district human subject approval were obtained, as well as parental consent. Child assent was obtained prior to each measurement. In line with school district protocols, we obtained active parental consent in the 15 schools in the quasi-experimental study (Study A) and passive parental consent in the 35 schools in the cross-sectional study (Study B). All other process-related study aims, measures and methods were also approved by the University of Texas School of Public Health Committee for the Protection of Human Subjects and school district review committees.

Study Measures & Data Collection Methods

Assessment measures and methods were developed or adopted to assess both impact-related outcomes, such as student physical activity participation and fruit and vegetable consumption, as well as implementation of Marathon Kids at school and at home. The impact of Marathon Kids was evaluated primarily by a self-administered questionnaire that was administered at four time points over the course of the year with 4th and 5th grade students from 15 schools in Houston and Round Rock. In addition, we attempted to measure physical activity via pedometers in a subsample of 5th grade children at two time points. Findings on physical activity were triangulated with parent report of children's physical activity. Lastly, we assessed student BMI-for-age and sex via physical measures of height and weight. The process for implementing Marathon Kids was evaluated via three principal methods: 1.) self-administered questionnaires with elementary school students and their parents in central Texas and Houston; 2.) an online survey with PE teachers in central Texas and Houston; and 3.) semi-structured interviews with PE teachers and school staff.

Measures implemented with the quasi-experimental study in HISD and RRISD (Study A):

- 1.) *"Active Kids Project" questionnaire.* The Active Kids Project (AKP) questionnaire (Appendix A) is a self-administered questionnaire that was administered at four time points over the school year (in October/November '08, December '08, February '09, and April '09) with 4th and 5th grade students. The AKP includes items on *physical activity engagement; fruit and vegetable consumption; and psycho-social factors such as students' athletic identity, social support for physical activity and fruit and vegetable consumption, and attitudes toward physical activity.*

Physical activity measures were based on the Physical Activity Questionnaire for Older Children (PAQ-Q), which is a 7-day recall measure designed to assess general physical activity levels in children in grades four and higher. The PAQ-C has been found to have good internal consistency and test-retest reliability in children (Crocker et al., 1997). For this study, we focused specifically on 7-day items for running and walking. Seven-day recall measures have been found to have adequate reliability and validity for 5th, 8th and 11th grade children in the United States (Sallis et al., 1993).

Items assessing *dietary behaviors* were adapted from the School Physical Activity and Nutrition (SPAN) survey, which has been tested for validity and reliability as part of the School-Based Nutrition Monitoring project (Hoelscher et al., 2003; Hoelscher et al., 2004; Penkilo et al., 2008). The SPAN survey items have been found to have an acceptable to good level of reproducibility in 4th grade students, with Kappa statistics for fruit and vegetable items ranging from 0.60 to 0.65 (Penkilo et al., 2008).

Athletic identity and social support measures were taken directly from Anderson and Coleman's *Athletic Identity Questionnaire* (Anderson and Coleman, 2008). Athletic identity comprises four dimensions: athletic appearance (e.g., "I think I look like a person who exercises", physical activity competence- a construct similar to self-efficacy (e.g., "I can do many types of physical activities"), physical activity importance (e.g., "I don't let things stop me from doing physical activities"), and encouragement. For this study, the *encouragement* dimension was analyzed separately under the construct of social support. Social support items assessed support from parents and family, friends, and teachers and included aspects of encouragement/emotional support, instrumental support, and modeling/observational support. Example social support items included "I have parents and family who...": "want me to exercise or be physically active", "encourage me to do sports or exercise", and "are proud of me when I exercise" (see Appendix A for items). The athletic identity and social support measures have been found to

have evidence of factorial and construct validity in children of the same age range as this study (Anderson and Coleman, 2008). For the current study, we developed a composite variable for the global athletic identity construct, which was based on summing up the scores for the three subscales. Based on a total of 19 items, global athletic identity scores ranged from 19 (lowest) to 95 (highest). Similarly, we developed a composite variable for athletic appearance (based on 5 items, with scores ranging from 5 to 25); physical activity competence (based on 6 items, with scores ranging from 6 to 30); and physical activity importance (based on 8 items, with scores ranging from 8 to 40).

Lastly, we measured attitudes toward physical activity (“positive outcome expectations”) and self-efficacy for physical activity and fruit and vegetable consumption. Self-efficacy for physical activity and self-efficacy for fruit and vegetable consumption were measured using a scale developed by Hoelscher et al (in preparation) under the SIP 15 project. Physical activity self-efficacy was measured with a 5 item scale that asked students to rate on a three point Likert-type scale their confidence on various physical activities, such as “How sure are you that you can play outside for 30 minutes every day?”. Fruit and vegetable consumption self-efficacy was measured in the same manner, with items such as “How sure are you that you can ask your parents for fresh fruit for a snack?”. *Positive outcome expectations* toward physical activity was measured with a seven item scale adapted from the GEMS study (Sherwood et al., 2004). Students were asked to rate on a 3-point scale how much they identify with statements such as: “Doing physical activity will be fun”, “Doing physical activity will make me sweat too much” (reverse coded), and “Doing physical activity will make me stronger”.

- 2.) Body Mass Index and student height and weight measurements. We measured 4th and 5th grade student heights and weights in October '08 and April '09 in order to assess student body mass index (BMI). Height and weight measurements were conducted following standard protocols, using trained and certified research staff. Weight measurements were collected using a Tanita BWB 800S scale; a Perspectives Enterprise stadiometer was used to measure height. BMI was calculated using the standard formula, and BMI percentiles were calculated using the CDC 2000 growth charts (CDC, 2009; Barlow 2007). Prevalence of overweight and obesity were the main outcomes based BMI $\geq 85^{\text{th}}$ percentile and $\geq 95^{\text{th}}$ percentile using CDC growth charts, respectively.
- 3.) Pedometer assessment of student physical activity (HISD schools only). As an additional measure of student physical activity, we selected a subsample of 5th grade students in 4 schools in HISD (two Marathon Kids schools and two comparison schools) to wear a pedometer for four consecutive days, which is a common pedometer measurement protocol that has been used in previous pedometer research with children (Pangrazi et al.; 2003; Wickel et al., 2007; Eisenmann et al., 2007). For this study, student participants wore a Walk4Life pedometer on Thursday through Monday during two time periods during the study: in October/November '08 and in February '09. A standard protocol for pedometer assessment was followed (see Appendix B for protocol), with the Walk4Life MVP brand pedometer used as the assessment instrument. Walk4Life brand pedometers have performed well in laboratory, controlled field, and free-living conditions in measurement of steps (Basset et al., 1996; Beets et al., 2005; Crouter et al., 2003; LeMasurier et al., 2004; Schneider et al., 2004; Scruggs, 2007). In addition to tabulating step counts, The Walk4Life MVP calculates bouts of moderate-to-vigorous physical activity, with each bout representing 5 continuous minutes of continuous MVPA activity. Based on the pedometer data, the following indicators of physical activity were assessed for the total 4-day period: mean number of step counts, mean number of minutes engaged in activity, mean number of minutes

engaged in moderate-to-vigorous physical activity, and the mean percentage of activity time spent in moderate-to-vigorous physical activity.

Measures implemented with 4th grade cross-sectional study in Travis County (Study B)

- 4.) School Physical Activity and Nutrition 4th Grade Survey (SPAN). We compared physical activity indicators in students who completed specific aspects of the Marathon Kids program with those who did not complete Marathon Kids goals in a representative sample of 4th grade students in central Texas. Two cross-sectional studies were carried out in spring 2008 and spring 2009 as part of the Travis County CATCH project. In assessing physical activity, we used the SPAN, a self-administered survey (Hoelscher et al., 2003; Hoelscher et al., 2004; Penkilo et al., 2008), which is described above. The three main indicators of physical activity measured were: number of days participated in vigorous physical activity, number of days participated in outdoor play, and hours/day of television watching. The vigorous physical activity measure is based on the same 7-day recall measure from the Centers for Disease Control and Prevention Youth Risk Behavior Survey (Kolbe et al., 1993; CDC, 2006). Seven-day recall measures have been found to have adequate reliability and validity for 5th, 8th and 11th grade children in the United States (Sallis et al., 1993). The outdoor play measure is also based on a 7-day recall and was developed specifically for the CATCH study. Children's time spent outside has been found to be strongly associated with children's engagement in physical activity (Klesges et al., 1990; Baranowski et al., 1993; Sallis et al., 1993) and has been recommended as a proxy measure of physical activity in children (Welk et al., 2000). Lastly, the measure of television viewing was based on the Youth Risk Behavior Survey (Kolbe et al., 1993; CDC, 2006) and was included as a proxy for sedentary behavior. In addition to these physical activity indicators, we included additional questions on the SPAN to assess participation in Marathon Kids, completion of the MK Mileage and Fuel Logs, and attitudes toward Marathon Kids.

Process Evaluation Measures

- 5.) Marathon Kids PE Teacher Interview assessed implementation of Marathon Kids at school. This interview was conducted with the PE teacher who had been designated as the MK coordinator. The interviews took place in April '09 with the 15 schools that participated in Study A.
- 6.) "Active Kids Project: Marathon Kids" questionnaire is a self-administered student questionnaire that assessed student participation in and satisfaction with Marathon Kids in our sample of 4th and 5th grade students from Study A. This questionnaire was administered at the end of the project in April 2009.
- 7.) A self administered parent questionnaire ("Active Kids Parent Survey") assessed parent social support of child participation in physical activity and fruit and vegetable consumption, parent physical activity engagement, and parent attitudes toward physical activity. This survey was administered in October '08 and April '09.
- 8.) An online self-administered questionnaire with Marathon Kids school coordinators. This survey aimed to assess various aspects of Marathon Kids implementation at the school level. The online survey consisted of 25 questions that assessed barriers and facilitators to Marathon Kids implementation, communication channels for promoting the program, satisfaction, and demographics of school faculty member and school. The survey was administered to 8 school districts in Houston and central Texas in Spring 2009.

- 9.) In-depth, face-to-face interviews with school staff implementing Marathon Kids. This qualitative assessment method aimed to provide deeper insights into how Marathon Kids is currently being implemented. Items for this interview were developed specifically for this study. Ten interviews were conducted in summer 2008.

Data Collection

Prior to the start of data collection, trainings were held by the project coordinator to review protocols and enhance skills with the data collection methods that included administration of surveys, taking anthropometric measures, and using pedometers. All staff and data collectors that would be assisting with data collection attended these trainings.

Study A Data Collection: The Active Kids Project student questionnaire was administered to the same group of 4th and 5th grades at four different time points over the 2008-09 school year: October 2008 (n = 1,136 students) (baseline), December 2008 (n = 1,069) (interim), February/March 2009 (n = 1,050) (interim), and April/May 2009 (n = 1,060) (post-test). Student height and weight measurements were taken during October 2008 and in April/May 2009. The October 2008 baseline measure was administered prior to or within 4 weeks after the Marathon Kids Kick-Off event, while the April/May 2009 posttest measure was administered within 1 to 2 months after the Final Mile Run event. Based on the baseline measure, the response rate for Marathon Schools was 41.1% for HISD and 39.1% for RRISD, calculated as the number of students who participated in the survey over the total number of students from participating classrooms. In addition to the administration of our principal student evaluation questionnaire, we administered the *Active Kids Project: Marathon Kids* questionnaire, a brief, self-administered survey that evaluates student satisfaction with Marathon Kids, with Marathon Kids participants only at the final measurement period in April/May 2009. A total of 917 students filled out the questionnaire out of the 956 students attending the 12 participating Marathon Kids schools, which represents a response rate of 95.9% of the original baseline sample.

Pedometer assessments under Study A were carried out with a subsample of 5th grade students in 4 low-income schools in HISD (two Marathon Kids schools and two comparison schools) in October and November 2008 (n = 110 students) and February 2009 (n = 84 students). We conducted a pilot test of the pedometer with a separate sample of elementary-school age children in spring 2009. Based on our 5th grade baseline sample, the pedometer subsample represents a 75.5% response rate of the 5th grade students in the two Marathon Kids schools and a response rate of 87.5% of students in comparison schools. The intervention and comparison schools were comparable by socio-economic status (87.3% vs. 85.4% economically disadvantaged for Marathon Kids and comparison schools, respectively) and ethnicity (84.2% vs. 90.5% Hispanic student composition for Marathon Kids and comparison schools, respectively). Comparisons are based on Texas Education Agency school-level data from 2008) [data not shown in tables].

Quality control procedures took place both during data collection and data entry. With regard to anthropometric measures, 5.7% of height and weight measurements were repeated by the same person who took the original measurements to track intra-rater reliability. These measures were then compared to the original. If ever a height measurement was more than 1.2 centimeters or a weight measurement was greater than 0.2 kilograms off from the original measurement, the data collector would be retrained on proper measurement technique. Inter-rater reliability was checked during data entry by 10% of the survey data being re-entered a second time.

Study B Data Collection. As stated above, two cross-sectional surveys were carried out in spring 2008 and spring 2009 with a larger sample of 4th grade students from four school districts in central Texas. We administered the survey with 35 public elementary schools that are part of the Travis County CATCH project. Thirty of the schools have higher composition of economically disadvantage ($\geq 60\%$); five of these schools represent schools with economically better off student composition ($< 60\%$ economically disadvantaged students). Further details on the sampling procedures have been described under a previous publication (Hoescher et al., 2004). Data collection procedures followed protocols that have been previously described (Hoelscher et al., 2004).

Process Evaluation Data Collection. PE teacher interviews were conducted under Study A at the last data collection period in April 2009. A student satisfaction survey with students in Marathon Kids-only schools (n=12) was also conducted in April 2009 as part of Study A.

We administered surveys with parents of the participating students in the 15 HISD and RRISD evaluation schools in October 2008 and February 2009. Out of a total of 482 parent surveys delivered in HISD and 661 delivered in RRISD, we received a response rate from parents in the fall of 67% in HISD and 62% in RRISD from the Marathon Kids schools. In February 2009, we achieved a parent survey response rate of 61% and 54% for HISD and RRISD, respectively.

We assessed implementation of and satisfaction with Marathon Kids directly with school faculty via two methods: a.) structured face-to-face interviews with PE teachers in Houston and Round Rock; and b.) an online survey administered to PE teachers and other school faculty serving as the Marathon Kids school coordinator in 8 school districts in Houston and central Texas. The structured interviews with PE teachers took place in the spring of 2009 with a total of 15 PE teachers. Interviews were conducted in person and lasted approximately 15 minutes each. The online survey was administered in spring 2009, with a pilot survey administered in spring 2008 to assess the delivery system. Based on the pilot survey, modifications to the survey design were made. In spring 2009, the online survey was administered to school faculty via the district-level PE coordinator in Houston and directly to school faculty in the other school districts. A total of 113 school faculty members serving as the Marathon Kids school coordinator responded to the survey.

Lastly, in-depth interviews were conducted in the summer of 2008 with ten school teachers from public schools in central Texas to learn more about the process for implementing Marathon Kids, including the factors that both facilitate and impede Marathon Kids implementation (see Appendix C: Interim Report for further description of data collection methods).

Analysis

Student Self-Report Data

In assessing the impact of Marathon Kids on the above mentioned outcome variables under the quasi-experimental study, we used two analytic strategies: a.) a comparison of control students with students enrolled in Marathon Kids, and b.) a comparison of control schools with schools enrolled in Marathon Kids. In the student enrollment comparison, we compared 4th and 5th grade students who enrolled in Marathon Kids with students of the same age who did not enroll in Marathon Kids, regardless of their school's enrollment status. Student enrollment in the absence of school enrollment can occur because Marathon Kids provides opportunities for individual families to enroll in the program, even when the school does not sign up for the program. Such voluntary enrollment is problematic from

the point of view of analytic comparisons because of potential selection biases that influence both enrollment and performance. Accordingly, for all analyses of these students, we included a measure of parent support for physical activity at baseline as a measure of selection effects. We examined the primary outcome variables (physical activity, fruit and vegetable consumption, psychosocial factors) in 15 socio-economically diverse schools in Houston and Round Rock. In addition to selection effects, the models adjusted for gender, ethnicity, school location (Houston/Round Rock), and school economic disadvantage. In the school enrollment analysis, we compared 4th and 5th grade students from 5 low-income (mean economic disadvantage: 80.5%) schools in Houston and Round Rock with students in the same grade level from 3 low-income schools in Houston that were not participating in Marathon Kids (mean economic disadvantage: 89.9%). Because of non-equivalencies in baseline levels in outcome variables between controls and treatment schools, analyses adjusted for baseline estimates for the primary variables of interest as well as gender, ethnicity, school location, and school economic disadvantage. For both analytic strategies, we assessed differences between Marathon Kids participants and controls for each outcome based on a comparison of the pooled mean from three measurement periods post-Kick Off event. Mixed-effect regression methods were used to model adjusted pooled means.

Pedometer Data

For the pedometer analyses, we first determined inclusion/exclusion criteria for the analyses. While student log books are often used to determine a student's participation in a four day assessment, we found the majority of our student log data regarding pedometer usage to be missing, incomplete or inaccurate. As such, we determined a cut-off value based on previous pedometer research to indicate plausible values for inclusion or exclusion of subjects in the analyses. A review of pedometer studies by Tudor-Locke and Myers (2001) provided ranges of pedometer counts for children, younger adult samples, healthy adults, and individuals with disabilities and chronic disease. For children aged 8 to 10 years, the range of steps per day was 12,000 to 16,000. These estimates are supported by research by Wickel et al. (2007), who found the lowest bound of girls' (mean age 9 years) step counts to be 8,556 steps/day (mean step counts: 11,138 +/- 2582). The lower bound of step counts in disabled adults according to the Tudor-Locke study was 3,500 steps/day. Based on these estimates, we set a conservative cut-off point for inclusion in the study of 3,000 steps per day. If the participant did not have a total of 12,000 step counts for the 4-day assessment period, he or she was excluded from analyses. Based on this cut-point, 7 students were excluded from the October 2008 measurement period analyses, and 15 students were excluded from the February 2009 measurement period analyses. In comparing physical activity based on step counts between students attending Marathon Kids schools with students attending non-Marathon Kids schools, we conducted independent sample t-tests to compare: the mean step counts for the four-day period, the mean number of minutes engaged in activity, the mean number of minutes engaged in moderate-to-vigorous physical activity, and the mean percentage of activity time spent in moderate-to-vigorous physical activity.

Cross-Sectional Study of 4th Grade Student Data

All analyses were conducted with SPSS version 15 (Chicago, Illinois). Percentages and means were calculated to describe engagement in various Marathon Kids process-related activities. Chi-square tests and independent T-tests were employed to test potential socio-demographic subgroup differences in participation in Marathon Kids, with significance at $p < .05$. Lastly, we conducted multiple linear regression analyses to test for differences in mean days of past 7-day participation in vigorous physical activity and playing outdoors, and mean hours of TV watching by participation in the Marathon Kids program. Participation in Marathon Kids was measured by completion of the Marathon Kids Mileage Log, comparing those who completed with those who did not complete/participate in the program. The

regression analyses were adjusted by gender, ethnicity, and school composition of economically disadvantaged students (continuous variable) as defined by the Texas Education Agency.

Parent-Level Data and Marathon Kids Coordinator Survey Data

As with the 4th grade student data, percentages and means were calculated to describe engagement in various Marathon Kids process-related activities, with Chi-square tests employed to test for socio-demographic subgroup differences in participation in Marathon Kids. Differences in parent report of child and parent physical activity and parent social support for child physical activity and fruit and vegetable consumption were evaluated via multiple linear regression analyses, which adjusted for parent gender, age, ethnicity, and education level.

IMPACT EVALUATION FINDINGS

STUDY A: Quasi-experimental study of 15 public elementary schools in Houston and Round Rock

Description of Sample

Tables 1A and 1B present demographic characteristics of participants for both the student enrollment comparison (n = 15 schools, n = 1,084 students) and low-income school enrollment comparison (n=8 schools, n = 511), respectively. For both samples, approximately half of the students were female, with a mean age of 10 years. In the student enrollment comparison, the samples represented students from diverse backgrounds, with students from Hispanic (54.0% and 41.8%, respectively for MK and Non-MK), White (26.3% and 30.0%, respectively), and African American/Other (19.8% and 28.3%, respectively) ethnic backgrounds (Table 1A). In the school enrollment comparison, the majority of students were Hispanic (78.6% and 76.6%, respectively for MK and Non-MK students).

In assessing the comparability of the Marathon Kids participants and non-participants, we found some differences in the socio-demographic compositions of those students who enrolled in Marathon Kids with those who did not. A greater percentage of Marathon Kids participants in the student enrollment comparison were Hispanic, while a greater percentage of non-participants were African American ($p<.0001$) (Table 1A). We also found a greater percentage of Marathon Kids participants had a higher mean percent of school economic disadvantage ($p<.001$). Lastly, we found Marathon Kids participants reported a higher baseline level of parent social support for physical activity ($p<.0001$) (Table 1A). In the school enrollment comparison, we found significant differences in schools that enrolled in Marathon Kids with those that did not by ethnicity and socio-economic disadvantage (Table 1B). For both student and school comparison samples, we also found significant differences in the composition of Houston and Round Rock students, with a higher percentage of Round Rock students in the student enrollment comparison, and a higher percentage of Houston students in the school enrollment comparison. No significant differences in age, gender, language use with parents, individual-level socio-economic status, BMI, or grade level were found between participants and non-participants in the student enrollment sample or the school enrollment sample.

Table 1A. Demographic characteristics of baseline sample. **Student Enrollment in Marathon Kids (MK)- Marathon Kids Evaluation Project, 2008-09.** (n = 15 elementary schools)

| | Student-level Enrollment in Marathon Kids | | |
|---|--|-------------------------------|-------------------------|
| | Marathon Kids | Comparison[†] | p for difference |
| n of students | 617 | 467 | |
| % belonging to schools enrolled in MK | 76.3 | 54.4 | <.001 |
| Location | | | |
| Houston | 45.1 | 37.0 | |
| Round Rock | 54.9 | 63.0 | 0.008 |
| Grade | | | |
| 4th grade (%) | 51.5 | 50.3 | |
| 5th grade (%) | 48.5 | 49.7 | 0.6911 |
| Age in years (mean, SD) | 9.8 (.77) | 9.9 (.78) | 0.0973 |
| Gender: % Female | 51.5 | 54.4 | 0.352 |
| Ethnicity (%) | | | |
| Hispanic | 54.0 | 41.8 | |
| White | 26.3 | 30.0 | |
| African American / Other ^a | 19.8 | 28.3 | 0.0001 |
| Language use with parents (%) | | | |
| English | 71.0 | 75.6 | |
| Spanish | 25.1 | 20.3 | |
| Other | 3.9 | 4.1 | 0.2 |
| Socioeconomic Indicators | | | |
| School Economic Disadvantage ^b | 57.1 (27.71) | 49.3 (30.4) | <.001 |
| Individual level SES ^c (mean, SD) | 7.0 (2.17) | 7.2 (2.35) | 0.4104 |
| Individual BMI (mean, SD) | 19.8 (4.40) | 19.9 (4.32) | 0.6 |
| BMI categories ^d | | | |
| % Normal or underweight | 61.0 | 59.8 | |
| % Overweight | 18.2 | 18.3 | |
| % Obese | 20.9 | 21.9 | 0.8143 |
| Baseline parent support for PA ^e (mean score, SD) | 27.6 (5.70) | 26.0 (5.89) | <.0001 |

^aIncludes "Other" (n = 15) and Asian (n = 7) [†]Represents students who did not enroll in Marathon Kids.

^bRepresents the mean percent composition of economically disadvantaged students as per Texas Education Agency. For the student enrollment analyses, school values were assigned to each student from a given school.

^cComposite variable comprising student responses to questions relating to number of cars, computers, number of vacations in prior year, and whether student has own bedroom. Range is 0-10.5

^dOverweight and obesity are defined as a BMI \geq 85th percentile to less than 95th percentile and \geq 95th percentile, respectively, based on CDC growth charts. ^eComposite variable with scores ranging from 6 (low support) to 30 (high support)

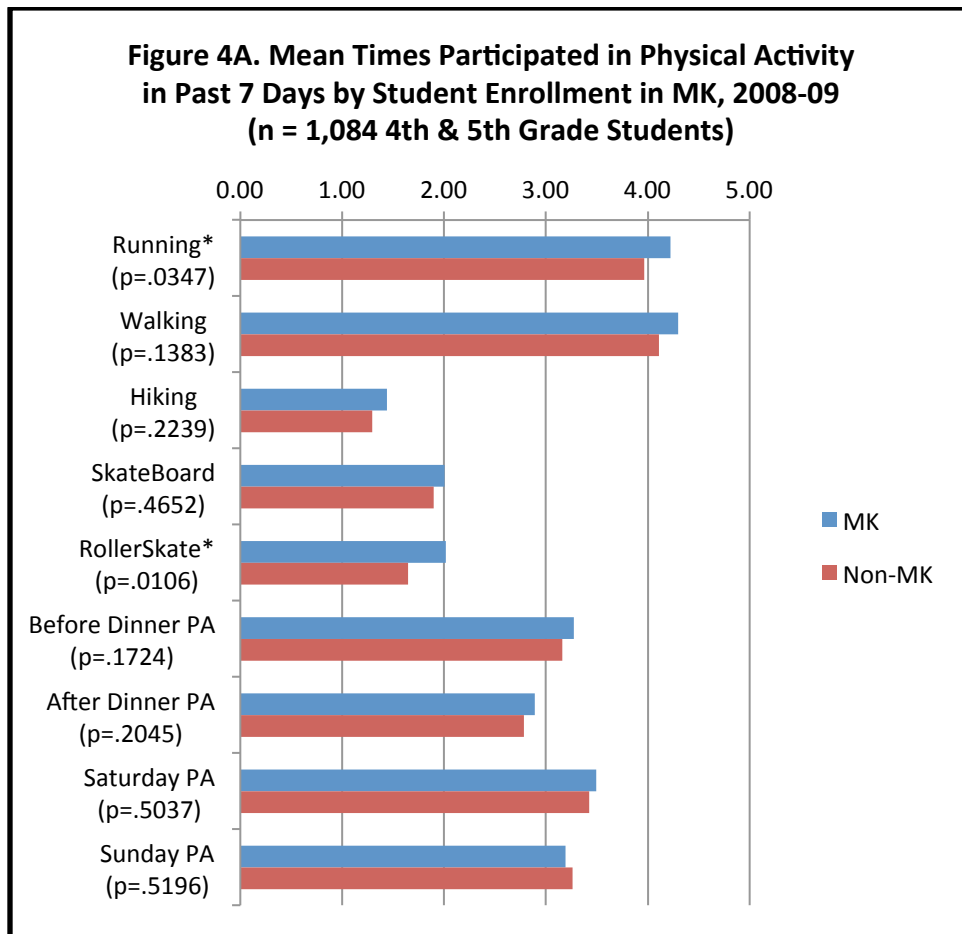
Table 1B. Demographic characteristics of baseline sample. *School Enrollment in Marathon Kids (MK)- Marathon Kids Evaluation Project, 2008-09.*

| School-level Enrollment in Marathon Kids | | | |
|---|----------------------|-------------------|--------------------------------|
| | Marathon Kids | Comparison | <i>p for difference</i> |
| n of students | 383 | 128 | |
| n of schools | 5 | 3 | |
| Enrolled in MK program (%) | 81.0 | 27.0 | <.0001 |
| Location | | | |
| Houston | 72.6 | 100.0 | |
| Round Rock | 27.4 | 0.0 | <.0001 |
| Grade | | | |
| 4th grade (%) | 52.7 | 53.1 | |
| 5th grade (%) | 47.3 | 46.9 | >.94 |
| Age in years (mean, SD) | 9.9 (.87) | 10.0 (.79) | >.29 |
| Gender: % Female | 49.6 | 56.3 | >.2306 |
| Ethnicity (%) | | | |
| Hispanic | 78.6 | 76.6 | |
| White | 11.8 | 3.9 | |
| African American / Other ^a | 9.7 | 19.5 | 0.0010 |
| Language use with parents (%) | | | |
| English | 55.6 | 53.9 | |
| Spanish | 42.8 | 45.3 | |
| Other | 1.57 | 0.78 | >.73 |
| Socioeconomic Indicators | | | |
| School Econ. Disadvantage ^b | 80.5 (8.9) | 89.9 (7.6) | <.0001 |
| Individual level SES ^d | 6.3 (2.21) | 5.9 (2.3) | 0.1 |
| Individual BMI | 20.7 (4.7) | 21.3 (4.9) | >.21 |
| BMI categories ^d | | | |
| % Normal or underweight | 53.1 | 48.0 | |
| % Overweight | 19.4 | 20.3 | |
| % Obese | 27.5 | 31.7 | >0.60 |

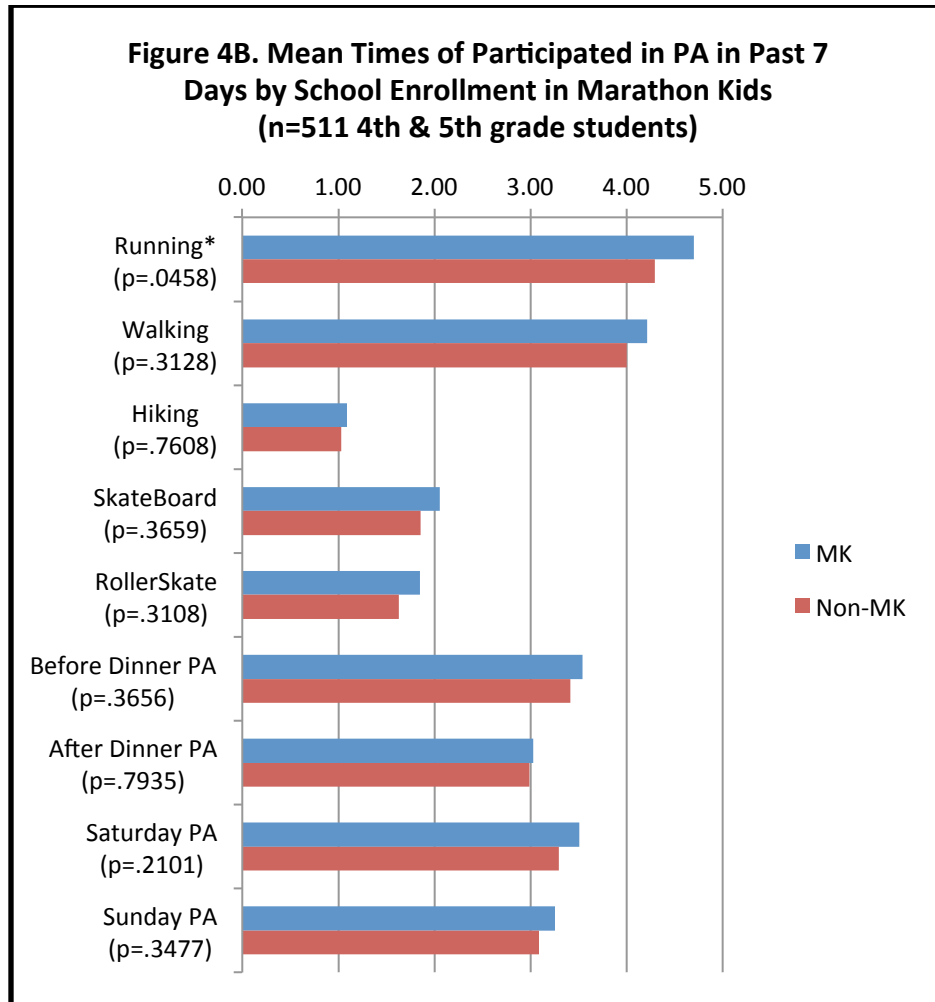
^aIncludes "Other" (n = 15) and Asian (n = 7)^bRepresents the mean percent composition of economically disadvantaged students as per Texas Education Agency. For school enrollment analyses, economic disadvantage values represent the mean value at the school level.^cComposite variable comprising student responses to questions relating to number of cars, computers, number of vacations in prior year, and whether student has own bedroom. Range is 0-10.5.^dOverweight and obesity are defined as a BMI ≥85th percentile to less than 95th percentile and ≥95th percentile, respectively, based on CDC growth charts.

Impact Evaluation Findings

Running, Walking, and Other Physical Activity Outcomes. Figures 4A and 4B present the results of the self-reported physical activity outcomes based on the student enrollment (n= 15 schools and 1,084 4th and 5th grade students) and school enrollment analyses (n= 8 low-income schools and 511 4th and 5th grade students), respectively. As presented in Figure 4A, 4th and 5th grade students who enrolled in Marathon Kids were found to engage in a higher mean number of times of running for the three pooled post-Kick Off event measurement periods compared to their peers who did not enroll in Marathon Kids (mean = 4.22 vs. 3.97 times, respectively. $p=.035$), with a standardized effect size of 0.08. When we compared running in students in low-income schools by enrollment status in Marathon Kids, we found that students in schools that enrolled in Marathon Kids also engaged in a higher mean number of times of running over the three pooled measurement periods compared to students in schools that did not enroll in Marathon Kids (mean = 4.70 vs. 4.29, respectively. $p=.045$), with a standardized effect size of 0.11 (Figure 4B). While students who enrolled in Marathon Kids had higher mean values for all other individual-focused physical activities, the only statistically significant differences observed were for roller-skating in the student enrollment comparison.



Mean scores based on pooled mean for three time periods post-Kick Off event (December '08, February '09, and April '09). Analyses adjusted for baseline parent social support, gender, ethnicity, school economic disadvantage, and school location.



Mean scores based on pooled mean for three time periods post-Kick Off event (December '08, February '09, and April '09). Analyses adjusted for baseline outcome variable scores, gender, ethnicity, school economic disadvantage, and school location.

Pedometer Assessment. We compared step counts and time engaged in activity in 5th grade children attending two participating Marathon Kids schools in HISD with steps counts and physical activity time in 5th grade children attending two schools in HISD that did not participate in Marathon Kids during the 2008-09 school year. Although Marathon Kids students reported a higher mean value of step counts and participation in moderate-to-vigorous physical activity minutes, these differences were not found to be statistically significant (Table 2). We also compared mean steps counts and activity time by participation in Marathon Kids at the student level- regardless of school participation in Marathon Kids, as it is possible for students in non-Marathon Kids schools to participant in Marathon Kids. No significant differences were found in any of the pedometer-based physical activity indicators by student participation in Marathon Kids (Table 3). Lastly we conducted stratified analyses to explore subgroup differences in pedometer-based physical activity. No significant gender or ethnic differences in the physical activity indicators were found between fifth grade students attending Marathon Kids and Non-Marathon Kids schools [data not shown].

Table 2. Comparison of pedometer outcomes between 5th graders attending **schools** that participated and did not participate in Marathon Kids. Houston Independent School District (n = 4 schools), *Marathon Kids Evaluation Project, 2008-09.*

| | October '08 Houston | | | | February '09 Houston | | | |
|---------------------------------|------------------------|---------|--------------------|---------|-------------------------|---------|--------------------|--------|
| | MK (n = 61) | | Non-MK (n = 42) | | MK (n = 39) | | Non-MK (n = 30) | |
| | Mean | (SD) | Mean | (SD) | Mean | (SD) | Mean | (SD) |
| | | | | | | | | |
| 4-day step counts | 30280.2 | 12557.5 | 29613.9 | 11621.9 | 29042.0 | 12863.2 | 30499.6 | 9857.1 |
| 4-day activity minutes | 293.6 | 98.7 | 306.4 | 116.3 | 277.5 | 103.6 | 309.6 | 92.6 |
| 4-day MVPA minutes | 130.9 | 57.6 | 124.8 | 61.4 | 133.3 | 62.1 | 141.6 | 54.9 |
| 4-day percent MVPA ^a | 43.7 | 9.8 | 40.2 | 9.0 | 46.6 | 10.0 | 45.3 | 8.5 |

Abbreviations: MK, Marathon Kids.

*p<.05, **p<.01, ***p<.001. *†p=.001. Statistical significance based on Independent Sample T-Tests.

^aBased on the total number of MVPA minutes divided by the total number of activity minutes.**Table 3.** Comparison of pedometer outcomes in 5th graders **between students** who participated in Marathon Kids and those who did not participate in Marathon Kids. Houston ISD. (n = 4 schools), *Marathon Kids Evaluation Project, 2008-09.*

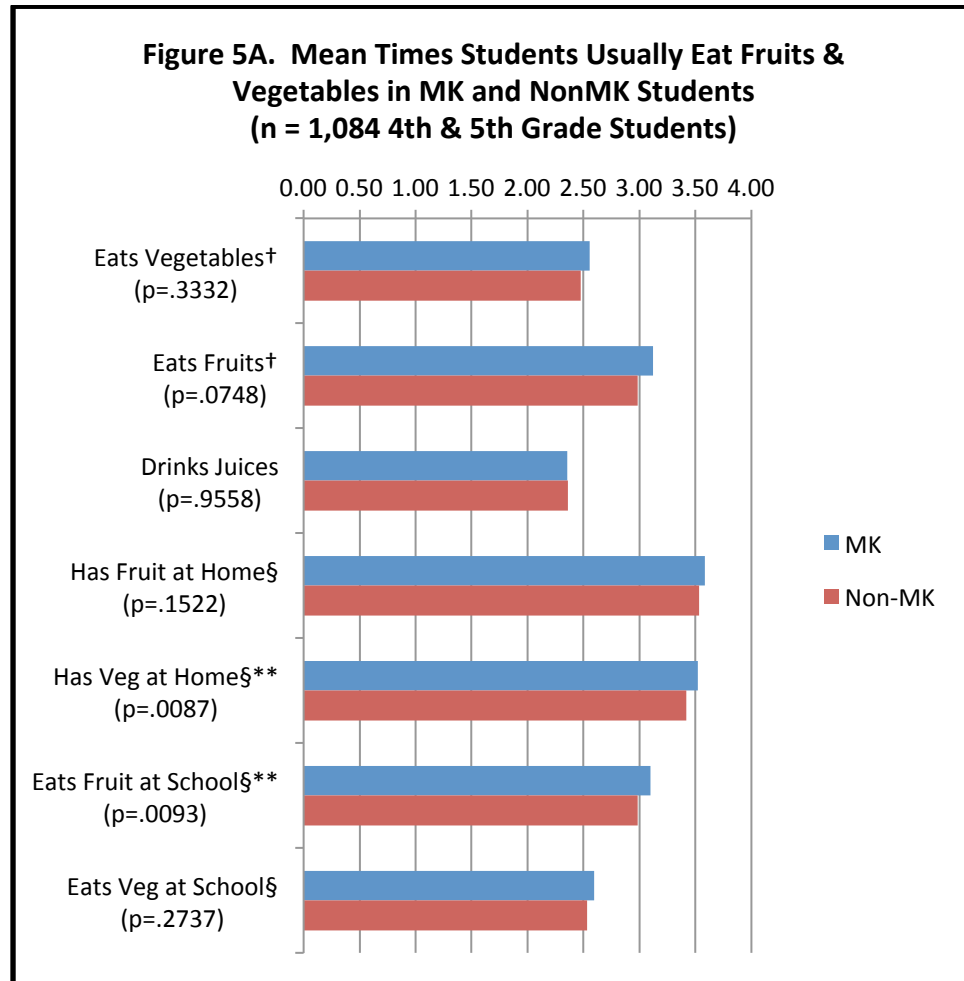
| | October '08 Houston | | | | February '09 Houston | | | |
|---------------------------------|------------------------|---------|--------------------|---------|-------------------------|---------|--------------------|---------|
| | MK (n = 61) | | Non-MK (n = 42) | | MK (n = 39) | | Non-MK (n = 30) | |
| | Mean | (SD) | Mean | (SD) | Mean | (SD) | Mean | (SD) |
| | | | | | | | | |
| 4-day step counts | 28814.5 | 11582.7 | 31615.7 | 13293.7 | 28428.0 | 10676.8 | 33560.7 | 12364.3 |
| 4-day activity minutes | 285.8 | 95.5 | 316.0 | 122.6 | 291.5 | 105.2 | 330.7 | 105.8 |
| 4-day MVPA minutes | 125.6 | 54.7 | 130.1 | 67.0 | 127.5 | 57.9 | 143.8 | 61.9 |
| 4-day percent MVPA ^a | 43.1 | 9.7 | 40.4 | 9.6 | 43.1 | 8.1 | 42.6 | 7.9 |

Abbreviations: MK, Marathon Kids.

*p<.05, **p<.01, ***p<.001. *†p=.001. Statistical significance based on Independent Sample T-Tests.

^aBased on the total number of MVPA minutes divided by the total number of activity minutes.

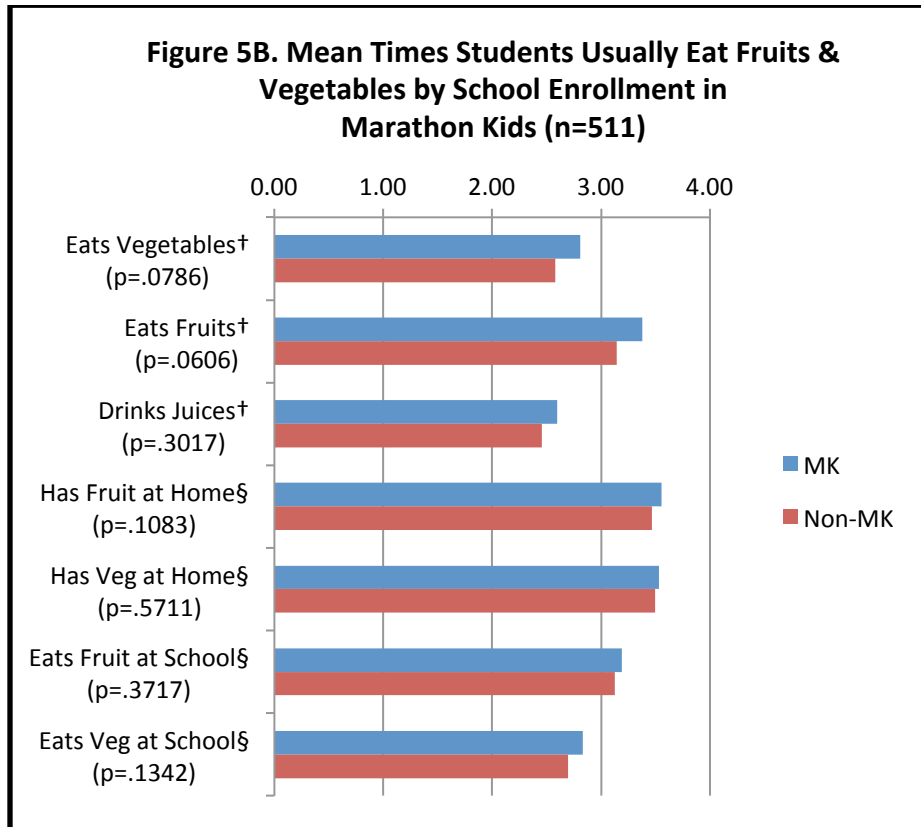
Fruit & Vegetable Consumption. Self-reported fruit and vegetable consumption was assessed at four time points during the study. While mean scores of fruit and vegetable consumption were higher for Marathon Kids participants in the student enrollment (Figure 5A) and school enrollment (Figure 5B) analyses, these differences lost significance upon adjusting for school-level composition of economically disadvantaged students. However, students who enrolled in Marathon Kids were found to eat fruits at school more often (mean = 3.10 vs. 2.98, respectively for MK and non-MK students, with 1 = never eat at school and 4 = eats most of the time. $p=.009$) and to report having vegetables at home more often (mean = 3.52 vs. 3.42, respectively for MK and Non-MK students. $p=.009$) compared to non-participants (Figure 5A).



Mean scores based on pooled mean for three time periods post-Kick Off event (December '08, February '09, and April '09). Analyses adjusted for baseline parent social support, gender, ethnicity, school economic disadvantage, and school location.

†Questionnaire item: "How many times do you usually eat/drink (vegetables, fruit, fruit juice)", with response options: I don't usually eat/drink _____, 1 time a day, 2 times a day, 3 times a day, 4 times a day, 5 or more times a day.

§Questionnaire item: "I have _____ (fruit/vegetables) at home," "I eat _____ (fruit/vegetables) during school lunch," with response options: Always, Most of the time, Some of the time, Never.

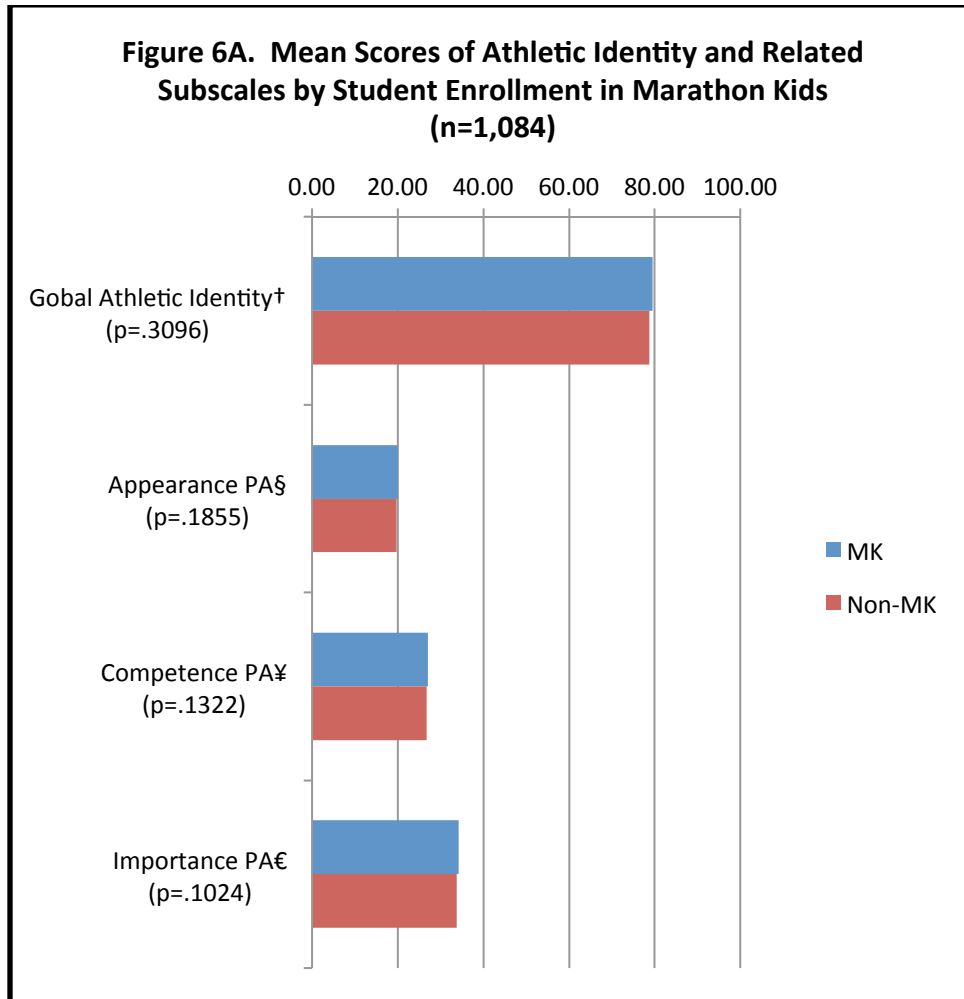


Mean scores based on pooled mean for three time periods post-Kick Off event (December '08, February '09, and April '09). Analyses adjusted for baseline outcome variable scores, gender, ethnicity, school economic disadvantage, and school location.

†Questionnaire item: "How many times do you usually eat/drink (vegetables, fruit, fruit juice)", with response options: I don't usually eat/drink _____, 1 time a day, 2 times a day, 3 times a day, 4 times a day, 5 or more times a day.

§Questionnaire item: "I have _____ (fruit/vegetables) at home," "I eat _____ (fruit/vegetables) during school lunch," with response options: Always, Most of the time, Some of the time, Never.

Athletic Identity. In addition to the main physical activity and diet outcomes in Study A, we examined the effect of Marathon Kids on *athletic identity self-concept* and *social support*. For this study, we examined a global athletic identity score, which is comprised of the sum scores of athletic appearance, physical activity competence, and physical activity importance subscales, as well as the individual subscales. In the student enrollment analyses, we found no significant differences in children's global athletic identity or for the related subscale scores (Figure 6A).



Abbreviations: PA, Physical Activity; (Non-)MK, (Non-)Marathon Kids. Mean scores based on pooled mean for three time periods post-Kick Off event (December '08, February '09, and April '09). Analyses adjusted for baseline parent social support, gender, ethnicity, school economic disadvantage, and school location.

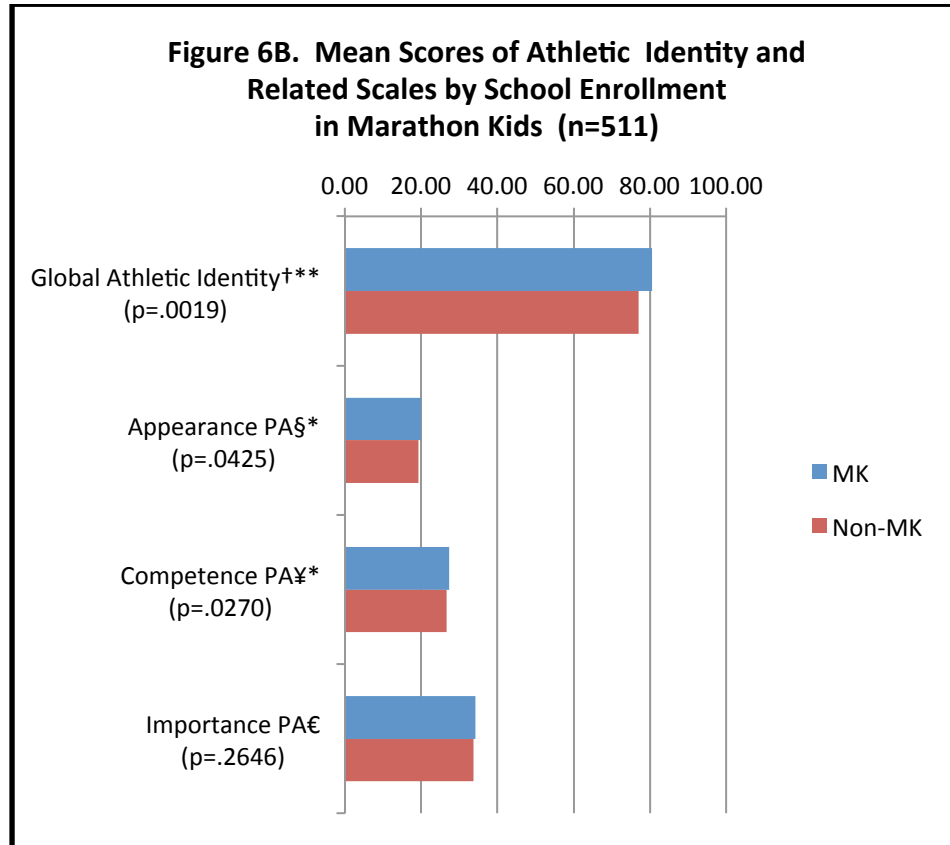
†Composite variable based on 19 items, with scores ranging from 19 (lowest Athletic Identity) to 95 (highest Athletic Identity).

§Composite variable based on 5 items, with scores ranging from 5 to 25.

¥Composite variable based on 6 items, with scores ranging from 6 to 30.

€Composite variable based on 8 items, with scores ranging from 8 to 40.

In the school enrollment analyses (Figure 6B), we found students attending Marathon Kids schools reported a higher mean value for Athletic Identity (global score) ($p=.002$), athletic appearance ($p=.04$), and physical activity competence ($p=.02$). No significant differences were found for the subscale of physical activity importance ($p=.26$).



Abbreviations: PA, Physical Activity, (Non-)MK, (Non-)Marathon Kids. Mean scores based on pooled mean for three time periods post-Kick Off event (December '08, February '09, and April '09). Analyses adjusted for baseline outcome variable scores, gender, ethnicity, school economic disadvantage, and school location. †Composite variable based on 19 items, with scores ranging from 19 (lowest Athletic Identity) to 95 (highest Athletic Identity).

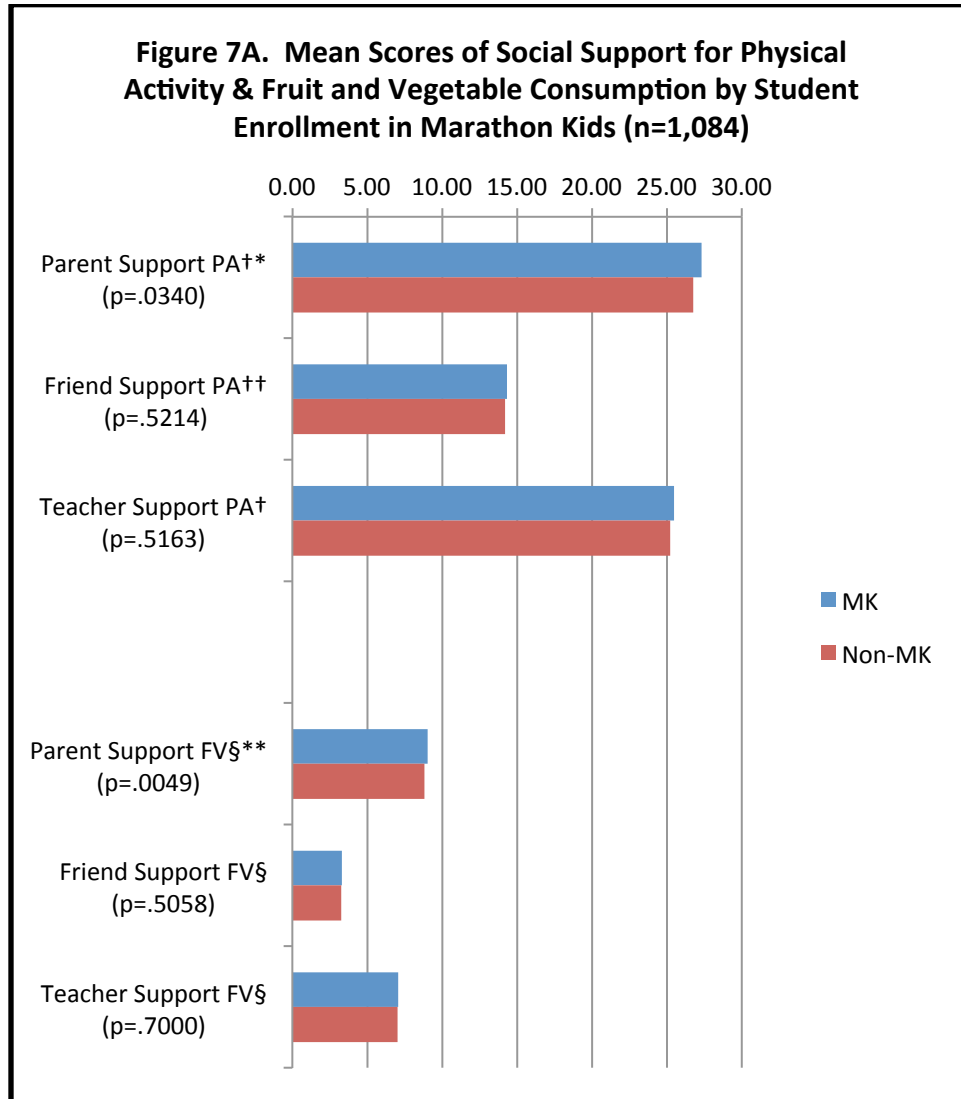
§Composite variable based on 5 items, with scores ranging from 5 to 25.

¥Composite variable based on 6 items, with scores ranging from 6 to 30.

€Composite variable based on 8 items, with scores ranging from 8 to 40.

Social Support. We examined student-reported social support for physical activity and fruit and vegetable consumption from parent, friend, and teacher. Students who enrolled in Marathon Kids were found to have a higher mean parent social support score over the three measurement period time points compared to Non-participants (mean=27.30 vs. 26.75 on a scale of 6 to 30 points (highest support), $p=.03$) (Figure 7A). No significant differences were found for friend or teacher support for PA for either student enrollment analyses or school enrollment analyses or for parent support for PA in the school enrollment analyses (Figures 7A and 7B).

With regard to fruit and vegetable consumption, Marathon Kids participants reported a higher mean score of parent social support for fruit and vegetable consumption compared to non-participants (combined mean score for three posttest measures: 9.05 vs. 8.81, respectively. $p=.005$) (Figure 4A). We also found higher parent support for fruit and vegetable consumption in the school enrollment analyses, although these results were not significant ($p=.07$) (Figure 7B). No significant differences in friend or teacher support for fruit and vegetable consumption were found between participants and non-participants for either the student enrollment or school enrollment comparisons (Figures 7A & 7B).



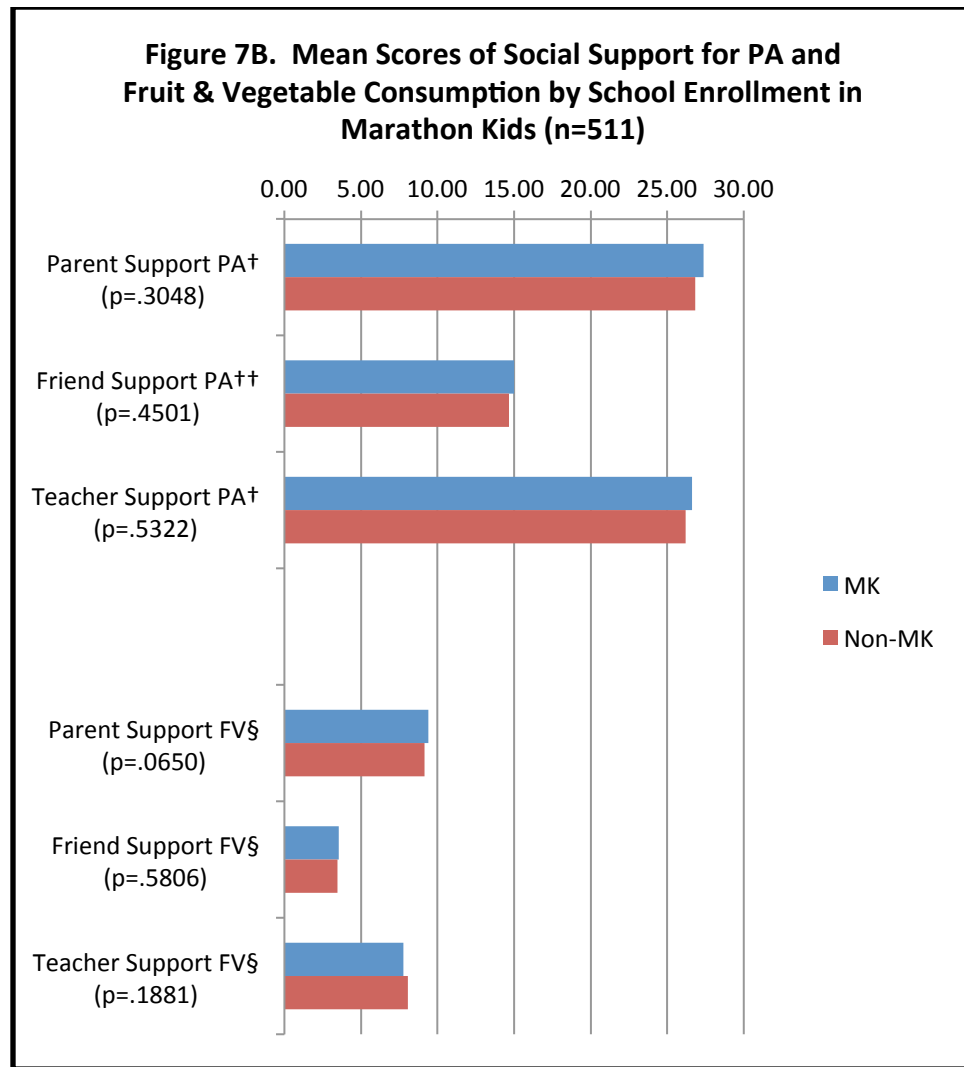
Abbreviations: MK, Marathon Kids; PA, Physical Activity; FV, Fruits & Vegetables. Mean scores based on pooled mean for three time periods post-Kick Off event (December '08, February '09, and April '09).

Analyses adjusted for baseline parent social support, gender, ethnicity, school economic disadvantage, and school location.

† Composite variable based on 6 items and a 5-point response scale ("never" to "always"), with scores ranging from 6 (low support) to 30 (high support).

†† Composite variable based on 3 items and a 5-point response scale ("never" to "always"), with scores ranging from 3 (low support) to 15 (high support).

§ Composite variable based on 2 items and a 5-point response scale ("never" to "always"), with scores ranging from 2 (low support) to 10 (high support).



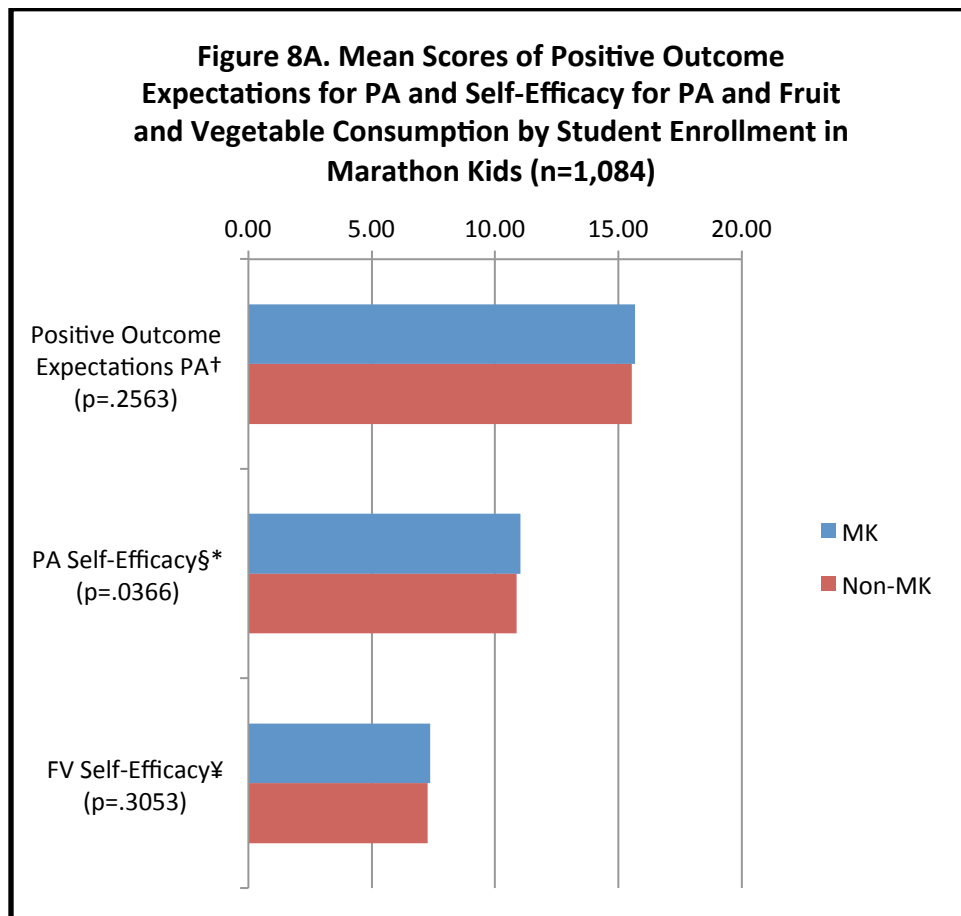
Abbreviations: MK, Marathon Kids; PA, Physical Activity; FV, Fruits & Vegetables. Mean scores based on pooled mean for three time periods post-Kick Off event (December '08, February '09, and April '09). Analyses adjusted for baseline outcome variable scores, gender, ethnicity, school economic disadvantage, and school location.

† Composite variable based on 6 items and a 5-point response scale ("never" to "always"), with scores ranging from 6 (low support) to 30 (high support).

†† Composite variable based on 3 items and a 5-point response scale ("never" to "always"), with scores ranging from 3 (low support) to 15 (high support).

§ Composite variable based on 2 items and a 5-point response scale ("never" to "always"), with scores ranging from 2 (low support) to 10 (high support).

Positive Outcome Expectations for Physical Activity, Physical Activity Self-Efficacy, and Fruit & Vegetable Consumption Self-Efficacy. While no significant differences in mean scores of positive outcome expectations for physical activity were found in the student enrollment analyses (Figure 8A), students that attended schools enrolled in Marathon Kids were both found to have significantly higher positive outcome expectations for physical activity based on the three measurement period post-Kick Off compared to students attending non-Marathon Kids schools ($p=.006$) (Figure 8B). For both the student enrollment and school enrollment comparisons, Marathon Kid students reported a significantly higher mean of physical activity self-efficacy at the three-measurement period post-Kick Off event compared to students not enrolled in Marathon Kids ($p=.04$) or not attending Marathon Kids schools ($p=.002$). No significant differences were observed for fruit and vegetable consumption self-efficacy between participants and non-participants in either the student enrollment (Figure 8A) or school enrollment (Figure 8B) comparisons.

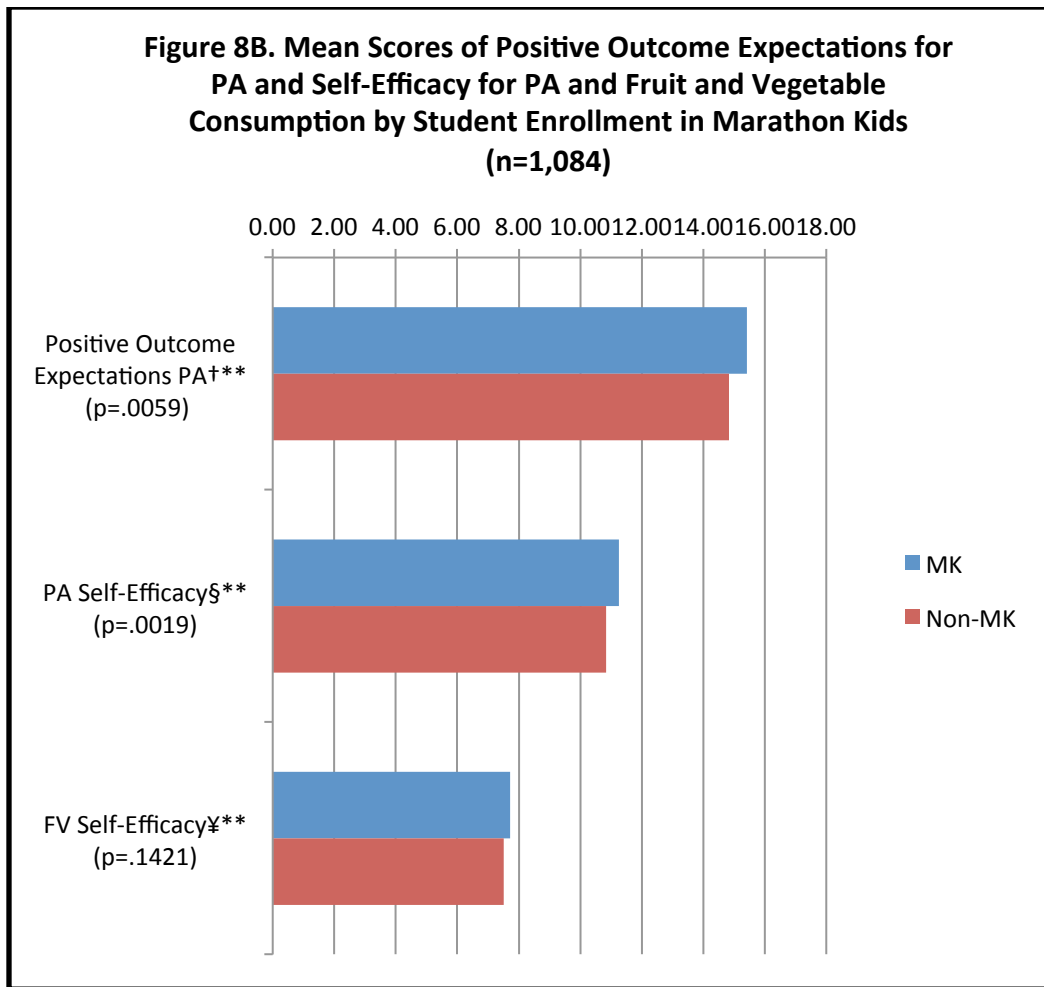


Abbreviations: PA, Physical Activity; FV, Fruit & Vegetables. Mean scores based on pooled mean for three time periods post-Kick Off event (December '08, February '09, and April '09). Analyses adjusted for baseline parent social support, gender, ethnicity, school economic disadvantage, and school location.

†Composite variable based on 7 items, with scores ranging from 7 (low) to 21 (high outcome expectations).

§Physical activity self-efficacy: Composite variable based on 5 item scale that asked students to rate on a three point Likert-type scale their confidence on various physical activities.

¥Fruit and vegetable consumption self-efficacy: Composite variable based on a 3-item scale ("How sure are you that you can ask your parents for fresh fruit for a snack?"; "How sure are you that you can ask your parents for vegetables at dinner?"; "How sure are you that you can eat 5 fruits or vegetables every day?"), with a 3-point response scale.



Abbreviations: PA, Physical Activity; FV, Fruit & Vegetables. Mean scores based on pooled mean for three time periods post-Kick Off event (December '08, February '09, April '09). Analyses adjusted for baseline scores, gender, ethnicity, school economic disadvantage, and school location.

†Composite variable based on 7 items, with scores ranging from 7 (low) to 21 (high outcome expectations).

§Physical activity self-efficacy: Composite variable based on 5 item scale that asked students to rate on a three point Likert-type scale their confidence on various physical activities.

¥Fruit and vegetable consumption self-efficacy: Composite variable based on a 3-item scale ("How sure are you that you can ask your parents for fresh fruit for a snack?"; "How sure are you that you can ask your parents for vegetables at dinner?"; "How sure are you that you can eat 5 fruits or vegetables every day?"), with a 3-point response scale.

Weight Status. We observed no difference in mean BMI in comparing students who enrolled and did not enroll in Marathon Kids (mean = 20.13 (SD: .19) vs. 20.40(SD: .23), $p = .38$, respectively) or for students attending schools that enrolled with Marathon Kids and those attending non-Marathon Kids schools (20.20(SD: .16) vs. 20.21(SD: .23), $p=.95$).

STUDY B: Cross-sectional study of Marathon Kids in a Representative Sample of 4th Grade Students in Central Texas

Description of Sample

Appendix D, Tables 1 and 4 present the demographic characteristics of students who participated in the Spring 2008 and Spring 2009 study of 4th grade student participation in Marathon Kids (Study B). In 2008, a total of 32 schools and 1,199 4th grade students participated in the survey from Spring 2008. School districts represented in 2008 included Austin ISD (n=29 schools), Pflugerville ISD (n = 2), and Manor ISD (n=1 school); Del Valle did not participate in the survey in 2008. In 2009, 1,803 4th grade students from the same three school districts that participated in 2008 as well as Del Valle ISD.

Approximately half the students in 2008 (51.5%) and 2009 (50.2%) were female, with a mean age of 9.8 and 9.9 years, respectively. In 2008, student ethnic groups represented in the study included African American (14.0%), Hispanic (57.0%), White (11.5%), and Other (17.5%), with a similar breakdown for 2009. In both the 2008 and 2009 surveys, our samples were representative of students from low, medium, and high socioeconomic status as measured by school composition of economically disadvantaged students. In 2008, 29.9% of students came from schools with high economic status (<60% economically disadvantaged students), 31.4% came from schools with medium economic status (≥60% to <90% economically disadvantaged), and 38.7% of students came from schools with low socioeconomic status (≥90% economically disadvantaged students). The breakdown of schools by SES in 2009 was similar to those surveyed in 2008 (Appendix D, Table 4).

Main Findings

Participation in Marathon Kids, Completion of Mileage and Fuel Logs, and Participation in Events. Among students attending schools that enrolled in MK, no significant differences in signing up to participate in the Marathon Kids were found by any socio-demographic factor examined for either the 2008 or 2009 samples (Appendix D, Tables 1 and 4). Among the students who signed up for the program, over two-thirds indicated completion of their mileage logs (26 miles over ~6 months) (69.1% and 77.1%, respectively for 2008 and 2009), with no significant ethnic differences for completion of the mileage log or fuel log for the total 2008 and 2009 samples. Completion of mileage logs by SES was not consistent across the two study years, with higher income students reporting the highest completion rates in 2008 (77.4% for highest income compared to 57.3% completion for lowest income, $p<.001$), and the lowest income students reporting highest completion in 2009 (82.5% completion for lowest income students compared to 74.2% for highest income students, $p<.05$). Completion of fuel logs (26 days of consuming 5 fruits and vegetables) was lower than mileage logs, with 58.4% completing their logs in 2008 and 53.4% completing their logs in 2009. Of note, African American and Hispanic girls reported the highest completion rates of their fuel log at both 2008 and 2009 measurement points (64.7% and 66.7%, for African American girls; 65.2% and 60.6% for Hispanic girls, respectively for the two time periods), with 44.4% and 36.2% of white girls in 2008 ($p<.05$) and 2009 ($p<.01$), respectively, reporting completion of fuel log (Appendix D, Tables 1 and 4).

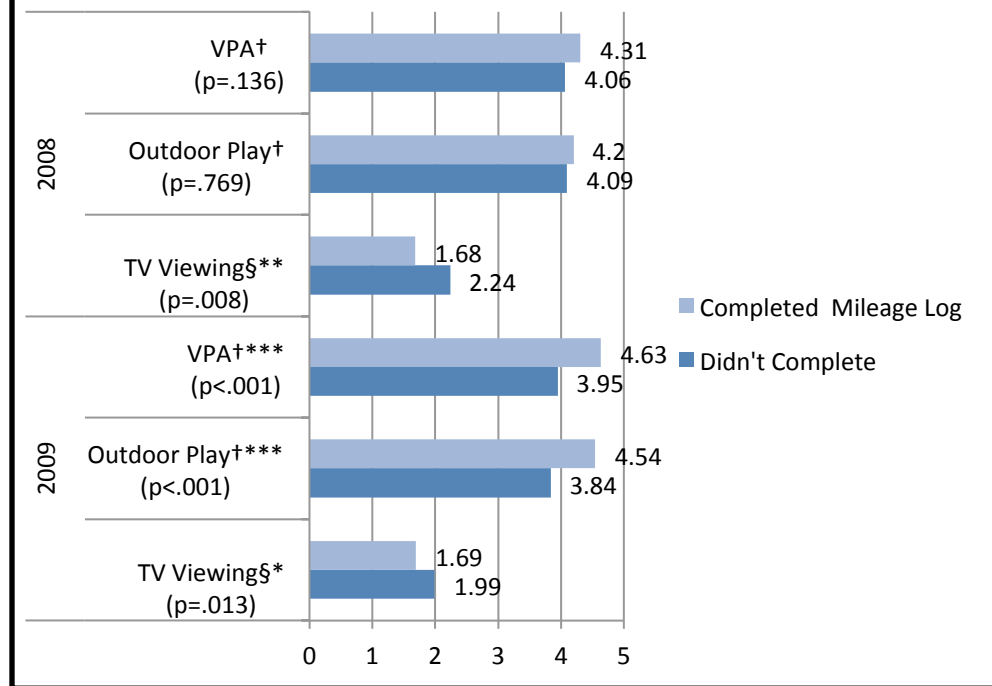
Approximately one-third of students who signed up to participate in Marathon Kids reported attending the principal Kick-Off and Final-Mile Run events at each time period (Appendix D, Tables 2 and 5). While participation in the two events was fairly equal by gender, a higher percentage of girls

reported participation at the Final-Mile run event in 2008 ($p<.05$) and a higher percentage of boys reported participation at the Kick-Off event in 2009 ($p<.01$). No statistically significant ethnic differences in participation in the events were observed. Of note, a higher percentage of low income students were found to participate in the Kick-Off events in 2008 ($p<.01$) and 2009 ($p<.001$) compared to high income students (Appendix D, Tables 2 and 5), and a higher percentage of Hispanic and African American students attended the Kick-Off event ($p<.05$) and Final-Mile Run event in 2009 (N/S) (between 10% and 15% higher participation).

Satisfaction and Intentions to Participate in Marathon Kids Again. We found a high level of satisfaction with Marathon Kids, with just under two thirds of students reporting the highest level of satisfaction with the program (64% of the sample in both 2008 and 2009). No significant differences in satisfaction with the program were found by gender, ethnicity, or parental language use for either the 2008 sample or 2009 sample. While no significant differences by socio-economic status were found in the 2008 sample, we found a greater proportion of low income students (76.6%) compared to high income students (56.1%) reported the highest level of satisfaction with the program ($p<.001$) in 2009. At both time points, over 4 out of 5 fourth grade students reported intentions to participate in Marathon Kids again in the upcoming year (82.4% in 2008 and 92.3% in 2009) (Appendix D, Tables 3 and 6). No significant differences in intentions to participate in Marathon Kids were found by ethnicity or language use with parents for either 2008 or 2009 samples.

Associations between Completion of Mileage Log and Participation in Vigorous Physical Activity, Outdoor Play, and TV Viewing. At both measurement periods in April 2008 and April 2009, students who reported having completed their mileage log during the respective school year reported a higher mean number of days of vigorous physical activity participation (mean= 4.31 vs. 4.06 in 2008, $p=.14$ and mean= 4.63 and 3.95 in 2009, $p<.001$), and outdoor play (mean = 4.20 vs. 4.09 days in 2008, $p=.77$ and mean = 4.54 and 3.84 in 2009, $p<.001$) (Figure 9). Mean number of hours of TV watching, on the other hand, was lower at each time period, with mean hours = 1.68 vs. 2.24 hours in 2008, $p=.008$, and 1.69 and 1.99 hours in 2009, $p=.013$ for students who completed and didn't complete their mileage log, respectively (Figure 9).

Figure 9. Mean Days/Hours Participated in VPA, Outdoor Play, and TV Watching by Completion of Mileage Log, 4th Grade Students in Central Texas (Spring 2008 & Spring 2009).



Abbreviations: MK, Marathon Kids; VPA, Vigorous Physical Activity. Significance testing based on multiple linear regression analyses. Analyses adjusted for gender, ethnicity and school economic disadvantage.

Sample size: n = 699 4th grade students in 2008 (482 MK completers and 217 non-completers);

n = 1,381 4th grade students in 2009 (762 MK completers and 619 non-completers students).

†Mean number of days in past 7 days.

§Mean number of hours spent watching TV yesterday.

PROCESS EVALUATION FINDINGS

The following section presents the process evaluation findings of Marathon Kids based on data from three primary data sources: PE and classroom teachers, 4th & 5th grade student participants in Marathon Kids, and parents of both Marathon Kids participants and non-Marathon Kids participants. These data were collected via various methods, including: PE and classroom teacher structured interviews, student and parent self-administered questionnaires, and online self-administered survey with PE teachers. These findings are presented by the three primary data collection studies: *the 15-school Quasi-Experimental Study of Marathon Kids in Houston and Round Rock (Study A)*, *the Marathon Kids School Coordinator Survey*, and *the Qualitative Study of the Implementation of Marathon Kids in Select Schools in Central Texas*.

Quasi-Experimental Study of Marathon Kids in Houston and Round Rock (Study A) (n = 15 schools)

School-Level Process Evaluation Results: We assessed various process indicators for the main impact study (Study A) in order to assess the level of implementation of Marathon Kids (see Appendix E, Tables 1 through 5). Among the 12 schools in Houston and Round Rock that had enrolled to participate in Marathon Kids during the 2008-09 school year (Appendix E, Table 1), all schools indicated they had structured time during the school day for students to work toward their Marathon Kids walking and running goals (Appendix E, Table 2). Among the three comparison schools in Houston, only one school indicated they had structured time for walking and running. Schools varied with how they structured time. PE class was the most popular class for incorporating time for Marathon Kids, followed by recess time and class time. All schools indicated that school faculty helped students track their miles, with 10 of the 12 schools indicating that the PE teacher helped track miles, 4 schools indicating the classroom teacher also helped to track miles, and 1 school indicating that peer leaders helped to track miles. In 8 of the 12 schools, miles were displayed in the classroom and/or gym (Appendix E, Table 2).

All 12 participating Marathon Kids schools indicated that students filled out the Fuel Log to track fruit and vegetable consumption; no schools in the comparison condition (n = 3) implemented a fruit & vegetable tracking program (Appendix E, Table 2). All schools indicated they had communicated to teachers in the school about Marathon Kids as well as parents. The main communication vehicle for parents was via information packets sent home with students. Six of 12 schools sent home a flyer, letter or email about Marathon Kids to parents. Ten of the 12 schools also sent a reminder notice, letter or email about Marathon Kids to parents during the course of the program (Appendix E, Table 3). The school gardening component appeared to receive less support from schools, with only 1 of the 12 schools indicating they implemented a school garden as a result of Marathon Kids; 5 indicating they implemented a garden but not with support from Marathon Kids, and 6 not implementing a garden or not sure (n = 1) (Appendix E, Table 4).

All Marathon Kids schools indicated a high level of support for the two principal celebratory events of Marathon Kids: the Kick-Off and Final Mile Run events, with 100% of the schools indicating that they encourage students and parents to attend the events. Of the 12 schools, 6 provided transportation for their students to the Marathon Kids events. (Appendix E, Table 4). Lastly, recognizing the potential for other school-based health promotion programs to compliment the work of Marathon Kids, Table 5 in Appendix E presents data on other physical activity programs taking place at schools during the time of the study.

Student-Level Process Evaluation Results: At the end of the program, we assessed indicators of participation in Marathon Kids as well as satisfaction with the program with students in the 12 study schools that signed up to participate in Marathon Kids during the 2008-09 school year. Within the 12 schools, 55.2% of the total students surveyed (n= 917) indicated signing up to participate in the program. Among the students who indicated signing up for the program, 78.2% indicated completion of their Marathon Kids Mileage Log (26 miles over the course of 6 months) (Table 4), suggesting a high completion rate. Completion of the Fuel Log (consumption of fruits and vegetables on 26 days during one month) was lower than the Mileage Log, with 58.3% indicating completion. No significant differences were found in students completing the Mileage Log by gender, ethnicity, language use, SES or school district. However, we did find that a higher percentage of low income students completed the Fuel Log (68.0%) compared to high income students (38.3%) (p<.001). We also found a higher percentage of students in Houston completed the Fuel Log compared to Round Rock (74.9% vs. 44.7%, respectively) (p<.001). Approximately a third of students attended the Kick-Off event (30.6%) in the fall

and Final Mile Run event (34.5%) in the spring. No significant differences in participation in the Marathon Kids' events were found by any socio-demographic factor examined (Table 4).

Table 4. Participation in Marathon Kids among 4th and 5th grade students in selected Houston and Round Rock schools by demographic characteristics. Marathon Kids Evaluation Project.Spring 2009. (n = 12 elementary schools).

| | Signed up for Marathon Kids | Completed MK Mileage Log | Completed MK Fuel Log | Attended Kick-Off Event | Attended Final Mile Event |
|---------------------------|--------------------------------|-----------------------------|--------------------------|----------------------------|------------------------------|
| | Total % (n=917) | Total % (n = 476) | Total % (n = 468) | Total % (n = 496) | Total % (n = 498) |
| Total Sample ^a | 55.2 | 78.2 | 58.3 | 30.6 | 34.5 |
| Gender | | | | | |
| Girls | 55.7 | 77.7 | 61.4 | 29.9 | 32.6 |
| Boys | 54.6 | 78.6 | 54.8 | 31.5 | 36.7 |
| Ethnicity | | | | | |
| African American | 43.4*** | 80.0 | 48.8 | 39.1 | 38.8 |
| Hispanic | 64.6*** | 79.3 | 68.8 | 30.7 | 37.4 |
| White | 45.7*** | 76.4 | 42.7 | 32.8 | 32.5 |
| Other ^b | 55.9*** | 75.4 | 50.9 | 19.7 | 23.0 |
| Language with parents | | | | | |
| Spanish | 69.5*** | 76.9 | 70.8 | 31.5 | 37.8 |
| English | 51.4*** | 78.3 | 54.1 | 30.0 | 33.5 |
| SES ^c | | | | | |
| High income | 44.7*** | 82.7 | 38.3*** | 31.6 | 37.7 |
| Medium income | 54.3*** | 76.0 | 64.2*** | 25.5 | 33.3 |
| Low income | 71.3*** | 76.9 | 68.0*** | 36.5 | 33.3 |
| School District | | | | | |
| Houston | 70.6*** | 78.5 | 74.9*** | 34.4 | 36.2 |
| Round Rock | 46.8*** | 77.9 | 44.7*** | 27.6 | 33.2 |

Data collection dates: March-April 2008. Abbreviations: MK, Marathon Kids; Partic., Participant; SES, socio-economic status; AISD, Austin Independent School District. p value: *<.05; **<.01; ***<.001, §=.05

^aIncludes 4th and 5th grade students from schools in Houston (n = 4 schools) and Round Rock (n = 8 schools).

^b"Other" ethnic group includes: American Indian/Native Alaskan (n=10), Asian (n=55), Native Hawaiian/Other Pacific Islander (n=1), and "Other" (n=63).

^cSES based on tertile distribution of SES for total sample. SES determined by school composition of economically disadvantaged students as per Texas Education Agency. Low income = >=76% student composition economic disadvantage; medium income = 38% to 75.8%; high income = <=37.4%.

Satisfaction with Marathon Kids. Overall, Marathon Kids reported a high level of satisfaction with Marathon Kids, with 69.0% of the sample indicating the highest level of satisfaction on a scale of one to three (Table 5). While satisfaction was high overall, Hispanic (74.9%) and African American (64.3%) students reported a higher satisfaction than white students (58.5%), $p<.01$. In addition, a higher percentage of students who spoke Spanish with parents reported the highest satisfaction with the program compared to English speaking students (78.0% vs. 66.8%, $p<.01$). The majority of 4th grade students who had participated in Marathon Kids during the 2008-09 year expressed intentions to

participate in Marathon Kids in the following year (85.6%), with no significant differences by socio-demographic subgroups (Table 5).

Table 5. Satisfaction with Marathon Kids by demographic characteristics. Marathon Kids Evaluation Project. Spring 2009. (n = 12 elementary schools).

| | How much do you like Marathon Kids? | | | Will you do |
|---------------------------|-------------------------------------|--------------------------|------------------------------|--|
| | A lot % (n=312) | A little % (n=119) | Not Very Much % (n=21) | MK next year? ^e % Yes (n = 263) |
| Total Sample ^a | 69.0 | 26.3 | 4.6 | 85.6 |
| Gender | | | | |
| Girls | 67.9 | 26.7 | 5.4 | 87.9 |
| Boys | 70.3 | 25.9 | 3.8 | 82.8 |
| Ethnicity | | | | |
| African American | 64.3 | 21.4 | 14.3 | 86.7 |
| Hispanic | 74.9†** | 22.6 | 2.5 | 88.7 |
| White | 58.5†** | 34.7 | 6.8 | 78.0 |
| Other ^b | 69.4 | 28.6 | 2.0 | 81.5 |
| Language with parents | | | | |
| Spanish | 78.0‡** | 21.2 | 0.8 | 91.8 |
| English | 66.8‡** | 26.9 | 6.3 | 83.2 |
| SES ^c | | | | |
| High income | 66.9 | 28.9 | 4.1 | 85.0 |
| Medium income | 67.4 | 25.9 | 6.7 | 85.8 |
| Low income | 73.2 | 24.6 | 2.2 | 85.7 |
| School District | | | | |
| Houston | 74.2 | 23.0 | 2.9 | 84.4 |
| Round Rock | 64.6 | 29.2 | 6.2 | 86.7 |

p value: *<.05; **<.01; ***<.001. †Significant difference at based on ANOVA test for comparison of Likert scale items.

‡Significant difference for mean comparison of two groups based on Independent Sample T-Test.

Significance testing for categorical variables based on chi-square tests.

^aIncludes 4th and 5th grade students from schools in Houston (n = 4 schools) and Round Rock (n = 8 schools).

^b"Other" ethnic group includes: American Indian/Native Alaskan (n=10), Asian (n=55),

Native Hawaiian/Other Pacific Islander (n=1), and "Other" (n=63).

^cSES based on tertile distribution of SES for total sample. SES determined by school composition of economically disadvantaged students as per Texas Education Agency. Low income = >=76% student composition economic disadvantage; medium income = 38% to 75.8%; high income <=37.4%.

^dBased on question: "How much do you like Marathon Kids?". Score ranges from 1 (Not very much) to 3 (A lot).

^eBased on 4th grade students only (n=263) as many fifth graders will be moving into middle school and may not realize MK is an option for the following year.

Satisfaction with Marathon Kids Mileage and Fuel Logs. Just fewer than 4 out of 5 students (79.1%) indicated that the Mileage Log helped them walk or run more (Table 6). A significantly higher percentage of lower income (87.8%), Hispanic (85.6%), and Spanish-speaking students (92.9%) indicated the Mileage Log helped them walk or run more (p<.001). Over half of students (61.7%) indicated that the Fuel Log helped them consume more fruits and vegetable, with demographic differences similar to those noted for the Mileage Log. The majority of students indicated they liked using the Mileage Log (84.5%) and Fuel Log (73.1%) a little ("2") or a lot ("3") on a 3 point scale. Of note, a higher percentage of students indicated that they didn't like the Fuel Log (26.9%) compared to the Mileage Log (15.5%)

(Table 6). In examining ethnic differences, Hispanic students reported the highest level of satisfaction with the logs (54.0% and 46.8% liked “a lot” the Mileage and Fuel Logs, respectively). African American students reported the lowest satisfaction among the ethnic groups examined for the Mileage Log (25.0% liked a lot) ($p<.05$ in comparison with Hispanic students), and White students reported the lowest satisfaction for the Fuel Log (17.6% liked a lot) ($p<.001$ in comparison with Hispanic students) (Table 6).

With regard to satisfaction with the Fuel Log, a higher percentage of students from Houston reported liking the Fuel Log “a lot” (45.0%) compared to Round Rock (26.8%) ($p<.001$). In exploring intentions to continue to do Marathon Kids for the coming year with 4th grade students (5th grade students were excluded given the possible confusion with their eligibility for Marathon Kids as many will be attending middle school), the majority indicated they will do Marathon Kids again (85.6%), with no significant differences found by socio-demographic characteristics. (Table 6).

Table 6. Perceptions about Mileage & Fuel Logs among 4th and 5th grade Marathon Kids participants by demographic characteristics. *Marathon Kids Evaluation Project, Spring 2009.* (n = 12 elementary schools).

| | Mileage Log Helped Student Walk/Run More | Fuel Log Helped Student Eat More F & V | Liked Using Mileage Log | | | Liked Using Fuel Log | | |
|-----------------------|---|---|-------------------------|---------------|-----------------|----------------------------|---------------|-----------------|
| | % Yes (n = 498) | % (n = 496) | A lot % | A little % | Not At All % | A lot % | A little % | Not At All % |
| Total Sample | 79.1 | 61.7 | 46.5 | 38.0 | 15.5 | 35.0 | 38.1 | 26.9 |
| Gender | | | | | | | | |
| Girls | 80.2 | 65.9* | 47.1 | 40.3 | 12.5 | 36.2 | 38.9 | 24.9 |
| Boys | 77.9 | 57.1* | 45.7 | 35.5 | 18.8 | 33.8 | 37.2 | 29.1 |
| Ethnicity | | | | | | | | |
| African American | 71.4** | 59.2*** | 25.0†* | 58.3 | 16.7 | 24.5 ^{h&AA*} | 46.9 | 28.6 |
| Hispanic | 85.6** | 73.7*** | 54.0†* | 33.1 | 12.9 | 46.8 ^{w&h***} | 35.4 | 17.9 |
| White | 72.0** | 39.2*** | 40.8 | 40.0 | 19.2 | 17.6 | 39.5 | 42.9 |
| Other ^b | 72.1** | 56.7*** | 42.6 | 39.3 | 18.0 | 26.7 | 40.0 | 33.3 |
| Language with parents | | | | | | | | |
| Spanish | 92.9*** | 81.1*** | 59.8‡** | 28.3 | 11.8 | 50.4*** | 34.6 | 15.0 |
| English | 74.2*** | 54.4*** | 42.5‡** | 40.0 | 16.7 | 29.2*** | 39.2 | 31.6 |
| SES ^c | | | | | | | | |
| High income | 73.2** | 40.6*** | 42.0 | 43.5 | 14.5 | 15.0 ^{h&i***} | 40.6 | 44.4 |
| Medium income | 76.5** | 66.0*** | 43.3 | 40.9 | 15.8 | 40.4 ^{h&m***} | 38.9 | 20.7 |
| Low income | 87.8** | 74.2*** | 54.5 | 29.5 | 16.0 | 45.2 | 34.8 | 20.0 |
| School District | | | | | | | | |
| Houston | 86.2*** | 77.9*** | 49.6 | 34.8 | 15.6 | 45.0*** | 39.6 | 15.3 |
| Round Rock | 73.4*** | 48.3*** | 44.0 | 40.7 | 15.4 | 26.8*** | 36.8 | 36.4 |

Abbreviations: MK, Marathon Kids; SES, socio-economic status; F & V, Fruit & Vegetables.

p value: * $<.05$; ** $<.01$; *** $<.001$. †Significant difference based on ANOVA test. ‡Significant difference for mean comparison of two groups based on Independent Sample T-Test.

Significance testing for categorical variables based on chi-square tests.

^aIncludes schools from AISD (n = 29); Manor ISD (n = 1),flugerville (n = 2).

^b“Other” ethnic group includes: American Indian/Native Alaskan (n=10), Asian (n=55), Native Hawaiian/Other Pacific Islander (n=1), and “Other” (n=63).

^cSES based on tertile distribution of SES for total sample. SES determined by school composition of economically disadvantaged students as per Texas Education Agency. Low income = $\geq 76\%$ student composition economic disadvantage; medium income = 38% to 75.8%; high income = $\leq 37.4\%$.

^dBased on question: “How much do you like Marathon Kids?”. Score ranges from 1 (Not very much) to 3 (A lot).

^eBased on 4th grade students only (n=263) as many fifth graders will be moving into middle school and may not realize MK is an option for the following year.

Parent-Level Process Evaluation Results

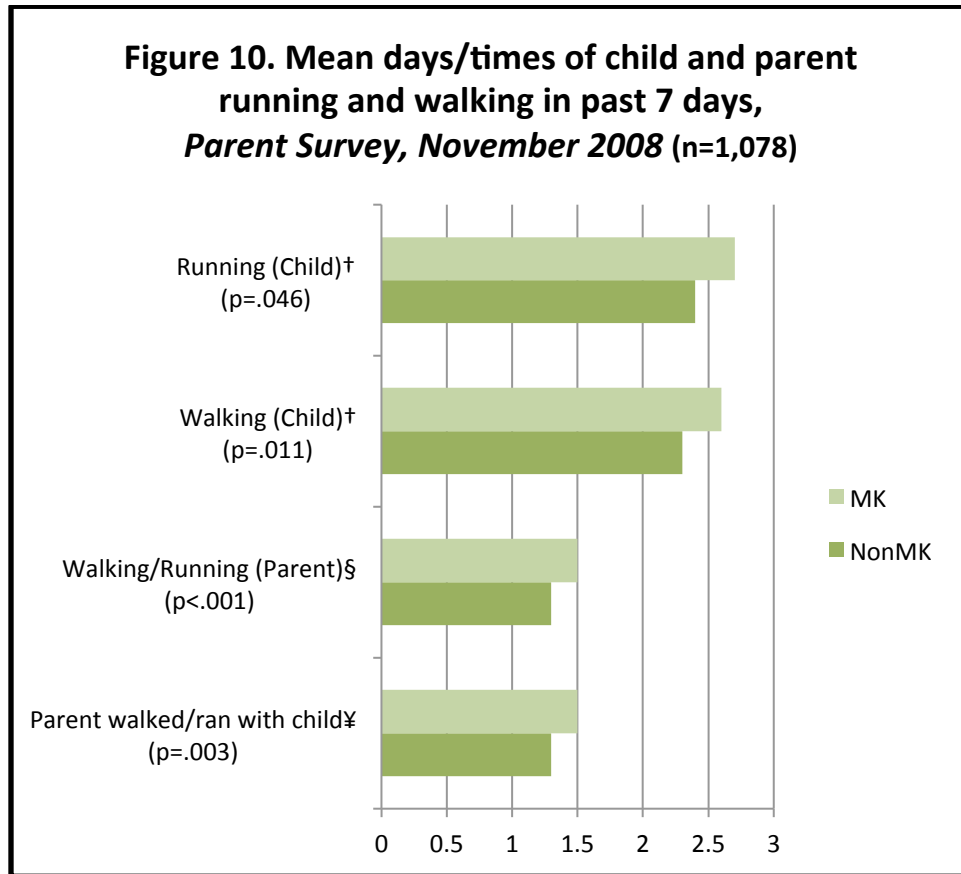
Table 7 presents the demographic characteristics of our parent sample. Parents who participated in the November 2008 survey had an average age of 37.3 (SD: 6.6) years and were predominantly female (86.5%). The majority of respondents (84.5%) indicated they were the mother of the 4th or 5th grade student. Participants in the November 2008 survey were predominantly Hispanic (48.1%), followed by White (34.0%) and African American (9.8%). Among participants, 22.9% spoke Spanish as the primary language used in the household. The demographic profile for the February 2009 sample was similar to that of the November 2008 sample. Of the 1,081 parents who participated in the November 2008 survey, 46.9% indicated that their child participated in Marathon Kids. In comparing demographic characteristics between parents who indicated their child was participating in Marathon Kids with those who indicated their child did not participate, no significant differences were found by gender, ethnicity, language use, or relationship with child. However, in the November 2008 sample, a higher percentage of parents of Marathon Kids students compared to parents of non-participants indicated having more than 4 years of college (16.7% vs. 10.1%, $p=.02$).

Table 7. Demographic characteristics of parent sample. *Marathon Kids Evaluation Project, 2008-09.*

| | <i>Individual-Level Analyses</i> | | | | | | | |
|---------------------------|----------------------------------|----------------|---------|--------------|--------------|----------------|---------|--------------|
| | November '08 | | p-value | Total Sample | February '09 | | p-value | Total Sample |
| | Student MK | Non-MK Student | | | Student MK | Non-MK Student | | |
| n of parents (Total) | 507 | 574 | | 1081 | 370 | 270 | | 640 |
| Age in years (mean, SD) | 37.4 (6.9) | 37.1 (6.3) | 0.462 | 37.3 (6.6) | 37.8 (6.5) | 38.2 (6.5) | 0.403 | 38.0 (6.5) |
| Gender: % Female | 86.6 | 86.4 | 0.934 | 86.5 | 87.0 | 87.4 | 0.9 | 87.2 |
| Ethnicity (%) | | | | | | | | |
| Hispanic | 51.1 | 45.5 | 0.091 | 48.1 | 52.4 | 39.6 | 0.001 | 47.0 |
| African American | 8.0 | 11.3 | | 9.8 | 7.0 | 15.3 | | 10.5 |
| White | 34.0 | 34.0 | | 34.0 | 33.0 | 36.6 | | 34.5 |
| Other ^a | 6.8 | 9.2 | | 8.1 | 7.6 | 8.6 | | 8.0 |
| Language use with parents | | | | | | | | |
| English (%) | 74.6 | 79.3 | 0.081 | 77.1 | 72.1 | 81.2 | 0.011 | 75.9 |
| Spanish (%) | 25.4 | 20.7 | | 22.9 | 27.9 | 18.8 | | 24.1 |
| Relationship with child | | | | | | | | |
| Mother | 84.0 | 84.9 | 0.337 | 84.5 | 85.6 | 85.8 | 0.610 | 85.7 |
| Father | 12.6 | 13.2 | | 12.9 | 12.5 | 11.2 | | 11.9 |
| Guardian/Other | 3.4 | 1.9 | | 2.6 | 1.9 | 3.0 | | 2.4 |
| Educational Level | | | | | | | | |
| 8th grade or less | 6.9 | 6.5 | 0.017 | 6.7 | 8.4 | 6.1 | 0.297 | 7.4 |
| Some high school | 9.8 | 7.9 | | 8.8 | 10.4 | 6.5 | | 8.7 |
| High school graduate | 15.7 | 15.7 | | 15.7 | 13.8 | 17.6 | | 15.4 |
| Some college | 27.4 | 34.3 | | 31.1 | 30.1 | 32.4 | | 31.1 |
| 4-year college graduate | 23.6 | 25.5 | | 24.6 | 21.6 | 23.7 | | 22.5 |
| >4 years of college | 16.7 | 10.1 | | 13.2 | 15.7 | 13.7 | | 14.9 |

* $p<.05$, ** $p<.01$, *** $p<.001$

Physical activity. Figures 10 and 11 present the mean times that children participated in running or walking in the past 7 days as reported by parents in November 2008 and February and November of 2009. At both measurement periods, children participating in Marathon Kids were found to engage in a higher mean number of times of running and walking in the past 7 days compared to children whose parents indicated they were not participating in the program ($p<.05$). While significant differences in parents' walking and running ($p<.001$) and parents' participation with their children in walking and running ($p=.003$) were found for the November '08 measurement period (Figure 10), no significant differences were found in parents' physical activity or parents' participation in walking and running with child for the February/March '09 measurement period (Figure 11).



Abbreviations: MK, Marathon Kids.

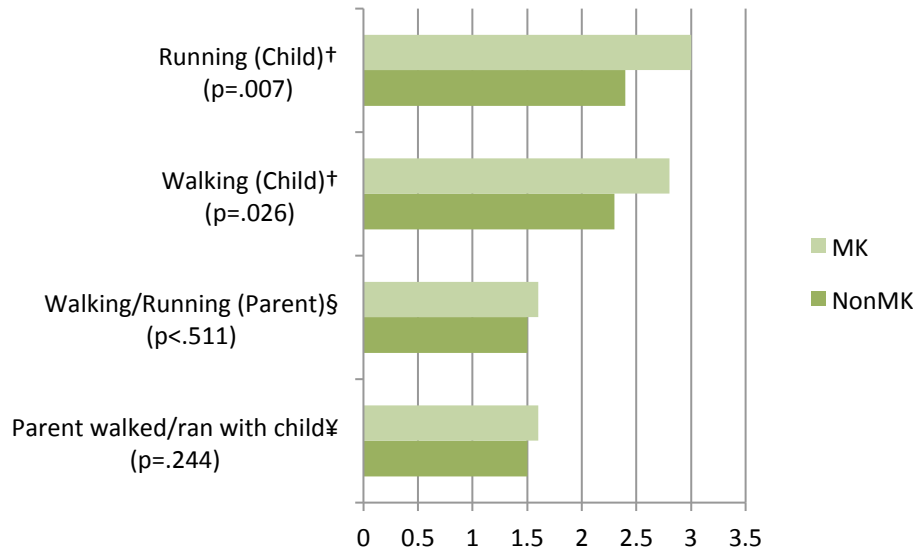
†Parent report of number of times child ran or walked for exercise outside of school time in past 7 days.

§Mean days that parent reported walking, jogging or running for at least 20 minutes in past 7 days.

¥Mean days that parent reported walking or running with 4th/5th grade child for exercise in past 7 days.

*P-value based on multiple linear regression analyses adjusted for parent gender, age, ethnicity, and education level.

Figure 11. Mean days/times of child and parent running and walking in past 7 days, Parent Survey, February-March 2009 (n=640)



Abbreviations: MK, Marathon Kids.

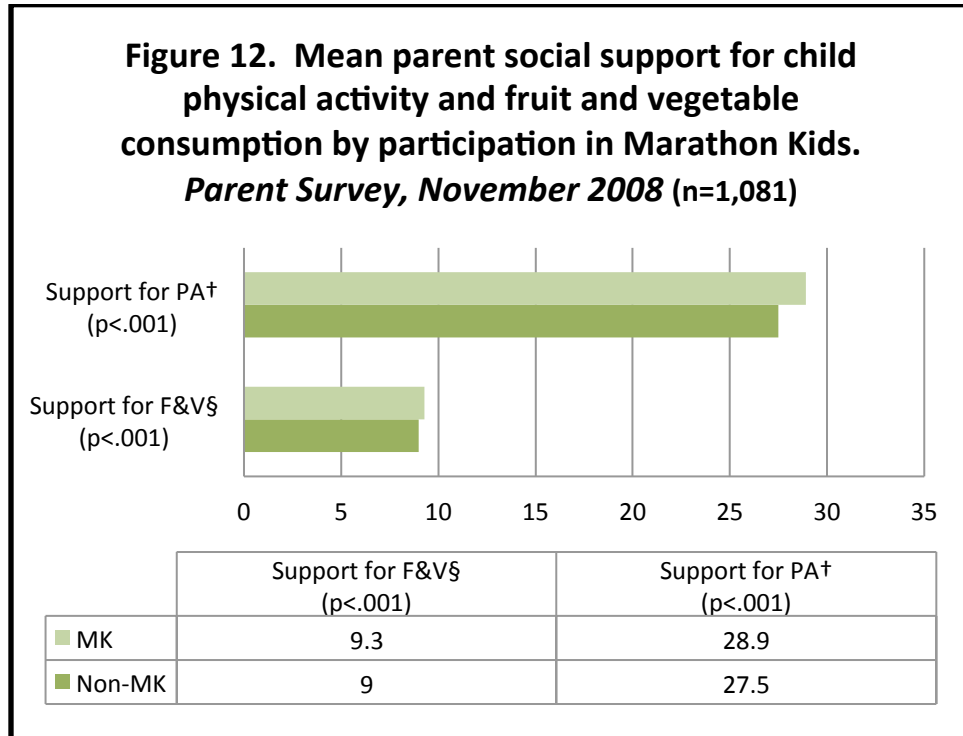
†Parent report of number of times child ran or walked for exercise outside of school time in past 7 days.

§Mean days that parent reported walking, jogging or running for at least 20 minutes in past 7 days.

¥Mean days that parent reported walking or running with 4th/5th grade child for exercise in past 7 days.

*P-value based on multiple linear regression analyses adjusted for parent gender, age, ethnicity, and education level.

Parent Social Support. Parents of students participating in Marathon Kids reported higher mean scores of parent support for physical activity ($p<.001$) and fruit and vegetable consumption ($p<.001$) at the November '08 measurement period compared to parents of non-participating students (Figure 12). However, at the February/March 2009 measurement period, which took place immediately prior or after the Marathon Kids Final Mile Run event, we observed no significant differences in parent support for physical activity or fruit and vegetable consumption between parents of MK and non-MK students (Figure 13).



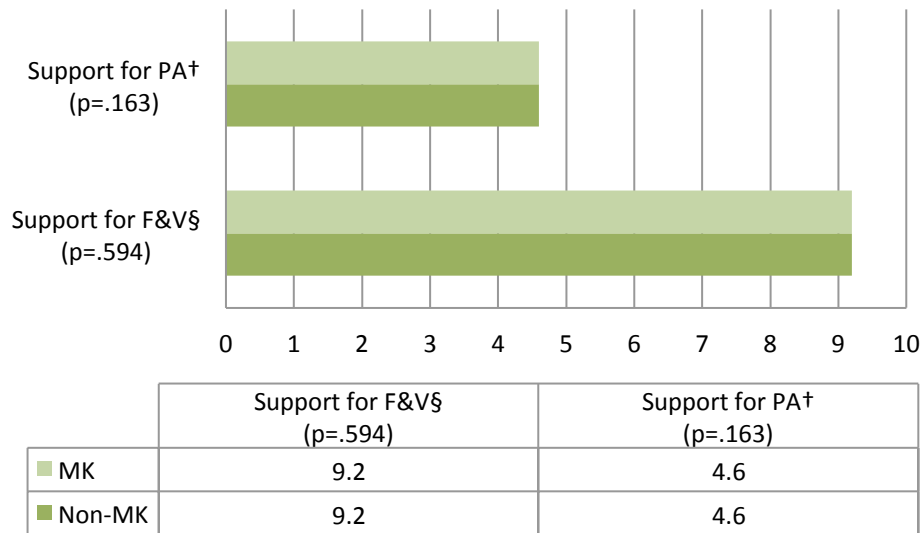
Abbreviations: MK, Marathon Kids; PA, Physical Activity; F&V, Fruits & Vegetables.

† Composite variable based on 7 items that measured encouragement of child to be physically active, direct participation in physical activity with child, observe child being physically active, and "help in every way when it comes to sports or exercise for my son or daughter." Score ranges from 7 (lowest) to 35 (highest) points.

§ Composite variable based on 2 items that measured encouragement for fruit and vegetable consumption and provision of fruit and vegetables to child. Score ranges from 2 (lowest) to 10 (highest).

*P-value based on multiple linear regression analyses adjusted for parent gender, age, ethnicity, and education level.

Figure 13. Mean parent social support for child physical activity and fruit and vegetable consumption by participation in Marathon Kids.
Parent Survey, February/March 2009 (n=640)



Abbreviations: MK, Marathon Kids; PA, Physical Activity; F&V, Fruits & Vegetables.

† Composite variable based on 7 items that measured encouragement of child to be physically active, direct participation in physical activity with child, observe child being physically active, and "help in every way when it comes to sports or exercise for my son or daughter." Score ranges from 7 (lowest) to 35 (highest) points.

§ Composite variable based on 2 items that measured encouragement for fruit and vegetable consumption and provision of fruit and vegetables to child. Score ranges from 2 (lowest) to 10 (highest).

*P-value based on multiple linear regression analyses adjusted for parent gender, age, ethnicity, and education level.

PE Teacher and Marathon Kids School Coordinator Survey (n = 119 schools/school faculty respondents)

Description of Sample

An online survey was administered in Spring 2009 with school faculty in 8 school districts in Houston and central Texas to assess various aspects of implementation of and satisfaction with Marathon Kids. Nine school districts were contacted to participate in the survey, of which 8 districts participated. Response rates varied for participation in the survey, ranging from 13.4% in Houston to 80% and 100% for Round Rock and Pflugerville ISDs, respectively. Given the small sample size for some school districts, which ranged in size from 2 schools in one school district in central Texas to 179 schools in Houston, we analyzed the findings by the following strata: all central Texas school districts (n=7 districts, including Round Rock and Austin ISDs), Round Rock ISD, Austin ISD, and Houston ISD. The overall response rate for the 8 school districts that participated was 37.2% (n = 119 respondents), with a response rate for Central Texas of 61.0% (n = 89 respondents) (Appendix F, Table 1).

Demographic characteristics of respondents and schools are presented in Appendix F, Table 2. Across school districts, 74% of respondents were female, with a mean number of years of teaching ranging from 14.8 year in HISD to 18.0 years in Round Rock ISD. The majority of respondents were PE teachers (98.2% for total sample), followed by classroom teacher (1.8%). The number of years implementing Marathon Kids ranged from 1 year in Del Valle ISD and Lake Travis ISD to a mean of 6.3 years in Austin ISD and Round Rock ISD. As the survey was administered using an anonymous format, we asked respondents to indicate the level of school composition of student economic disadvantage. Survey respondents represented schools with a diversity of socio-economic status, with schools in AISD and Houston representing the greatest composition of student economic disadvantage (59.5% and 58.3% of respondents representing schools with 76% or more economic disadvantage in AISD and HISD, respectively), and schools in Round Rock representing the lowest school composition of student economic disadvantage (12.5%). Respondents from AISD and Houston represented schools with majority composition of Hispanic students, while Round Rock represented schools with a majority white ethnic population (Appendix F, Table 2).

Findings

Implementation of Marathon Kids' Walking and Running Activities

The majority of respondents indicated participation in Marathon Kids during the 2008-09 school year (95.8%) (Appendix F, Table 3), with 4 schools from HISD and 1 school from central Texas districts indicating they did not participate. Overall, respondents indicated a high level of support for implementation of the walking and running objectives of Marathon Kids, participation in the core Marathon Kids Kick-Off and Final Mile Run events, and overall satisfaction of Marathon Kids. Among schools participating in Marathon Kids during the current year, over 90% of all respondents indicated their school provided structured time for students to carry out Marathon Kids' running and walking goals. School districts varied in their approaches for providing structured time. In AISD, respondents identified class time dedicated to physical activity ("WOW time") (81.6%), recess time (71.1%) and PE time as the main times during the day for implementing Marathon Kids running and walking goals. In Round Rock ISD, the main time was PE class (78.9%), followed by recess time (21.1%) and class time (15.8%), which was similar to Houston ISD (84.2%, 47.4%, and 15.8%, respectively). For Central Texas overall, PE class was the main vehicle for providing time for Marathon Kids goals (65.4%), followed by recess (52.6%) and class time (48.7%). Of note, 31.6% of Round Rock respondents also indicated structured time for addressing Marathon Kids' walking and running goals during after-school programming.

Respondents also indicated a high level of instrumental support for Marathon Kids' walking and running goals through helping students with tracking of walking and running miles (Appendix F, Table 4). For the total sample, the majority of schools indicated direct support with tracking of miles by PE teacher (64.9%), followed by support with tracking miles by classroom teacher (49.1%). Just under a third of respondents (31.6%) indicated they displayed the students' tracking of miles walked or run in the classrooms. School districts tended to differ in their approaches for tracking student miles (Appendix F, Table 4). In AISD, 90.5% of respondents indicated the classroom teacher supported students' tracking of miles, while in Houston and Round Rock, the PE teacher was the main person who supported tracking of miles (90.0% and 70.8%, respectively). AISD indicated the highest support for displaying student mile logs in the classroom (59.5%). Just under half of all respondents (44.5%) indicated that their students filled in their mileage logs at schools, followed by at home and at school (31.1%).

Teachers also indicated support for Marathon Kids through participation in the main Marathon Kids Kick-Off and Final Mile Run events. In Central Texas school districts, 64.4% and 65.5% of respondents indicated participation in the Kick-Off and Final Mile Run events during the current year, respectively, compared to 75.0% and 65.0% of respondents in Houston. Approximately half of respondents in Central Texas and 30% of respondents in Houston indicated volunteering at Marathon Kids events during the current year (Appendix F, Table 3).

Implementation of Marathon Kids' Fruit & Vegetable Consumption Activities

While the majority of teachers indicated that students filled out their Fuel Log to track fruit and vegetable consumption (e.g., 57.5% indicating students fill out their logs at school or home), a much larger percentage of respondents indicated that students do not fill out their fruit and vegetable consumption "Fuel Logs" (42.5%) compared to filling out the mileage log (3.6%) (Appendix F, Table 4). Respondents also indicated a lower level of implementation of Marathon Kids' garden promotion activities. Among the total sample, 56.4% indicated their school did not have a gardening project, while 37.8% indicated they did have a gardening project, but that it was developed separately from Marathon Kids (Appendix F, Table 4).

Communication Channels for Marathon Kids

Table 5 in Appendix F presents findings on channels for communicating to schools and parents about Marathon Kids. The majority of respondents across school districts indicated they had first learned about Marathon Kids through a regional school district presentation (39.5%) or through their school's previous participation with Marathon Kids (40.4%). For the current year, the majority of respondents indicated that they had received information about Marathon Kids upcoming events via an email from Marathon Kids (79.8%), followed by a school district meeting (57.0%), the Marathon Kids website (37.8%), and information flyers (32.5%). Schools tended to communicate to students about Marathon Kids via distribution of information packets to students via the PE teacher (78.1%), followed by distribution of packets by classroom teacher (23.7%). On a similar note, the majority of schools communicated to parents about Marathon Kids via information packets sent home with students (89.5%). Other communication channels about Marathon Kids to parents included: a flyer, letter or email (34.2%), parents informed at a school meeting (16.7%), and parents informed via school newsletter (48.2%). Just under half of respondents indicated their school had sent parents a reminder notice about Marathon Kids during the course of the program (48.2%) (Appendix F, Table 5). Findings on communication channels for the sample as whole were similar to findings at the district level.

With regard to communication preferences, respondents overwhelmingly indicated that they would prefer to receive communication via email (97.7% and 100.0% for Central Texas and Houston, respectively), followed by information mailed to them at school (53.2% and 38.5%, respectively) (Tables 6a & 6).

Tables 6a and 6b in Appendix F present findings on teacher feedback regarding the process of Marathon Kids implementation for Central Texas and Houston schools. Overall, respondents from both Central Texas and Houston rated very positively the support provided by Marathon Kids for implementation of the program at their school, including positive ratings on the instruction packets, registering children to participate, and support received. Respondents indicated that children at their school enjoyed Marathon Kids (≥ 4.5 for all school districts on a scale of 1 to 5, with 5 indicating 'strongly

agree'). None of the respondents indicated the need for more training on how to implement the program.

Facilitators and Barriers for Implementation of Marathon Kids

Table 7 in Appendix F presents findings on the primary facilitators and barriers for participation in Marathon Kids based on open-ended responses from the respondents. The majority of respondents indicated that student health and well being were the primary reasons for their school to participate in Marathon Kids (77.3% in Central Texas and 60.0% in Houston), followed by the importance of Marathon Kids motivating and goal setting with students for physical activity and healthy eating (37.5% and 30.0%, respectively, for Central Texas and Houston), Kids loving the program (30.7% and 30.0%, respectively), kids love the free t-shirt (27.3%, 30%), and MK promotes parent and family exercise (18.2% and 20.0%, respectively). The top barriers cited for implementation of Marathon Kids by respondents from Central Texas and Houston, respectively, were: lack of parent support (33.0% and 25.0%), excessive workload for MK school coordinators (26.1% and 15.0%), lack of teacher support (20.5% and 10.0%), and time constraints (17.1% and 60.0%). Barriers cited for student participation in Marathon Kids events included: time/date conflict with other events, lack of transportation to events, inconvenient location, and lack of parent support. Lastly, in response to a question about ways to strengthen Marathon Kids, a large percentage of respondents from central Texas indicated that the program was great as is (21.6%). Top strategies for strengthening the program included: increased media advertisement, presentations by Marathon Kids staff at schools, and provision of transportation to Marathon Kids events (Table 7). Lastly, respondents indicated a very high level of satisfaction, with 100% of respondents indicating that they would recommend Marathon Kids to other teachers (Table 3).

Qualitative Study of the Implementation of Marathon Kids in Select Schools in Central Texas (n = 10 in-depth interviews with school faculty)

During summer 2008, 10 qualitative interviews were conducted with Marathon Kids program coordinators and supporting faculty in six elementary schools in four school districts in central Texas. A master-level anthropologist (Sherman Chow) with experience in qualitative research conducted, transcribed, and analyzed the interviews. Study participants included PE teachers (n=5), classroom teachers (n=4) and one school counselor. Semi-structured interviews were conducted in-person. Interviews were transcribed, coded, and analyzed to identify key themes. Four thematic categories emerged: 1) school approaches to implementing the program; 2) perceived benefits of Marathon Kids; 3) program support; and 4) program barriers. These four thematic categories and their subsequent sub-themes are discussed in detail in the report (see Appendix C for full report).

The *program implementation* theme centers on: the actual implementation of the program at the school level; school modifications of the Mileage Log; and how CATCH curriculum is used for nutrition education instead of the Fuel log. Important findings that emerged from this theme indicate that most schools schedule specific time during the school day for students to work toward their Marathon Kids' walking and running goals. Specifically, respondents stated that their students ran/ walked at school through a combination of PE classes, recess/ W.O.W. ("Working Out for Wellness") time, and through running/ jogging clubs. Respondents also discussed a variety of 'fun run' events, such as "Turkey Trots", that were developed at their schools as a result of or in support of Marathon Kids. Lastly, respondents indicated that most students complete their Mileage Logs at school with assistance from school faculty or in support of Marathon Kids. On the other hand, Fuel Logs are not being implemented at the school as indicated by all respondents.

The *benefits* theme focuses on the perceived benefits (besides physical/ exercise benefits) of the Marathon Kids program. These perceived program benefits included: mood and confidence boosting; potential testing and academic performance benefits; and an energy release for ADHD students. *Program support* explores two areas: teacher and administration support; and parent support. Teacher and administration support indicated that schools embrace Marathon Kids as a celebration and tradition. Several schools have developed specific celebrations during the year to promote and embrace Marathon Kids, including Marathon Kids T-Shirt days, contests and celebrations for the classroom of students that walks or runs the most miles, and awards for students who walk or run a certain number of miles. Parent support for Marathon Kids, on the other hand, has been found to be mixed. At one school, for example, attempts to bring parents to school for Marathon Kids event resulted in very low turn-out.

Finally, *program barriers* focus on barriers and obstacles surrounding the implementation of the Marathon Kids program. These include: challenges with recruiting students at the beginning of the school year as well as organizing for the Kick-Off event; parent misunderstandings about the program—such as thinking that the program entails running a complete marathon at one point in time as well as motivating parents to attend the Marathon Kids events; Hispanic cultural barriers, with some respondents suggesting that Hispanic families "don't get it," while another respondent indicating that Hispanic families are starting to recognize the importance of physical activity and exercise; community/ environmental barriers in terms of safety concerns as a barrier for children walking and running in their community; and TAKS/ TEKS testing priorities. A detailed description of the interviews along with analysis and considerations for enhancements to the Marathon Kids program are presented in the full study (see Appendix C).

DISCUSSION AND RECOMMENDATIONS

Marathon Kids® is a free, nonprofit program that promotes running and walking, healthy eating, and schoolyard gardening for children in grades K through 5 and their families. Under a subcontract from Marathon Kids and funding from the Michael & Susan Dell Foundation, this project aimed to evaluate the impact of participation in Marathon Kids on physical activity, fruit and vegetable consumption, and related psycho-social factors in a sample of 4th and 5th grade children in Texas. Secondary aims of the study were to evaluate the process of implementation of Marathon Kids as well as program satisfaction with the key program end-users.

We found that Marathon Kids participants, compared with non-participants, engaged in higher mean times of running when measured at three time points post-Marathon Kids Kick Off event. These findings held for both student enrollment comparisons and comparisons of economically disadvantaged students in schools that enrolled and did not enroll in Marathon Kids, with standardized effect sizes of .08 and .11, respectively. With regard to fruit and vegetable consumption, Marathon Kids students were found to consume fruit more often at school than non-participants. While mean scores for other fruit and vegetable consumption measures were generally higher among Marathon Kids participants, these findings were not statistically significant. Other positive findings include higher mean scores for athletic identity and physical activity self-efficacy among students who attended schools that participate in Marathon Kids, as well as higher parent support for physical activity among students who enrolled in Marathon Kids. These overall findings, along with high levels of school implementation of the program and program satisfaction among student participants, provide initial evidence on the effectiveness of Marathon Kids in promoting physical activity and fruit consumption in older age elementary school children from diverse socio-economic and ethnic backgrounds.

Effectiveness of Program and Appeal with Children of Diverse Backgrounds Given the important gender, ethnic, and SES disparities for physical activity participation in U.S. children (USDHHS, 1996; IOM, 2005), low-cost physical activity promotion programs that reach underserved children are needed. A review of physical activity programs for children by van Sluijs et al. (2007) found limited evidence on the effectiveness of interventions that promote physical activity in children from low socio-economic backgrounds. In this current study, we found positive effects of the Marathon Kids program on running and psycho-social related factors in children from diverse socio-economic and ethnic backgrounds, with the highest satisfaction for the program reported by Hispanic and African American children as well as children from Spanish-speaking families. The appeal of the program among diverse participants was underscored by the similar participation rates across socio-economic subgroups in most of the Marathon Kids activities, including the celebratory events at the beginning and end of the program and the completion of the mileage and fuel logs. These findings provide an important basis for further dissemination of the program to ethnically and economically diverse children, families and schools.

The impact of Marathon Kids on fruit and vegetable consumption was less conclusive in comparison with findings on running. While Marathon Kids students were found to consume fruit at school more often, differences between general fruit and vegetable consumption between Marathon Kids and non-Marathon Kids students became nonsignificant upon adjusting for school composition of economically disadvantaged students. Measurement of fruit and vegetable consumption in children is difficult, and one possible explanation for the lack of difference may be a result of the measures used. It is possible that our ‘usually’ measures of fruit and vegetable consumption were not sensitive enough to detect differences. On the other hand, mean scores of fruit and vegetable consumption were found to

be generally higher across measures for Marathon Kids students. Thus, it may be that Marathon Kids does increase fruit and vegetable consumption, yet the impact is modest. As a third consideration, it is possible that our mostly nonsignificant findings for the fruit and vegetable consumption resulted from an over-adjustment of the analyses with the inclusion of school composition of economically disadvantaged students. Under these analyses, all students from a given school are assigned the school score for economic disadvantage. This adjustment may have reduced the significance of the findings. A final consideration in interpreting these findings is the timing of the measures. As students may complete their fruit and vegetable logs only during a one month time- with the goal of eating fruit and vegetables for 26 days straight, it is possible that the effect of the program may be diluted as schools and students implement the Fuel Log activity at different time points over the six month period. These considerations notwithstanding, our findings provide some evidence of a positive effect of Marathon Kids on fruit and vegetable consumption. Further research is warranted to confirm these findings given the considerations listed above.

Although the effect sizes of the program were generally modest, these findings should be evaluated within the larger context of the study and the program. First, we should note that this study was carried out as an effectiveness study, under which conditions were neither optimal nor manipulated by the researchers. The program was evaluated ‘as is’ in its current form within a community/school setting. As such, while the effects of the program may be modest, it is likely that the effects could be increased with specific refinements to the program. Second, the program’s simple model provides specific appeal and potential for widespread impact compared to more time- and resource-intensive programs. The high satisfaction of the program among PE teachers surveyed in central Texas and Houston along with the high implementation levels of most of the program’s components suggest that the current model is appealing and easily adopted by teachers and schools. Third, the program was found to have several additional positive effects on parent social support, children’s athletic identity and children’s physical activity self-efficacy. Lastly, the modest effect sizes for the program translate into an important population-level effect when taking into account the current reach of the program, with 151,215 students participating in MK during the current year.

Athletic Identity. Students from low-income backgrounds who attended Marathon Kids schools reported greater athletic identity than students from similar economic backgrounds attending non-Marathon Kids schools post Kick-Off event, yet no differences were found in athletic identity or related subscales in the student enrollment analyses with the mixed income groups. One possible explanation for these divergent findings is that Marathon Kids may have a greater impact on psycho-social factors such as athletic identity in low income students. Given important socio-economic differences in physical activity- with children from lower SES background found to engage in less physical activity (Powell et al, 2004; Gordon-Larsen et al, 2006), students from lower income schools may have fewer opportunities for physical activity engagement as well as public celebration for physical activity compared to children from higher income groups. As such, it is possible that the lack of effect of Marathon Kids on athletic identity in the student enrollment analyses may be due to the diversity of SES represented in the student enrollment sample. The higher levels of athletic identity reported by Marathon Kids students in low income schools is important given research by Anderson et al. (2009) that found athletic identity to be positively associated with physical activity in elementary and middle school children.

Social Support. Social support has been found to be positively associated with children’s participation in physical activity (USDHHS, 1996; Sallis et al., 2002; Taylor et al., 1994). Our findings provide some evidence of Marathon Kids’ impact on social support for children’s physical activity and healthy eating among parents and teachers. We found that students who participated in Marathon Kids

reported higher levels of parent social support for physical activity and fruit and vegetable consumption. We were able to triangulate these findings with parent responses, which also indicated greater support for children's physical activity and fruit and vegetable consumption in the November measurement. The lack of differences in parent-reported support at the February measure as well as the lack of significant differences in teacher support for physical activity and healthy eating merit further discussion. One possible explanation for the lack of difference in parent social support observed at the February measure may be due to the timing of our measure, in which parent support may be greatest immediately following the Kick-Off event but lowest toward the end of the program. The lack of differences in teacher support reported by students may be due to several reasons, including the possibility that teachers are already promoting these health behaviors across schools and thus the student perception of support by teachers is diluted in Marathon Kids schools; and that our general 'teacher support' measure may require more specificity (i.e., to specify the classroom or PE teacher).

While Marathon Kids students may not perceive greater amounts of teacher support, our process evaluation findings suggest that Marathon Kids schools are providing key instrumental support for physical activity and healthy eating. Of important note, we found a high percentage of Marathon Kids schools incorporated more time during the school day for walking and running, with significant differences found between Marathon Kids and control schools. This finding has important implications for the promotion of physical activity at a population level, given that schools that participate in Marathon Kids may be more likely to structure additional time for walking and running during the school day. We also found a high percentage of teachers from Marathon Kids schools reported supporting their students in tracking of miles, with a third of respondents indicating they displayed the mileage logs in the classroom. We also found that the majority of schools sent information home regarding Marathon Kids and that just under half sent a follow-up reminder about the program during program implementation. Lastly, between a third and a half of PE teachers indicated participation in the Marathon Kids Kick-Off and Final Mile Run events during the current year. These findings suggest that Marathon Kids has been effective in engaging schools and school staff in providing greater instrumental support for physical activity and healthy eating.

Self-Efficacy. Students who enrolled in Marathon Kids and students who attended schools that enrolled in Marathon Kids both reported higher levels of physical activity self-efficacy for the 3 pooled measurement periods post Kick-Off event. Self-efficacy is a key construct for predicting health behavior under Social Cognitive Theory (Bandura, 1986; Baranowski et al., 1997). In two recent review papers on mediators of physical activity behavior among children and adolescents, self-efficacy was identified as a key mediator between interventions and physical activity outcomes in several studies (Lubans et al., 2008; Salmon et al., 2009).

Body Mass Index. No significant impact on BMI scores was found for students who participated in the Marathon Kids program. It is possible that the dose of the Marathon Kids program is not great enough to produce a population-level effect on weight status, or that the impact of Marathon Kids may be strongest for only specific types of children such as those who are not currently participating in high levels of physical activity. Further subgroup analyses may provide additional insights. While we did not observe an effect on BMI with the total sample, it is important to note that we found no significant differences in students who participated in Marathon Kids and those who didn't participate by weight status. Thus, our findings suggest that the program holds appeal not only with normal weight children, but also with children who are overweight or obese.

Program Implementation. Implementation of program activities was generally high, although some facets of the program merit further refinement or additional support. Overall, implementation of physical activity-related activities appeared to have the highest level of support in the schools. Teachers also reported high rates of satisfaction with support they receive from Marathon Kids staff (a mean of 4.8 out of a scale of 5). While many schools also reported support with the fruit and vegetable consumption activities, this support was generally lower, with around 40% indicating their students do not fill in the Fuel Log. The lower implementation of the Fuel Log activities was corroborated with findings from the in-depth interviews conducted with Marathon Kids coordinators. School gardens is another component that merits further exploration or emphasis within the Marathon Kids model, given that no schools reported implementing their garden project with support from Marathon Kids. These aspects of the program notwithstanding, the generally high level of support with structuring time for Marathon Kids running and walking goals, the high percentage of schools that send communication home to parents about the program, the high support for tracking miles and displaying within the classroom, and the high participation of teachers in the Marathon Kids celebratory events indicate a generally strong level of support for implementation of core Marathon Kids components.

Limitations of the Evaluation Methodology

Specific limitations of the study merit mention. First, this study was based primarily on self-reported measures of physical activity in children, which are prone to social desirability bias and recall bias. Because these biases should be equally distributed among participants and non-participants, we would not expect these biases to have a major impact on the study conclusions. While we attempted to measure physical activity via pedometers as an additional measure to triangulate our physical activity findings, the lack of compliance among students with filling out the physical activity logs brought into question the viability of the pedometer data. These limitations notwithstanding, 7-day self-reported physical activity recall measures have been found to have evidence of reliability in children (Crocker et al., 1997) and reliability and validity for 5th, 8th and 11th grade children in the United States (Sallis et al., 1993). Other strengths of the study include the assessment of our primary variables of interest at four time points over the school year, which provides a greater measure of stability of a given measure while also allowing for a better assessment of change over time. Another strength of our assessment measures was the inclusion of additional data sources with which to triangulate our impact findings. As such, we found parent report of child physical activity as well as cross-sectional findings from two, large-scale studies of 4th grade students to corroborate our findings of greater times of physical activity (running) in Marathon Kids participants. A second limitation is inherent to our nonequivalent control group design. Because we were not able to randomly assign students or schools to intervention conditions, we cannot totally rule out a selection bias in which students or schools may be more inclined for physical activity prior to participating in Marathon Kids. In addressing this threat to validity, we attempted to match schools to the extent possible on specific characteristics and adjusted for key socio-demographic and selection differences (e.g., parent social support) in the analyses. A third limitation that should be taken into consideration has to do with the generalizability of the findings. Because our study focused specifically on 4th and 5th grade children in primarily urban and suburban areas, we cannot make inferences of the findings for younger-aged children or children from rural areas. The diversity of our sample in terms of ethnicity, socio-economic status, gender, and location (two different school districts), on the other hand, provides some foundation for generalizability of the findings to children and schools with similar ethnic and socio-economic compositions.

Recommendations for Enhancing Marathon Kids

1. Fruit and Vegetable Consumption: While fruit and vegetable consumption was generally higher among Marathon Kids students, these differences lost significance upon adjusting for school economic disadvantage. We recommend further exploration of strategies for promoting this component of the program.
2. School Gardens: As noted above, we recommend continued exploration of the promotion and delivery of this component, especially given its low implementation rates.
3. Communication with Parents: Given that around 50% of Marathon Kids coordinators indicated that no follow-up communication was provided to families during the course of the program, Marathon Kids may consider strategies for helping schools increase communication about Marathon Kids during the course of the program with the aim of maintaining high levels of support from families for the program.
4. Communication with School Staff: Although Marathon Kids Coordinators appeared to be satisfied with current communication from Marathon Kids staff, MK staff may consider strategies for increasing communication with key stakeholders (parents, MK school staff) during the school year given deficiencies in completion of some components of the program (e.g., Fuel Log) and in order to share best practices and prompt teacher participation with the program.
5. Parent Support: Some respondents from our PE Teacher online survey indicated lack of parent support for the program as an important barrier, and this theme was echoed in our qualitative in-depth interviews with school staff, which also identified possible cultural barriers for Hispanic families who might not quite understand the program. Further exploration of strategies for increasing parent support should be considered, such as enhanced communication with parents in both English and Spanish and involvement of parents in supporting Marathon Kids at school (perhaps through organization of specific Marathon Kids events at school such as Turkey Trots and/or organization of transportation to celebratory events).
6. Best Practices: Several innovative practices were shared during our in-depth interviews with Marathon Kids school stakeholders, including approaches for when students participated in their walking and running goals during the school day (or after school), after school clubs that support Marathon Kids, and a variety of fun run events such as Turkey Trots. Marathon Kids may consider compiling these best practices and developing a venue for sharing best practices with schools. Sharing of best practices may be one approach to continue to increase the impact of the program on physical activity and healthy eating goals.
7. Specific input from school Marathon Kids coordinators for strengthening the program included the following: increase media advertisement, presentations by Marathon Kids staff at schools, and provision of transportation to Marathon Kids events.

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Appendix A

Active Kids Project

Student Questionnaire- 4th & 5th Grade

[see attached]

Appendix B

ACTIVE KIDS PROJECT: MARATHON KIDS (MK) EVALUATION STUDY MVP Walk4Life Pedometer Protocol

I. Purpose

The purpose of using pedometers in the MK evaluation project is to measure physical activity in students by quantifying over the measurement period (a) total steps taken; (b) bouts of moderate to vigorous physical activity (MVPA); and (c) total activity time.

II. Staffing Needs

- A. The MK measurement team will prepare, distribute, explain, place and collect pedometers.
- B. Teachers and other individuals can assist with classroom management and remind students of proper pedometer use.

III. Materials

- A. MVP Walk4Life pedometer for each student
- B. Pedometer Velcro security strap for each student
- C. MVP Walk4Life pedometer protocol
- D. Pedometer Log for each staff member
- E. Pedometer assent form for each student
- F. Folder for each student containing Pedometer Information sheet and Activity Logs
- G. Pencil for each student and staff member

IV. Pedometer Preparation

- A. Pedometers will be used at 2 points during the MK evaluation project. They will be used once during Fall 2008 and once during Spring 2009.
- B. Each measurement period will consist of 4 days of pedometer use, including 2 weekdays and 2 weekend days.
- C. All calibration and pedometer placement will take place at the school, by trained project staff.
- D. Project staff will be responsible for proper setup, placement, and locking of the pedometer (see Appendix A).
- E. Project staff will have a pedometer log with student names, ID numbers, a number correlating to each pedometer, date and time the pedometer was placed, date and time pedometer was removed, and data from the pedometer including: steps, MVPA time, MVPA bouts, and activity time. Data will be entered prior to measurement, at the start of measurement, and at the completion of each data collection period, when pedometers are removed.
- F. Upon computer entry of data, paper charts indicating student names will be destroyed.

V. Pedometer Settings

- A. Pedometers will be set, using the directions included in Appendix A, at the following values:
- | | |
|-----------------|-------------------|
| Step filter | 0 steps |
| MVPA threshold | 70 steps / minute |
| Length of bouts | 5 minutes |
- B. Pedometers will be locked with a predetermined code prior to use with students so pedometers settings or data cannot be tampered with.

VI. Administration of pedometers

- A. At a predetermined time, project staff will meet with students who were invited and received parental consent to participate in pedometer measures.
- B. Project staff will administer student assent. Project staff will then explain proper pedometer use to students who give assent (script follows). Students will also be given folders containing project staff contact information in case of pedometer problems, activity logs to fill out each day the pedometer is worn, and instructions for placement and use of the pedometers.
- C. Project staff will then individually place pedometers on students, reiterating important points of use, and recording data onto the pedometer log.
- D. Students will be told when pedometers will be collected. At that time, pedometers will be removed and information will be recorded onto the pedometer log.

VII. Script for project staff

Today you will each be getting a pedometer to wear. The pedometer will tell us about your physical activity by counting how many steps you take. You will not know how many steps you are taking because we will seal the pedometers shut with a sticker. You should not try to remove the sticker. We want you to do all the normal activities you would usually do. This is not a competition or a test. We will not know how many steps you took, because after we remove the pedometers and enter information into a computer, we will use a code number to identify you, not your name. You will need to wear the pedometer starting today, Thursday, until Monday when we pick them up. The pedometer is worn on your waist. It clips onto the top of your waist band. Please wear the pedometer all day until you get into bed. The only other time you should remove the pedometer is when you shower, bathe, swim, or do something that will get it completely wet. Rain or sweat will not hurt the pedometer, so you should wear them when you dance, play sports or games. If you need to take off the pedometer, put it somewhere where it will not be bumped, chewed on (by pets or younger siblings), dropped, or broken.

It is very important that you put the pedometer back on your waist as soon as you can after you are done bathing/showering or swimming, or as soon as possible after you wake up and get dressed.

Now I'm going to demonstrate how you should wear the pedometer. Each pedometer has a Velcro strap attached to it to keep you from losing the pedometer. The pedometer is placed on

your waist band and the metal clip id also clipped to your waist band. The Velcro strap is used so if the pedometer falls off, it will still be attached to you and you can put it back on your waist (***now put the Velcro strap and pedometer on***). Notice how I am placing the pedometer over the top of my pants, directly above my knee. The pedometer needs to be placed here every time you put it on. Wearing the pedometer here will give us the most accurate measure of your activity.

As I mentioned earlier, when you take the pedometer off, for instance to take a shower, place the pedometer in a safe and high place, where pets and young children won't get to it, but also in a place where you can see it (not in a drawer) so you won't forget to put it back on immediately after you are done showering or swimming or right when you get dressed.

The pedometer is fragile and you should be careful with it.

Are there any questions about wearing the pedometer?

Now I am going to explain the activity log you will fill out each day you wear the pedometer (***Pass out folders***). Please write your name on the front of your folder. In your folders is an instruction sheet that has all the information I just explained (***Show "Pedometer Instructions"***). A phone number is also provided on the instruction sheet in case you have any questions. Look at the bottom of the sheet under "Pedometer Pick Up" and find the blank. We are all going to fill out when the pedometers and activity logs will be picked up. Everyone please write "Monday, *Month*, *Day*, *Year*." This is the day we will be back to pick up the pedometers and activity logs. Please bring the logs back in this same folder. If you are absent that day, you can let us or your teacher know when we can come and pick up the pedometer and logs.

Now look on the other side of the folder. You should have 5 pieces of paper, one log for each day until we pick up the pedometers...Thursday, Friday, Saturday, Sunday, Monday. Let's look at the first one, Thursday's. Everyone should start by writing their name, school, and grade at the top of this sheet. You will need to write this on the top of all 5 sheets. (***Let students complete this information***). Now we will read through each part. Remember you will need to fill this out every day you wear the pedometer. You should keep this folder with you all day. The first question says "Did you put your pedometer on this morning?" Everyone should circle "yes" because you are all about to put your pedometers on. The next question says "What time did you put your pedometer on this morning?" You will fill this out once you have the pedometer on and have begun. The next question says "Did you take your pedometer off during the day?" If you went swimming after school and took it off, you would circle "yes". If you take the pedometer off to shower before you go to bed, you would also circle "yes". If you do not take the pedometer off until you go to bed, you would circle "no". The next section says "If you took your pedometer off during the day, why did you take it off and how long was it off?" This is where you write why you took it off, such as "shower" or "swim" and then write in how long it was off, like how many minutes. There are room for 3 times here, if you took the pedometer off more than 3 times, just write on the back of the sheet. The next section says "Did you do any exercises or physical activities today? If so, what did you do and how long did you do it?" This is where you would write anything you did that made your heart beat fast or made you breathe hard. This includes things you did in PE class. So you could write things like ran, played soccer, or skipped rope. You would also write in how long you did the physical activity for. There is room for you to list 3 activities, if you did more than 3, just write on the back of the sheet. The last section says "What time did you take your pedometer off at night (before going to bed)?" here you will write in what time you took the pedometer off, which should be just before going to bed.

You will fill all 5 of these sheets out and turn them in with your pedometer on Monday.

Are there any questions about filling your activity logs out?

Now we will pass out the pedometers. Each of you should put them on as I showed you, on your waist band directly above the knee, and wait for one of us to come around and check the placement.

(Pass out pedometers and have the students put them on. Project staff will now go to every student and perform the steps under “Pedometer Placement” and “Locking the Pedometer” located in the appendix of this document. With each student they will verify understanding of wearing the pedometer and logging activity. They will then place the “do not remove” sticker over each pedometer’s cover to seal them shut.)

Remember, this is where you should place your pedometer every time it is put on. You may now fill out today’s activity log to write what time you put your pedometer on today.

Thank you and remember to call the number on the “Pedometer Instructions” sheet if you have any questions or problems.

VIII. Placing & Locking the Pedometer – Abridged

Placement

1. Press MODE until you see the step counter (leave pedometer open)
2. Hand pedometer and Velcro strap to student to place (help student if needed)
3. Ask student to press & hold RESET until zero appears (help student if needed)
4. Ask student to close the pedometer
5. Instruct student to walk 30 steps
6. Ask student to open the pedometer (help student if needed)
7. If you see 27-33 steps, move on to locking the pedometer
8. If you see below 27 or above 33 steps:
 - a. Ask student to place the pedometer more towards their hip (or try moving in the other direction)
 - b. Start over at step number 3

Locking

1. Ask student to hand you the pedometer (but keep strap attached)
2. Press MODE until you see the step counter
3. Press and quickly release the SET button
4. You should see 5 flashing hyphens (- - - - -)
5. Quickly press SET, RESET, SET, RESET, MODE (23231)
6. Make sure an “L” appears in the lower left corner
7. Close the lid and sticker the pedometer shut
8. Ask student to place the pedometer in the exact place it was

Appendix C

Marathon Kids Evaluation Project

-Interim Evaluation Report-

January 29, 2009

Michael & Susan Dell Center for Advancement of Healthy Living,
University of Texas School of Public Health-Austin

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Summary of Key Findings to Date based on Survey Results from Spring 2008 with 4th Grade Students (n=32 schools, 1,199 students) and In-Depth Interviews with Marathon Kids School Staff (n = 10):

- Among 4th grade students from 3 districts in Travis County who reported participation in Marathon Kids (MK) (n=699), 74.3% indicated they signed up for the program.
- Over two-thirds of MK Participants completed their Mileage Log. Significant differences in Mileage Log completion were observed by socio-economic status (SES) in boys, with boys of higher SES significantly more likely to complete compared to boys of lower SES (82.6% vs. 49.2%, $p < .001$).
- Completion rates of the Fuel Log were ~ 10% lower compared to completion rates of the Mileage Log, with 58.4% of the sample indicating completion.
- Just under a third of MK participants indicated they attended the Kick-Off and Final Mile Run events.
- Girls were significantly more likely than boys to attend the Final Mile Run (34.2% vs. 25.5% of boys, $p < .05$), and the percentage of girls attending the Final Mile Run increased by ~5% from the Kick-Off.
- A higher percentage of students of lower SES attended the Kick-Off Event (38.8% vs. 25.6%, $p < .05$)
- No significant differences were observed in attendance at the two events by ethnicity or language.
- Students who attended MK Kick-Off reported higher mean days of playing outdoors ($p < .05$).
- Sixty-five percent indicated they liked MK “a lot,” the highest value on a 3-point scale.
- No significant differences were observed by socio-demographic characteristics for satisfaction with MK, indicating positive attitudes for MK were evenly distributed by gender, ethnicity, Spanish/English language, SES, and school district.
- The majority of students expressed intentions to do MK again in the coming year (82.4%).
- School staff reported that schools schedule time for their students to run/ walk through a combination of PE classes, recess/activity break, and running clubs. Respondents also discussed a variety of ‘fun run’ events, such as “Turkey Trots”, that were developed at schools as a result of MK.
- School staff indicated that most students complete their Mileage Logs at school with assistance from school faculty. On the other hand, Fuel Logs are not being implemented at the school.
- Barriers and challenges cited by school staff include: parent involvement and misunderstanding, TAKS testing, and conflicts with organizing activities at beginning of school year.

INTRODUCTION

In January 2008, The University of Texas School of Public Health-Austin initiated a two-year evaluation project of the Marathon Kids® Program under a subcontract with Marathon Kids® and based on funding from the Michael & Susan Dell Foundation. The following interim report provides a description of the evaluation, an update on our progress with data collection, and a summary of preliminary evaluation findings based on our spring 2008 survey of 4th grade students and our in-depth interviews with school staff.

PROGRAM DESCRIPTION

Marathon Kids® is a free, nonprofit program that promotes running and walking, healthy eating, and schoolyard gardening for children in grades K through 5 and their families. Founded in 1996 in Austin, Texas, Marathon Kids currently operates in 7 sites throughout the United States: Austin, Dallas, Houston, Harlingen, Los Angeles, Baltimore, and Chicago. In addition, a pilot project was launched in 2008 with the Navajo Nation in Window Rock, Arizona. Marathon Kids is both a school and community-based program that is implemented primarily by school and community volunteers. A small paid staff of four people based in Austin, Texas coordinates program efforts and fundraises to support core program materials and activities.

The core program activities of Marathon Kids center around a ~6-month walking/running and fruit and vegetable consumption program for children in grades K-5 and their families. During the program, students track the number of miles they walk or run along with the number of fruits and vegetables they eat by coloring in their Marathon Kids Mileage Log and Marathon Kids Fuel Log, respectively. Successful completion of Marathon Kids is based on walking or running 26.2 miles over a 6-month period and eating fruit or vegetables 5 times a day for 26 days per month. Students can perform these activities at both school and home. In many schools, structured time is provided during recess, PE class, or during other periods of the school day for students to walk or run with the aim of helping students work toward their 26.2 mile goal. In some schools, teachers often assist students with the tracking of their miles/ fruits & vegetables consumed. A key feature of Marathon Kids is the celebration of children and family physical activity and healthy eating through the Kick-Off and Final Mile Run events, which cap the 6-month program. These events are often held at highly visible public venues, such as university or city football stadiums. Local and national celebrities such as mayors, entertainers, professional athletes, police chiefs, among others often host the Kick-Off and Final Mile Run. Students who complete the program receive a 'finisher' t-shirt, and those who also attend the Final Mile Run receive a medal.

EVALUATION OVERVIEW

The overarching aims of the evaluation of Marathon Kids are to: 1.) assess the impact of participation in the Marathon Kids program on physical activity engagement and related psycho-social factors such as student athletic identity and social support for physical activity and healthy eating; and 2.) describe the process of implementation of Marathon Kids at the school level, including the factors that facilitate and impede implementation of the program. To address these aims, a multi-method approach is being employed that includes both quantitative and qualitative assessment methods. Below we provide an

overview of the evaluation design and methods, an update on progress with data collection, and a summary of preliminary findings.

Evaluation Design, Sample, and Measures

Aim 1: Assess impact of Marathon Kids on student physical activity and related psycho-social factors.

Evaluation Design

In assessing the impact of Marathon Kids on elementary school students' physical activity and healthy eating behaviors (Aim 1), we are conducting two separate studies: 1.) a cross-sectional study of 4th grade students in Central Texas; and 2.) a quasi-experimental study based on a nonequivalent control group design of 7 public elementary schools in HISD (4 Marathon Kids schools and 3 comparison schools) and 8 schools in Round Rock ISD (4 'high implementing schools' and 4 'low implementing schools'). For the cross-sectional study ("Study A"), we are surveying 4th grade students in three districts in Travis County (Austin Independent School District (ISD), Pflugerville ISD, and Manor ISD) who are participating in the four-year Travis County CATCH study. To date, we have collected data from 32 schools in spring of 2008 ($n = 1,199$ 4th grade students). Findings from this study are presented below. We will conduct a second survey of 4th grade students from these same schools in spring of 2009. For the second study ("Study B"), a nonequivalent control group pretest/posttest evaluation design (Figure 1) will compare physical activity and healthy eating outcomes between schools that are implementing Marathon Kids with schools that are either not implementing Marathon Kids or are implementing Marathon Kids on a lower level (comparison). Figure 1 presents the study design employed for Study B, with "O" representing an assessment period and "X" representing the implementation of Marathon Kids. The dotted line indicates the matching of intervention and comparison schools based on socio-demographic characteristics. Four assessment periods have been planned for Aim 1 (O_1 = October '08, O_2 = December '08, O_3 = February '09, O_4 = April '09). Details of each assessment period are provided below.

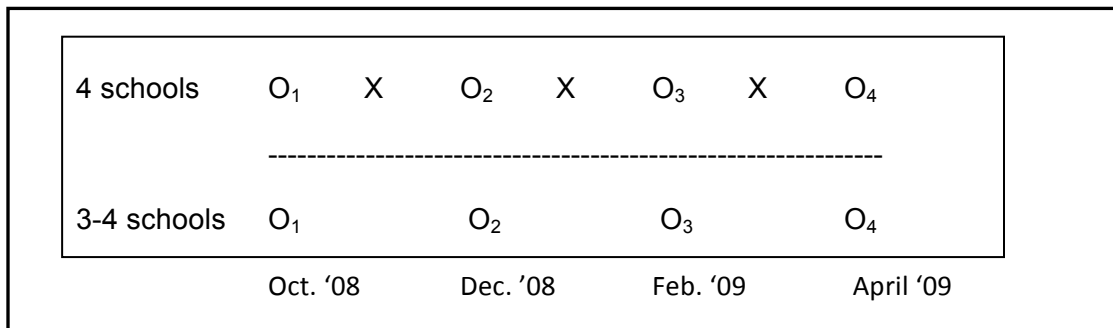


Figure 1. Study B Evaluation Design.

Student Study Sample

Study A: Cross-sectional study of 4th grade students in Central Texas. This sample is part of the Travis County CATCH study, which is based on a representative sample of high, medium, and low income schools in Travis County, with a greater composition of lower income schools (>60% economically disadvantaged students). For the CATCH study, schools were stratified by economic disadvantage and randomly selected from all elementary schools in AISD, Pflugerville ISD, Manor ISD, and Del Valle ISD. For this study, AISD (n=29 schools), Pflugerville ISD (n = 2), and Manor ISD (n=1 school) are included in the analyses; Del Valle was not participating in Marathon Kids at the time of the study and was thus excluded. A total of 32 schools and 1,199 4th grade students were included in the survey from spring 2008. Of these schools, five schools had higher socio-economic status population (<60% economically disadvantaged students), 15 schools had medium socio-economic status (≥60% to <90% economically disadvantaged), and 12 had lower socio-economic status (≥90% economically disadvantaged students).

Study B: Quasi-experimental study of 4th and 5th grade students. Eight schools from RRISD and seven schools from HISD have been recruited for this study. In selecting the sample, schools in HISD and RRISD were stratified by percent composition of economically disadvantaged students according to high, medium and low strata. A list of schools implementing Marathon Kids was then obtained from Marathon Kids staff in Austin, reviewed by the PE coordinator from each school district, and verified by the Marathon Kids Evaluation Project Coordinator with selected schools. In HISD, one high economically disadvantaged school (≥90%), two medium economically disadvantaged schools (≥60% to ≤89%) and one low economically disadvantaged school (<60% disadvantaged) were randomly selected from the list of Marathon Kids schools and then matched with non-participating Marathon Kids schools from the previous year. Schools were matched on economic disadvantage as the primary factor, followed by size and ethnic composition. Due to the promotion of Marathon Kids this year by HISD's PE Coordinator, Jose Santiago, we were not able to recruit an economically better off school that was not implementing Marathon Kids. As such, our sample includes: 2 high economically disadvantaged schools (1 Marathon Kids, 1 comparison), 4 medium disadvantage (2 MK and 2 comparison), and 1 low disadvantage (Marathon Kids).

In RRISD, the majority of schools are implementing Marathon Kids for 2009. As such, the evaluation design in this school district is based on comparing high and low implementing Marathon Kids schools. In assigning schools to these categories, we obtained both 2008 records of participating Marathon Kids schools along with the number of students who completed the program as well as input from Tracy Neely, Round Rock ISD Assistant Athletic Director, who helped confirm the categorization into 'high' and 'low' implementing schools. Because RRISD has a lower level of economic disadvantage, the following categories were developed to classify schools: high economic disadvantage (≥70%), medium disadvantage (≥30% to <70%) and low economic disadvantage (<30%). Our final RRISD sample includes 4 'high' implementing Marathon Kids schools and 4 'low implementing' Marathon Kids schools. For both study sites, we will assess impact of the program on 4th and 5th grade students.

Measures & Data Collection Methods

Assessment measures and methods have been developed to assess both impact-related outcomes such as student physical activity participation and fruit and vegetable consumption as well as implementation of Marathon Kids at school and at home.

Measures implemented with 4th grade cross-sectional study in Travis County (Study A)

- 1.) School Physical Activity and Nutrition 4th Grade Survey (SPAN). The SPAN is a self-administered survey for assessing physical activity and diet with 4th grade students. Currently, the SPAN is being administered to 4th grade students as part of the Travis County CATCH study. We included additional questions on the SPAN to assess participation in Marathon Kids, completion of the MK Mileage and Fuel Logs, and attitudes toward Marathon Kids. Below we present preliminary findings from our spring 2008 survey.

Measures implemented with quasi-experimental study in HISD and RRISD (Study B):

- 2.) A self-administered student questionnaire to assess physical activity and fruit and vegetable consumption of 4th and 5th grade students (“Active Kids Project” questionnaire), which includes items to assess physical activity engagement; fruit and vegetable consumption; and psychosocial factors such as students’ athletic identity, self-efficacy for physical activity, social support for physical activity. This survey is administered at four time points over the school year (in October ‘08, December ‘08, February ‘09, and April ‘09).
- 3.) A self-administered student questionnaire to assess student participation in and satisfaction with Marathon Kids (“Active Kids Project: Marathon Kids” questionnaire). This questionnaire is administered only with Marathon Kids’ schools at the end of the project in April 2009.
- 4.) Student height and weight measurements. We assessed 4th and 5th grade student heights and weights in October ‘08 and will assess again in April ‘09. These measures will provide data on student body mass index (BMI).
- 5.) A self-administered parent questionnaire (“Active Kids Parent Survey”) to assess parent social support of child participation in physical activity and fruit and vegetable consumption, parent physical activity engagement, and parent attitudes toward physical activity. This survey was administered in October ‘08 and will be administered again in April ‘09.
- 6.) A self-administered parent questionnaire (Active Kids Parent Survey: Marathon Kids”) to assess participation in Marathon Kids and attitudes toward Marathon Kids. This survey will be administered in April ‘09.

- 7.) A pedometer assessment of student physical activity (HISD schools only). Student participants will wear the pedometer on Thursday through Monday on two time periods during the study: in October '08 and in February '09.
- 8.) A Marathon Kids school coordinator structured interview to assess implementation of Marathon Kids at school. This interview will be conducted with the PE teacher or a classroom teacher who has been designated as the MK coordinator. The interviews will take place in April '09.

Measures implemented with other Marathon Kids stakeholders:

- 9.) In-depth, face-to-face interviews with school staff implementing Marathon Kids. This qualitative assessment method aims to provide deeper insights into how Marathon Kids is currently being implemented. Ten interviews were conducted in summer 2008. We present preliminary findings on this qualitative study below.
- 10.) An online self-administered questionnaire with Marathon Kids school coordinators. This survey will be administered to school districts in Central Texas (Austin, Round Rock, Del Valle, Pflugerville and Manor) and aims to assess various aspects of Marathon Kids implementation at the school level. A pilot survey was administered in Spring 2008 to assess the delivery system; the main online survey will be administered in April of 2009.

Progress with Data Collection to Date

Student baseline data collection occurred between October and November 2008, and consisted of physical activity surveys and height/weight measurement of 4th and 5th grade students in Round Rock and Houston ISD, and physical activity assessment via pedometers with a subsample of 5th graders in Houston ISD. A total of n = 1,137 students participated in the surveys, of whom 1,136 were measured for height/weight. Data were collected from 112 students who participated in the pedometer assessment. Parent surveys were sent home in November of 2008, with 1094 parent surveys collected. The first interim measurement period took place in December 2008 and included a second administration of surveys with 1065 students.

Preparation is under way for the second interim measurement period which will occur during February 2009. During this time, students and parents will complete surveys, and pedometer measures will take place with the HISD subsample. In April 2009, the final measurement period will take place. During this time students completed surveys and have their height/weight measured. Appendix A presents the sample size and response rates for the Impact Study (Table 1) as well details on completed and proposed dates for data collection (Table 2).

PRELIMINARY FINDINGS

For this interim report, we present preliminary findings from our cross-sectional study of 4th grade students from AISD, Pflugerville ISD, and Manor ISD (Study A cited above) along with highlights from our in-depth interviews with 10 PE and classroom teachers from Travis County, Texas who facilitate implementation of Marathon Kids program in their respective schools.

Cross-sectional study of 4th grade students from Travis County (Study A)

Students Who Signed Up for Marathon Kids: Total Sample

In April and May of 2008, a self-administered questionnaire (“SPAN”) was implemented with 4th grade students from 32 public elementary schools. In analyzing the data, descriptive statistics were computed using SPSS v.18 (Chicago, IL.) Chi-square tests for categorical data and t-tests for continuous data were conducted to assess statistical significance, which was set at $p < .05$. Table 3 (Appendix A) presents the sample size and socio-demographic characteristics of the 4th grade student participants. Among the 1,199 students who completed the questionnaire, the majority were Hispanic (57%), followed by African American (14%), and White (12%), with 18% representing “Other” ethnic groups. The sample was evenly divided between boys (49.8%) and girls (50.2%). The majority of students attended schools in AISD (90%). Among the total sample, just under half indicated that they signed up for Marathon Kids (44.7%), with no significant ethnic or Spanish/English differences among those signing up. Statistically significant differences among those signing up for Marathon Kids were observed by income level, with those of a higher income reporting an over 10% higher rate of signing up compared to those of lower income (49.6% vs. 38.8%, respectively, $p < .05$), as well as school district, with Non-AISD students more likely to sign up compared to AISD (54.6% vs. 43.6%, respectively, $p < .05$).

Marathon Kids Participants

Among the total sample ($n = 1,199$), 42% indicated that they “didn’t do Marathon Kids this year.” As such, we limited the findings for the following analyses to those who indicated they did participate in Marathon Kids ($n = 699$). Socio-demographic characteristics of the Marathon Kids participants were similar to those of the total sample (Appendix A, Table 3). Of those participating in Marathon Kids, almost three-quarters indicated that they signed up for the program (74.3%), with girls indicating a higher rate of signing up compared to boys (77.9% vs. 70.9%, $p < .05$). A higher percentage of students from higher socio-economic status (SES) indicated they signed up for Marathon Kids (77.8% of higher SES compared to 71.0% of lower SES), although significant difference were only found for boys (78.9% of higher SES compared to 63.9% of lower SES, $p < .05$). Over two-thirds of the Marathon Kids participant sample indicated that they completed their Marathon Kids Mileage Log, with similar rates of completion by ethnic group, Spanish/English language, and school district. Significant differences in completion of the Mileage Log were only observed by SES, with boys of higher SES significantly more likely to report completing their Mileage Log (82.6% vs. 49.2% of lower SES, $p < .001$). Completion rates of the Fuel Log were ~ 10% lower compared to completion rates of the Mileage Log, with 58.4% of the sample indicating completion. A significantly higher percentage of African American and Hispanic girls reported completing their Fuel Log compared to White and other ethnic groups (~65% vs. 44% for white students,

$p < .05$). Lower income girls were also more likely to report completing their Fuel Log (69.9% vs. 50.9% of higher income, $p < .05$). Borderline significance was also observed by school district, with students in AISD reporting a higher completion of their Fuel Log compared to Non-AISD (Appendix A, Table 3).

Attendance at Marathon Kids Events

Just under a third of Marathon Kids participants indicated they attended the Kick-Off and Final Mile Run events (Appendix A, Table 4). Girls were significantly more likely than boys to attend the Final Mile Run (34.2% vs. 25.5% of boys, $p < .05$), and the percentage of girls attending the Final Mile Run increased by ~5% from the Kick-Off event. Significant difference in attendance at events was observed by SES and school district. A higher percentage of students of lower SES attended the Kick-Off Event (38.8% vs. 25.6%, $p < .05$), with the largest difference observed by SES in girls. Students from AISD were also more likely than students from PISD and Manor ISD to attend the Kick-Off event ($p < .05$) and Final Mile Run event (Not Significant). No significant differences were observed in attendance at the two events by ethnicity or Spanish/English language.

Student Satisfaction with Marathon Kids

Among students participating in Marathon Kids, 65% indicated they liked Marathon Kids “a lot,” the highest value based on a Likert-type response scale that also included the responses: “Not very much” and “a little.” No significant differences were observed by socio-demographic characteristics for satisfaction with Marathon Kids, indicating that liking of Marathon Kids was evenly distributed by gender, ethnicity, Spanish/English language, SES, and school district. The majority of students expressed their intentions to do Marathon Kids again in the coming year (82.4%). With the exception of gender and boys’ SES strata, no significant differences in intentions to do Marathon Kids in the coming year were found by ethnicity, Spanish/English language, or school district. A slightly higher percentage of girls compared to boys reported intentions to do Marathon Kids in the coming year (85.5% vs. 79.4%, $p < .05$), as well as higher percentage of higher SES students compared to lower SES students (84.8% vs. 76.9%, respectively, $p < .05$) (Appendix A, Table 5).

Associations between Marathon Kids Participation and Physical Activity

As the SPAN survey also provides items on self-reported physical activity, we also explored whether students who participate in Marathon Kids were more likely to engage in physical activity. We found that students who attended the Marathon Kids Kick-Off event (4.6 vs. 4.0 mean days for non-participants, $p = .006$) and completed their Fuel Logs (4.3 vs. 3.95 days for nonparticipants, $p < .05$) reported a significantly higher mean days of playing outdoors in the past 7 days [data not shown in tables]. Preliminary analyses indicate no significant differences between Marathon Kids participants and non-participants for engagement in vigorous physical activity or engagement in sports in the past 7 days. However, Marathon Kids participants tended to report slightly higher means. Further sub-group analyses by gender and ethnicity will be conducted to explore these associations as well as associations with fruit and vegetable consumption.

Qualitative Findings on the Implementation of Marathon Kids in Select Schools in Central Texas

During summer 2008, 10 qualitative interviews were conducted with Marathon Kids program coordinators and supporting faculty in six elementary schools in four school districts in central Texas. A master-level anthropologist (Sherman Chow) with experience in qualitative research conducted, transcribed, and analyzed the interviews. Study participants included PE teachers (n=5), classroom teachers (n=4) and one school counselor. Semi-structured interviews were conducted in-person. Interviews were transcribed, coded, and analyzed to identify key themes. Four thematic categories emerged: 1) school approaches to implementing the program; 2) perceived benefits of Marathon Kids; 3) program support; and 4) program barriers. These four thematic categories and their subsequent sub-themes are discussed in detail in the report (see Appendix B for full report).

The *program implementation* theme centers on: the actual implementation of the program at the school level; school modifications of the Mileage Log; and how CATCH curriculum is used for nutrition education instead of the Fuel log. Important findings that emerged from this theme indicate that most schools schedule specific time during the school day for students to work toward their Marathon Kids' walking and running goals. Specifically, respondents stated that their students ran/ walked at school through a combination of PE classes, recess/ W.O.W. ("Working Out for Wellness") time, and through running/ jogging clubs. Respondents also discussed a variety of 'fun run' events, such as "Turkey Trots", that were developed at their schools as a result of or in support of Marathon Kids. Lastly, respondents indicated that most students complete their Mileage Logs at school with assistance from school faculty or in support of Marathon Kids. On the other hand, Fuel Logs are not being implemented at the school as indicated by all respondents.

The *benefits* theme focuses on the perceived benefits (besides physical/ exercise benefits) of the Marathon Kids program. These perceived program benefits included: mood and confidence boosting; potential testing and academic performance benefits; and an energy release for ADHD students. *Program support* explores two areas: teacher and administration support; and parent support. Teacher and administration support indicated that schools embrace Marathon Kids as a celebration and tradition. Several schools have developed specific celebrations during the year to promote and embrace Marathon Kids, including Marathon Kids T-Shirt days, contests and celebrations for the classroom of students that walks or runs the most miles, and awards for students who walk or run a certain number of miles. Parent support for Marathon Kids, on the other hand, has been found to be mixed. At one school, for example, attempts to bring parents to school for Marathon Kids event resulted in very low turn-out.

Finally, *program barriers* focus on barriers and obstacles surrounding the implementation of the Marathon Kids program. These include: challenges with recruiting students at the beginning of the school year as well as organizing for the Kick-Off event; parent misunderstandings about the program—such as thinking that the program entails running a complete marathon at one point in time as well as motivating parents to attend the Marathon Kids events; Hispanic cultural barriers, with some respondents suggesting that Hispanic families "don't get it," while another respondent indicating that Hispanic families are starting to recognize the importance of physical activity and exercise; community/

environmental barriers in terms of safety concerns as a barrier for children walking and running in their community; and TAKS/ TEKS testing priorities. A detailed description of the interviews along with analysis and considerations for enhancements to the Marathon Kids program are presented in the full study (see Appendix B).

NEXT STEPS: For this spring semester of 2009, we will move forward with our two remaining data collection periods for the quasi-experimental study (Study B) in RRISD and HISD. We have also recently updated the Marathon Kids questions for the cross-sectional study of 4th grade students in Travis County with the aim of administering that questionnaire in April of 2009. The Marathon Kids Online Coordinator Survey is currently being formatted for Survey Monkey, which will be administered with school districts in Central Texas with the aim of learning more about how schools implement Marathon Kids. In addition, we will continue to explore sub-group analyses to assess the association between Marathon Kids participation and various health behaviors in our sample of 4th grade students from AISD and PISD from 2008. For our final report, we will synthesize findings from the various measures and data collection instruments and provide a lessons learned and recommendations for program enhancement section.

Appendix C (continued)

Marathon Kids Evaluation Project

**Qualitative Study of
the Implementation of Marathon Kids
in Select Schools in Central Texas**

November 2008

University of Texas School of Public Health-Austin Regional Campus

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Abstract

This report discusses the results and conclusions of the qualitative component of the Marathon Kids Evaluation Project. Marathon Kids is a 6-month school and community-based program that promotes walking/running and fruit and vegetable consumption with elementary school children and their families. During summer 2008, 10 qualitative interviews were conducted with Marathon Kids program coordinators and supporting faculty in six elementary schools in four school districts in central Texas. Study participants included PE teachers (n=5), classroom teachers (n=4) and one school counselor. Semi-structured interviews were conducted in-person. Interviews were transcribed, coded, and analyzed to identify key themes. Four thematic categories emerged: 1) school approaches to implementing the program; 2) perceived benefits of Marathon Kids; 3) program support; and 4) program barriers. These four thematic categories and their subsequent sub-themes are discussed in detail in the report.

The *program implementation* theme centers on: the actual implementation of the program at the school level; school modifications of the Mileage Log; and how CATCH curriculum is used for nutrition education instead of the Fuel log. Important findings that emerged from this theme indicate that most schools program time during the school day for students to work toward their walking and running Marathon Kids' goals. Specifically, respondents stated that their students ran/ walked at school through a combination of PE classes, recess/ WOW ("Working Out for Wellness") time, and through running/ jogging clubs. Respondents also discussed a variety of 'fun run' events, such as "Turkey Trots", that were developed at their schools as a result of Marathon Kids. Most students complete their Mileage Logs at school with assistance from school faculty or in support of Marathon Kids. Fuel Logs, on the other hand, are not being implemented at the school according to the respondents. The *benefits* theme focuses on the perceived benefits (besides physical/ exercise benefits) of the Marathon Kids programs. These perceived program benefits included: mood and confidence boosting; potential testing and academic performance benefits; and an energy release for ADHD students. *Program support* explores two areas: teacher and administration support; and parent support. Teacher and administration support centers on

how schools embrace Marathon Kids as a celebration and tradition. On the other hand, parent support for Marathon Kids has been found to be mixed. Finally, *program barriers* focus on barriers and obstacles surrounding the implementation of the Marathon Kids program. These include: first of the year time constraints; parent misunderstandings about the program; Hispanic cultural barriers; community/ environmental barriers; and TAKS/ TEKS testing priorities. Two conclusions are made from these findings: 1) Schools employ an “individualizing” strategy in order to make the Marathon Kids program their own; and 2) the Marathon Kids program is a component situated within a dynamic setting made up of the school system and individual neighborhoods and communities. Finally, four avenues of future exploration are suggested: 1) Advocate for program implementation at schools on all “levels” (administration, faculty, and staff); 2) Include student and staff motivators or incentives; 3) Encourage the creation of a Marathon Kids committee at each school; and 4.) Strengthen communication with parents to promote child and family engagement in Marathon Kids outside of school.

Introduction

In January of 2008, the University of Texas School of Public Health-Austin Regional Campus was subcontracted by Marathon Kids (MK) with funding from the Michael & Susan Dell Foundation to conduct a process and impact evaluation of their program. Marathon Kids was founded in 1994 with the aim of promoting walking/running and fruit and vegetable consumption in elementary school children and their families. As an initial step in evaluating Marathon Kids, we attempted to develop a better conceptualization of how Marathon Kids is implemented in elementary schools through face-to-face interviews with key school personnel. The purpose of this qualitative study was to ascertain and explore the ways in which Marathon Kids is implemented at schools. Topics of interest included: the delivery and facilitation of the Marathon Kids program; strengths and barriers of the program; benefits of the program; and potential program improvements. The report presents findings from ten qualitative interviews conducted with Marathon Kids school coordinators and classroom teachers from six schools located in central Texas. In addition, we explore specific recommendations for enhancing the program implementation based on our findings along with limitations and practical considerations of the study.

Methods

This section discusses the research methods of the qualitative component of the Marathon Kids Evaluation Project. Specifically, this discussion focuses on study sampling; interview tool; interview protocol; and the data analysis process. However, before these topics are covered, a philosophical description of the underpinnings of qualitative data methodology is appropriate in order to understand its role in this project.

Philosophy and Role of Qualitative Data

The most salient difference between qualitative data and quantitative data is that qualitative data is inherently unquantifiable. Quantitative data relies on precise and accurate measurements, such as height and weight measurements as well as measures captured in surveys. On the other hand, qualitative data is concerned with capturing people’s experiential accounts. As a result, qualitative data takes the form of rich, detailed descriptions of respondents’ pertinent life experiences and events, which are analyzed and presented as relevant themes. As such, qualitative data collection explores avenues of inquiry, such as open-ended interviews, that are not usually included within quantitative data collection tools (for example, surveys). Therefore, incorporating both qualitative and quantitative methodologies

allows for a more complimentary approach to the project. By capturing measurable characteristics (physical activity) and collecting qualitative data from PE coaches' and teachers' experiences on program implementation allow for a more accurate assessment of the Marathon Kids program.

Qualitative Data Collection Protocol (Appendix D)

Qualitative data collection for the Marathon Kids Evaluation Project consisted of face-to-face, semi-structured interviews with PE coaches and teachers in schools implementing the Marathon Kids program. Qualitative data collection was collected during summer 2008. Two stages of participant recruitment were conducted: 1.) recruitment of Marathon Kids school coordinators; and 2.) recruitment of classroom teachers. Ten Marathon Kids coordinators were randomly selected and invited through email to participate in the qualitative interview by the Marathon Kids Project Coordinator, Heather Hochberg-Garret (MPH, RD, LD). Six out of ten coordinators agreed to participate in the interviews. In our second recruitment stage, we used a snowball recruitment method in which names of classroom teachers were elicited from Marathon Kids coordinators and PE teachers. Classroom teachers were recruited in order to provide a more comprehensive understanding of the implementation of Marathon Kids at the school from school staff who may not be directly involved in organizing Marathon Kids. We identified four classroom teachers through this approach, and all four agreed to participate.

As a result, ten total interviews were conducted for the qualitative component of this project (Table 1). Ten interviews was the initial goal for the study, and the criterion to pursue additional interviews was based on saturation of participant responses. Simply, the variability of participant responses stopped at the tenth interview. Finally, it is important to note that respondents' identities and their respective schools have been kept confidential and pseudonyms have instead been employed.

Table 1. Interview Participants

| Marathon Kids Program Coordinator | Teacher Follow-up | School |
|-----------------------------------|---------------------------|---------|
| Albert Rictor (PE) | Cory Shelly (3rd grade) | Alma |
| Rudy Sanchez (PE) | Renee Swain (5th grade) | Zelda |
| Lori Soren (Counselor) | None | Micah |
| Carrie Anise (PE) | Annie Rom (1st grade) | Oceanic |
| Terri Bloom (PE) | Iraida Gustav (3rd grade) | Globe |
| Polly Bleaker (PE) | None | Juneau |

Interviews were scheduled and conducted with respondents by project research assistant, Sherman Chow (MPH, MA). Interviews were scheduled and conducted in neutral locations (schools, coffeehouses, etc.) in order for the participants to be as comfortable as possible. The interview process took between 20 to 30 minutes for each participant, and participants received a \$25 VISA gift card as a sign of our appreciation. Interview participants were read an informed consent, and agreeing to its terms, all conducted interviews were recorded on a digital recorder. The interview questionnaire contained short demographic survey questions, and semi-structured, open-ended questions pertaining to the implementation of Marathon Kids in their respective schools (Appendix D).

Qualitative Data Analysis

All interviews were transcribed in order to facilitate data analysis. Qualitative data analysis consisted of creating a coding scheme based on the interview questions and responses. Interview passages were coded and further sub-coded into conceptual categories. Essentially, coding involved structured organizing of interview passages into categories in order to facilitate analysis and interpretation. Organization of coded and sub-coded passages of transcribed text was examined and emergent themes were identified. These themes are presented in the next section.

Results

This section presents the results and findings of the qualitative data collection component of the Marathon Kids Evaluation Project. First, participant school-related demographics will be presented in order to display a better picture of the study population and their overall characteristics. Second, pertinent themes discovered from the open-ended interviews will be presented. A discussion of the results presented here will be the subject of the next section.

Participant School-related Demographics

This section presents participant school-related demographics, which were collected before conducting the open-ended interviews. A total of ten (N=10) participants conducted the study. The sample consisted of five PE coaches (50%), one counselor (10%), and four grade level teachers (40%) (Table 2). In terms of sex, the majority of participants were female (N=8, 80%) with only two male participants (20%) (Table 3). The majority of participants taught K-5th grades (N=6, 60%). This is to be expected as the sample composed of five PE coaches and one elementary school counselor. The rest of the sample consisted of one 1st grade teacher (10%), two 3rd grade teachers (20%), and one 5th grade teacher (10%) (Table 4). In terms of length of teaching, the range consisted from 1 year to 25 years, with 10.7 years as the average length of teaching (Table 5). In regards to length of implementing Marathon Kids, the range consisted from 1 to 10 years, with 5 years of implementation as the average (Table 5). Finally, participants were asked to describe how they first heard of the Marathon Kids program (Table 6). One participant (10%) stated that she discovered it in a school presentation. Four participants (40%) stated that it was through their school's participation. And, five participants (50%) stated that it was through outside (non-school) sources such as news media, advertisements, graduate school, AAPER (Austin Association for Physical Education Recreation), and through their own children's involvement in the Marathon Kids program.

Table 2. Study Sample Categorized by Occupation

| Occupation | N | % |
|---------------------|---|----|
| PE Coach | 5 | 50 |
| Counselor | 1 | 10 |
| Grade level Teacher | 4 | 40 |

Table 3. Study Sample Categorized by Sex

| Sex | N | % |
|------|---|----|
| Male | 2 | 20 |

| | | |
|--------|---|----|
| Female | 8 | 80 |
|--------|---|----|

Table 4. Study Sample Categorized by Grade Level

| Grade Level | N | % |
|-------------|---|----|
| 1st | 1 | 10 |
| 3rd | 2 | 20 |
| 5th | 1 | 10 |
| K-5th | 6 | 60 |

Table 5. Study Sample Categorized by Length of Teaching and MK Implementing

| Participant | Years Teaching | Years Implementing MK | Average # of Years Teaching | Average # of Years Implementing MK |
|-------------|----------------|-----------------------|-----------------------------|------------------------------------|
| 1 | 8 | 7 | 10.7 | 5 |
| 2 | 1 | 1 | | |
| 3 | 16 | 2 | | |
| 4 | 21 | 10 | | |
| 5 | 11 | 3 | | |
| 6 | 25 | 10 | | |
| 7 | 5 | 5 | | |
| 8 | 2 | 2 | | |
| 9 | 7 | 7 | | |
| 10 | 11 | 3 | | |

Table 6. Study Sample Categorized by Discovery of MK

| | N | % |
|---|---|----|
| School Presentation | 1 | 10 |
| School's Participation in MK | 4 | 40 |
| Other (News Media, Graduate School, Advertisement, AAPER, Children's Participation) | 5 | 50 |

Relevant Themes

This section presents the relevant themes that emerged from the interviews. The themes are divided into four categories: (I) Program Implementation; (II) Marathon Kids Benefits; (III) Program Support; and (IV) Program Barriers. Within each category, the related themes are explored in detail with supplementary respondent quotes and passages (Table 7).

Table 7. Thematic Categories Summary

| Thematic Categories | |
|----------------------------------|-----------------------------|
| I. Program Implementation | III. Program Support |
| 1a. School Implementation. | IIIa. Celebratory Tradition |

| | |
|---|--|
| Ib. Modified Mileage Log | IIIb. Parent Support is Mixed |
| Ic. CATCH Health Promotion | IV. Program Barriers |
| II. Perceived Benefits | IVa. Time Crunch |
| IIa. Mood elevator & Confidence booster | IVb. Parents Just Don't Understand |
| IIb. Potential Testing and Alertness | IVc. Cultural Barriers |
| IIc. Energy Release for ADHD students | IVd. Community & Environmental Factors |
| | IVe. TAKs Testing is a Top Priority |

I. Program Implementation

The themes in this category center on how the Marathon Kids program is implemented and facilitated in respondents' respective schools. These themes focus on the implementation of the program at the school level; how schools modify the mileage log for their own needs; and the reasons why the Fuel log is not implemented.

Ia. Marathon Kids is Implemented at the School Level.

The majority of respondents stated that the actual implementation of the Marathon Kids program was conducted at their respective schools. That is, the majority of running/ walking to meet the goal of 26.2 miles was conducted on school grounds. Specifically, respondents stated that their students ran/ walked at school through a combination of PE classes, recess/ WOW ("Working Out for Wellness") time, and through running/ jogging clubs. For example, Rudy Sanchez, a PE coach at Zelda Elementary, gives a typical answer, *"it's really a school supported program. The grade level teachers, they have their students do laps before they start recess. And we do laps in PE"*.

Additionally, several schools held running events such as Fun Runs, Turkey Trots, and Jingle Bell Runs in order to supplement the already existing structured time for students to run/ walk. Carrie Anise, a PE coach at Oceanic Elementary, states, *"We do also a cross-country run, and so that kind of helps gets them motivated. We do our Jingle Bell run. Another school I know does a Turkey Trot, and that kind of thing. So we got, you know, a little fun run going in there"*. As Carrie states, the purpose of these events is to motivate students to keep running. Indeed, Renee Swain, a 5th grade teacher at Zelda Elementary, states that they have had celebrity appearances at school events to boost motivation, *"we're trying to get more and more kids involved in running. And in the past here at Zelda we have a Fun Run. It's an annual event and for the last 2 years we've done it ourselves...She [Mia Hamm, soccer player] was here. She has a relative that goes to our school...And so she came and was like a celebrity at one of our Fun Runs one year"*.

Only one school (Alma Elementary) did not implement the Marathon Kids program at their school. When asked why, the PE coach, Adam Rictor responded:

"They do it on their own. We don't do it in class. They actually do it on their own...We could have them run around in PE, but I think that's extremely boring for the kids to do every single day. I only see them every 3 days...I don't spend every day with them, and when I do see them I try not to talk to them too much. I try to get them as active as I can."

Similarly, Polly Bleaker, a PE coach at Juneau Elementary, while sharing Adam's opinions of PE class time, expressed that her school still found ways to implement Marathon Kids. Polly states, *"They always do that [Marathon Kids] at the classroom. I have all the equipment and skills to do the more difficult*

things so the teachers are covering that cardiovascular component on a daily basis, which is more effective than every 3 days”.

Ib. Schools Utilize a Modified Mileage Logs to Suit Their Needs

As stated earlier, the majority of the Marathon Kids program is conducted on school campuses in a structured format. This same majority of respondents also stated, essentially, the mileage log provided by Marathon Kids served as a template for schools to create their own version of the mileage log. Generally, the reasons behind the creation of these modified mileage logs are convenience in order to facilitate the Marathon Kids program on their respective school campuses.

For instance, at Zelda Elementary the school track is 6 laps to a mile. As a result, the Zelda mileage log incorporates a six-sectioned star in which each section is a lap to be colored in. PE coach, Rudy Sanchez, explains, *“It’s a lot more convenient. The one that ya’ll have works, you know, when they take it home, and do it at home...But this one [Zelda version] just makes it, when the teachers or myself are keeping track of it, it helps make it a lot easier”.* Simply, school tracks may not be a quarter mile in length, and the Marathon Kids mileage log may not be appropriate (The Marathon Kids mileage form depicts pie charts as miles, divided into quarters to be colored in). As Carrie Anise succinctly states, *“we have an eighth of a mile track so I have to go in and cut it [mileage log] up and be smaller. Cause each one is a quarter. I don’t think there’s one school that has a quarter mile track.”*

Of note, Oceanic Elementary PE coach, Polly Bleaker, and 1st grade teacher, Annie Rom, not only utilize their own mileage log, but they also incorporate the running/ walking from Marathon Kids into their math curriculum. According to Polly,

“I created some different things for classrooms according to what their teacher wanted. For example, first grade uses what’s called a Hundreds Chart, which is a math tool, and the kids would come in and color off the number of laps. Each classroom teacher fit it to their math curriculum...For example, 5th grade can get more into fractions and decimals. If they do an odd number of laps...We have them keep a decimal or use a fractional component to connect with their laps.”

Annie Rom also verifies this by stating,

“she (Polly) asks us to graph it, and I use it in my math. So I incorporate it with math...In the 1st grade they’re still learning. They’re learning halves, thirds, and fourths. Why not go beyond? They really like it. They’re like, ‘oh, we already have one little piece of pie’.

In terms of tracking students’ mileage accrued from day to day, both PE teachers and classroom teachers assisted students to record laps on their modified mileage logs. Very little was mentioned in the interviews about students completing mileage logs at home by themselves or even receiving help from their parents or other family members to complete their mileage logs. Also, the interviews seemed to indicate that a minority of students turned in mileage logs that were completed at home.

Ic. Nutrition and Health Promotion is Covered in CATCH

The participant interviews revealed that practically no school implemented the Marathon Kids Fuel Log. Overwhelmingly, participants stated that the CATCH (Coordinated Approach to Children’s Health) curriculum as well as their own respective health/ nutrition promotion (Wellness Wednesday, daily nutrition facts, etc.) served to cover health and nutrition education for students. Thereby, the

CATCH curriculum is taught in elementary schools in lieu of the nutrition/ Fuel log component of Marathon Kids. For example, when asked about the nutritional component and fuel log, PE coach, Polly Bleaker stated, *“Not through Marathon Kids. We use the CATCH Go, Slow, and Whoa foods in our cafeteria and things like that...So we do that more as separate from Marathon Kids, our school wellness thing”*. In the future, reconsideration of the planning and implementation of the Marathon Kids nutrition and Fuel log components may be necessary.

II. Marathon Kids Perceived Benefits

This section focuses on the perceived benefits of the Marathon Kids programs from Marathon Kids school coordinators as well as grade level teachers. While the physical activity and exercise benefits of the program were universally agreed upon, the interviews revealed that cognitive/ behavioral benefits existed as well.

IIa. Marathon Kids as a Confidence Booster and Mood Elevator

While exploring the benefits of Marathon Kids, participants often touched on the ways in which Marathon Kids benefits depressed and overweight children. Counselor and Marathon Kids coordinator at Micah elementary, Lori Soren recounts, *“I’ve got kids, who have depression issues, and they know that if they go to jogging club when they start their day they’re in a happier mood than if they just walked into class...It’s [Marathon Kids/ Jogging club] emotional [positive] affecting”*. According to Lori, the salient benefit of Marathon Kids to children who suffer from depression is that the program can act as a mood and emotional elevator. Renee, 5th grade teacher at Zelda elementary, observes that Marathon Kids acts as a confidence builder and booster in her overweight students. Renee said:

“Well, we do have some kids that are overweight, who have problems running the laps. So I do see some kids, mainly the ones who are overweight, who struggle with the program. But I’ve also had kids in the past who have really been pleased that, ‘look what I did. I’m overweight and look what I finished [Marathon Kids]’. You know, I did it a little bit, a day at a time, and some of those kids even go the Final Mile. You know, they feel really good about it...it really does help improve their confidence to watch those numbers [mileage] being marked off and how close they’re getting to finishing [26.2 miles goal]”.

While Renee sees some overweight children struggling with the running/ walking requirements, she also sees children struggle and succeed with the program and even attend events, which serves to increase their confidence and, potentially, their self-image.

Finally, Iraida Gustav, a 3rd grade teacher at Globe elementary, states that the benefits of Marathon Kids with overweight children are enhanced in conjunction with a supplemental nutrition program. This nutrition program was conducted by Capital Area Food Bank through four one-hour classes. Iraida points out:

“It [Marathon Kids] also helps our overweight children because even if they’re not running, they’re getting them up to walk... In combination with nutrition classes, this year I also participated in Capital Area Food Bank nutritional classes. So they[nutrition classes] taught them how to read labels, and how to make little healthy snacks and the decisions that they make. Instead of reaching for that bag of hot cheetos, maybe some yogurt and berries or fruit and peanut butter and bananas. So I think in combination with that, that made them more aware of

that. Because it really isn't something they get at home. Just having the information [nutritional] there, the kids aren't really going to read about it. Unless it's some kind of big, you know, presentation kind of thing where they'll really remember it, the visual or physical connection, they're not going to really read it."

As Iraida stated, the benefits of Marathon Kids increased overweight children's activity levels. Additionally, the supplemental Capital Area Food Bank nutrition classes helped to teach them how to make better food choices. The combination of the two programs may provide greater motivation to successfully lead healthier lifestyles.

IIb. Potential Benefits to Testing and Alertness

One potential benefit from Marathon Kids worth mentioning is its affect on testing and grades as well as on mental alertness. Lori Soren explains her observations on alertness:

"So, yeah, as a mood elevator and a way to become more alert for school, they know it. And the teachers can see the difference and have commented on the difference. When you walk down the hall in the morning and the kids are lined up, waiting for class, and they're sleepy looking. And I come in the room with all the kids from the jogging club, who are really animated. It's very obvious, so that's becoming more and more apparent"

And, commenting on test scores Lori states, *"I can tell you that the feedback I get is that the getting out and moving, especially before school, has made an incredible impact on a lot of the kids. Kids have come up to me and say, "I have a test today. I have to go run first". They understand that their frame of mind and concentration improves. Yeah, definitely improves their score"*.

Similarly, Polly Bleaker explained her view:

"We have pretty good test scores too. They all go out and run before the test. Yep. They go out there on the test day, and there'll be 250 kids running. It started with one day they did really well one year, and I pointed that out so now they go out and have them jog a bit before the test days. Yeah, we have the numbers in the back."

Taking both Lori and Polly's observations into account, the potential benefit of running/ walking is mental alertness, which may in turn positively affect test scores. While the benefits from Marathon Kids on testing and grades may exist, Renee Swain, keeps a healthy dose of objective skepticism. When asked on possible benefits to alertness and, subsequently, testing, Renee stated, *"I couldn't say that. I couldn't say whether I have or not. That's just a belief I have about working out and being fit is that it'll help improve your alertness"*.

IIc. Marathon Kids as an Energy Release for ADHD Kids

While respondents reported an increase to mental alertness, a similar affect may be occurring with ADHD (attention-deficit hyperactivity disorder) and ADD (attention-deficit disorder) students participating in Marathon Kids were observed by two respondents, Iraida Gustav and Carrie Anise. Iraida briefly mentioned, *"I think for some of the kids it's a good energy release, especially like the ADD/ ADHD kids or distracted kids"*. In more detail, Polly explained her view:

"I see it for kids with ADHD. They just need that release, and they need it every day. Sometimes, you know, they need it more than they get. They need to be out there and get some of that energy"

off so they can focus. And that's one kind of mental health But I think you see a difference when they come in kind of, "whee whoo", you know, we get around and they're a little more relaxed."

The "energy release" described by both Iraida and Carrie may also increase mental alertness and focus in students with ADHD/ ADD analogous to the alertness gains by other students. Possibly this potential increase in alertness and mental focus may be more important to this population than compared to the rest of the participating student body.

III. Program Support

This thematic category reviews the role of support for the Marathon Kids program. Specifically, two areas of support are explored: teacher and administration support; and parent support. For each area, support strategies are discussed.

IIIa. Schools Support Marathon Kids as a Celebratory Tradition

In four schools (Zelda, Juneau, Bendis, and Globe), teacher and administrative support came in the form of keeping and implementing Marathon Kids as a school tradition or celebratory event. PE Coach at Zelda Elementary, Rudy, had this to say about teacher and administrative support:

"I know when I came in there was an expectation that it was something they wanted. It was definitely going to continue. I knew that expectation. Even when I had come last year, and I was subbing for the teacher, she kind of told me about it; and how it was for a few years running they had 100% completion, and that was something all the parents and kids and teachers were going to want to continue".

According to Rudy, Marathon Kids at Zelda Elementary has been a yearly program to be expected by the school, parents, and students alike. Not only was it a yearly program, but it was one that had 100% participation and completion as stated by Renee, 5th grade teacher at Zelda, "Our school is 100% participation school. We've been on the news. We've been on FOX 7 news before as being the only school in Austin that had 100% participation. Every kid in this school finishes a marathon by February".

In Juneau, Bendis, and Globe Elementary, Marathon Kids was incorporated into school spirit-type events and celebrations. Polly, PE coach at Juneau, stated, "I think it's a tradition here. And, you know, we have Marathon Kids t-shirt day. Since everybody has one, everybody wears one. It's a very important holiday. You know, if they have an older brother or sister, they've accomplished that...we're very proud of them". In this case, Marathon Kids has become a school-wide event via Marathon Kids t-shirts.

In the cases of Bendis and Globe Elementary, both schools incorporated school celebrations to support Marathon Kids. Cory Sadler, currently teaching at Alma Elementary, described a celebration event at her former school, Bendis, "at the end of the year we had a celebration of the classes that had the most miles, and we kind of had an Olympic ceremony type thing, and they would present how many miles each classroom teacher accomplished, and they would reward the top runners". Similarly, Iraida at Globe recalled,

"our PE teacher this year at the end-of-the-year awards thing gave all of the kids in my homeroom a certificate for running because they ran over 50 miles because we started in September and the kids were really excited about it and they knew. When the principal was reading the little note the PE teacher wrote about 'this class has a teacher who takes them out

every morning and run' and they were like [makes happy face]. They were just thrilled. They were being acknowledged for something and all they got was a little certificate. It's not like a big deal".

These recognition ceremonies all served to acknowledge the classes and students, which excelled in the Marathon Kids program.

IIIb. Parent Support is Mixed

Interview respondents revealed that high parent support equated to parents taking an active role to support their child to accomplish the mileage goal of Marathon Kids. This often took the form of parents running/ walking with their children and/ or providing moral-type support at Marathon Kids events.

Micah elementary school counselor, Lori, comments on parent support, *"they [parents] attend the races and all of our trips: the Kick-Off, the Final Mile, and two races a year. And, then I have several parents who come and run in the morning with me"*. In this case, Lori has parents who both attend Marathon Kids events with their children and also run with them in the mornings at school. Oceanic Elementary PE coach, Carrie observations also parallel Lori's:

"Now, we even have a PTA group that comes out and does it in the morning. You know, early in the morning they come out, about 6 or 7 parents with their kids... Jingle bell run, we have a lot of parents jog a lap or two with their kids. Track and field, we have a lot of parents out there running with them...They come to Marathon Kids and run with them...And, I think, you know, it's starting to seep in. You know, in the beginning with Marathon Kids it seemed like it was only the kids that was running. Parents would just sit on the side, and now they're getting into it...you really see a difference in the amount of parents coming from the very beginning here and the amount of parents running with their kids, there's a lot, you know. You can tell it's not just their first time too. They're out there. I think Marathon kids has helped that awareness".

Like Lori, Carrie's experiences with parents have been a positive one in terms of child support of the Marathon Kids program. In fact, as a Marathon Kids events volunteer, Carrie also believes that support and awareness is increasing within the parent population.

While parent support seen by Lori and Carrie was high, active parent engagement in Marathon Kids has also been seen to be frustratingly low in some schools. Cory, a former Bendis Elementary teacher, noticed at her previous school, *"They had an evening where they planned that for the parents, and I know very few parents did come to that...It was once a month or once in a school year where they would hopefully 'Bring your parents. Come to the school. You'll get credit for the laps you have'. I don't recall a lot of them that participated"*. Cory's recollection is in stark contrast with both Lori's and Carrie's experiences with parents.

Two respondents touch on the reasons that may be surrounding a lack of parent support. PE coach, Albert Rictor shares his opinions on the matter, *"The fit ones [parents] will encourage their kids to do it. I'm not saying they'll do it with them. It [parent support] might not be there. You know, there may be some because they want their kids to do better than they do"*. When questioned further on how parents could take a more active role, Albert replied, *"Well, the parents know. It's like smoking. And some teachers, they're eating a dozen cookies. To me, the only way an adult can change is get scared to hell"*. Renee at Zelda Elementary touched on her views of adults and exercise:

"I'm assuming, and I don't have any statistics, but, you know, I think the majority of the people in America have good intentions for working out, but I don't think most people do because they're tired, and they don't have time, and they spend an hour in MoPac in traffic, and why would they want to do that and go home and run for an hour?...I don't think that we're going to get a lot of

parent support for a fitness program unless the parents are into fitness themselves. I mean, we can try. We can always try, but, you know, if I had a kid they would be into fitness because I'm into fitness. All right. They would probably play a musical instrument because I play a musical instrument. That's just my opinion".

While both Albert and Renee may have good points, their views do differ. Albert implies that some parents may support their children and their fitness endeavors only in a moral sense, one that is lacking an active role unless motivated by fear. On the other hand, Renee provided a more societal view on the lack of an active role of parents in their children's fitness beginning with the parents themselves.

IV. Program Barriers

The themes in this section focus on barriers and obstacles surrounding the implementation of the Marathon Kids program. Themes that emerged from respondents' interviews include barriers due to: time; parent misunderstandings; cultural barriers; community/ environmental barriers; and TAKS/ TEKS testing.

IVa. First of the Year Time Crunch

One of the barriers to Marathon Kids in terms of recruitment is an issue of time. Specifically, recruitment for Marathon Kids occurs during the beginning of the school year, which is, according to participants, a busy enough time already. Rudy recounts:

"Marathon Kids, pretty much the kickoff was like really close to when we started school. So this year, that actually presented a little bit a challenge. You know, getting all of the permission forms out and stuff like that. So, it was a constant emailing between me and the teachers that first week. But for the most part, it was just sending the forms home and doing an email to all the parents so they would know what the forms were for and stuff like that...Not to mention, I know that some of the other schools in our district, they didn't get their forms until like a couple of days before [the deadline]".

Rudy attributes his relative success with negotiating student recruitment to his mindfulness and commitment to the program. Rudy's colleague, Renee, also shared her thoughts on the beginning of the year time crunch:

"It is a struggle for the teachers at our school because... 'okay, Renee, you have 25 kids in your class. Make sure you have all 25 signatures.' Do you know how difficult that is? It's very because that requires me to make phone calls home, and this is at the beginning of the year at August where we have to have this in by a certain date. Or we won't get it, you know, or whatever. And, here I am, the beginning of the year: meetings, new kids, planning. You know, having new kids and now I have to get all these signatures".

In fact, Renee goes as far as suggesting that Marathon Kids do away with parent consent forms as a solution:

"You know, I just don't understand why we need all those parent signatures. I wish they would do away with that part of the program and just require a commitment on the child's part, like the child's signature. You know, like 'I'm a student at Zelda and everyone at Zelda's doing Marathon Kids and I'm committed to be part of that team.' You know, and so I just don't understand why we need that parent signature for that. Because it's very difficult when it comes

down to that one kid, and they don't have fun with it or their mom's always out of town, and you know it gets very difficult..I wish we could change the packets up so we don't need the parents' signature".

Renee's frustration with the parent signature requirement may be understandable as her school is apparently 100% Marathon Kids implementation, participation, and success.

Terri, a PE coach, experiences similar frustrations at Globe. She states:

"You know, trying to get them to do it, but again classroom teachers aren't PE teachers. They don't like fitness usually, so they don't stress it as much. At the beginning of the year, there's so much going on. They have so many other things to do. This is on the bottom of their list. So it's up to us to really stress it to the kids. Homeroom teachers, you know, usually don't have time. It's another thing they don't want to do, you know? And we try and tell the teachers at the beginning of the year that this is not anything they have to do, and the kids like it, but only a handful of teachers actually do it. And they are the teachers that are fit and like to exercise. So they find it important, you know?"

In Terri's opinion the difficulty in student recruitment may be due to a combination of factors besides just a time crunch. Teachers may find the Marathon Kids program outside their responsibilities since they are not PE coaches. Teachers, themselves, may not emphasize physical fitness personally, which would be apparent in their choices to either support or not support the Marathon Kids program at their school.

IVb. Parents Just Don't Understand

Another barrier to recruitment involves parents of students misunderstanding aspects of the Marathon Kids program. PE coaches Carrie and Terri provide two instances in which this occurred. Carrie states:

"Yeah, I think we have to talk to parents. They sometimes think that, 'well, my kid isn't going to run 26 miles'. Oh, yeah. It's not in one day. It's not in one week, one month. We're doing this. They're going to do it anyway. And I tell them they're going to be running more than one marathon. By the end of the year, you're going to be way past that. Parents will sign once they know that... Then they go, 'oh, okay', and then they understand. I just don't think they read. I mean, with everything parents are doing they just don't read it through...I'm telling each group, every single group about Marathon Kids, get it signed, we're doing it now...And our school does have a problem with getting anything signed...They don't seem to, you know. If you don't, oh well, it'll be okay, and they let them pass. Parents have gotten used to 'if I don't do it on time, they'll give me another chance'".

As Carrie stated, her solution to this problematic misunderstanding is to explain to parents in person the details on the actual implementation of Marathon Kids. In fact, Carrie usually recruits parents at Back-to-School Nights, which a majority of parents attend.

In Terri's case, she has trouble with parent recruitment as well as event attendance. Terri reports: *"A lot of our kids don't go to the Kick-Off or to the final marathon. Mainly, because their parents, they just don't understand or don't have the desire to do it. So, initially, you know, the first year I did it, I can't remember exactly how I did it, but we didn't get a lot of forms back because kids thought they had to go to the Kick-Off. No matter how many times that you tell them, 'get the form back to me', they don't. So out of 600 kids at school, we'll get 300 that bring it back, which is silly cause everyone can participate in it...I mean, the parents that go and take*

their kids always seem really happy and appreciative of going. But, every time we've had it, you know, again, we stress it, the kids know, we give them maps, who can go, you know, everybody, and we would get less than 10 every time...which is, you know, a shame a third of the kids didn't show up or sign up."

Terri's solution to the problem of low event attendance is to organize a school bus or shuttle to take students to Marathon Kids events, however the idea does not seem feasible in terms of funding. Terri explains their situation:

"You know, we've talked about taking a bus and making it more of a field trip, and that might be something we can try again for the Fall. But, it's one of those, you know, just kind of a little bit hard to do money-wise. We don't have a lot of money for buses...We talked about it this year, and it kind of came and went. At the beginning of the school it's so busy...A bus trip would be good. Our district is very poor. How are we supposed to get them there? We try our best that we can to get them there. We can't even afford paper."

IVc. Cultural Barriers within the Hispanic Population

Carrie and Terri's interactions and miscommunications with students' parents also lead into the topic of cultural barriers. According to both Carrie and Terri, their schools serve a large Hispanic population, whose culture may act as an obstacle to the implementation of Marathon Kids in terms of both miscommunication and misunderstanding cultural practices (i.e. running for exercising). Carrie explains her experiences and views on the matter:

"Some are, like I said, just from Mexico. They don't know anything yet, but this is the way we do this is getting it into them first because they can't go the Opening Ceremony, the Kick Off, and the closing. They see their kids doing this, you know, doing something...Being a Hispanic population, a lot of our kids and their parents are growing up with diabetes and overweight and all this other kind of stuff. It's starting to be very important to them. I think when they were in Mexico their opportunities weren't as great. Now that they're here, they've got more stuff and whatever, better jobs and better pay, money, things like this. You get to eat whatever you want, and the kids get to bring big, huge bags of chips or whatever for one meal. You know, we're starting to see, and I think parents are starting to get interested in that exercise part because of that. I tell them how to exercise, and here they are. Their kids are showing them what to do".

Terri expresses similar reservations about this population's cultural understandings:

"I don't think they quite get it...I don't know if it's a cultural thing, you know, mostly being Hispanic kids. I just don't know if they get it. It's not like you see a lot of them jogging. I don't know if they just don't get it. I don't know...And, like I said, for them, you know, signing up for Marathon Kids, again they don't really know what it is. It's like they see pictures of kids who went. They know they get a t-shirt. I'm trying to explain it, but because their family background is not involved with that, I don't think they quite get it".

As Carrie and Terri explain it, there are certain American cultural practices and ideals that have yet to become or are slowly becoming accepted within the lifestyle of many of their Hispanic student/ parent populations.

IVd. Community and Environmental Factors

The role of the community and environment in which some students live and play may act as a barrier to implementing Marathon Kids on their own time outside of school. Specifically, the infrastructure such as roads, sidewalks, and parks are areas of concern. Additionally, the socioeconomics of students' communities and environmental factors are also discussed in this theme.

In terms of the infrastructure of communities and neighborhoods, several respondents voiced concerns and comments about their students' situations. Rudy Sanchez, for example, states, *"Because, you know, the location where some of these kids run, it may not always be an easy thing...Some of the roads don't have sidewalks. They're not really safe for them to run by themselves on it. They're rural and windy"*. Likewise, as Terri declares, *"back country roads type of living"* in which it would be *"very difficult"* for her students run without sidewalks or parks.

Concerns were also voiced about students attempting to run/ walk in their own respective neighborhoods, which in these cases were described as lower socioeconomic. Iraida describes a number of these concerns:

"A lot of my students can't participate because I deal with lower socioeconomic children. So they don't have aid with transportation or are illegal and don't know how to drive, and/ or they're working. I deal with working poor, basically, and so survival is their number one basic need. So trying to get the children to go to a Kick-off is very difficult..Well, you know, my kids don't have access to being able to run outside and play because of their-It's their living conditions. It's not safe for them to be outside because they live in a zip code that's very rough. So they don't have any motivation to really track it outside of school. So my purpose is to help them set a goal, and help them manage that information in a way where they can [at school]".

These same concerns were also expressed by Cory as she spoke about her former school, Bendis:

"a lot of our kids in that area that I worked with lived in apartment complexes, and it was a rough neighborhood. A lot of the kids would not go outside...The area that we were at, yeah, I would see a lot of the kids would share their stories that, yeah, they wouldn't go out after they got home from school. A lot of them lived in housing apartment complexes, and it was a rough part of Austin...So I know the opportunity would not present itself because of one, maybe parents worked double, two jobs or whatever and were not home and if they were a lot of them would stay indoors. Maybe a lot of times the vicinity they lived in was not conducive to going out and being out unless their parents were 'okay we're going out'".

IVe. TAKs Testing is a Top Priority

Finally, one barrier very much worth mentioning is the role of TAKs testing in the schools as it relates to the Marathon Kids program. One difficulty for PE coach, Albert Rictor, is communicating with teachers and staff about Marathon Kids in light of TAKs. Albert states, *"We're so overwhelmed with TAKS right now. It's that difficult. We have a new principal. We have a different assistant principal. So all these changes, there wasn't...I'm not saying they're not supportive, but they're thinking more about TAKs"*. So in Albert's case, a change in school administration resulted in more of a focus on TAKs testing as a main concern of the school. This made implementing Marathon Kids difficult in light of the situation.

Globe PE coach, Terri, and elementary teacher, Iraida, are also going through similar circumstances with TAKs testing. They both expound on the topic by adding their own beliefs about

testing. Terri says, *“I think they’re [school staff and administration] very appreciative of us here doing this, but [whispering] it’s like they don’t want to leave the classroom because TAKS is so important. They don’t want to take time out to go and run laps. It only takes 15 minutes. They’re very stressed on academics”*. It is obvious from Terri’s comments that testing is a strained topic for her even to the point that she had to whisper during our interview even though we were alone. On more of a “ground level”, Iraida shares her opinions on the subject of testing:

“To be honest I don’t think they think about it. I think everybody stresses out. It’s a testing culture. And education is all about TAKs and testing. That’s all it is. And, I think people, you can’t help but feel the stress and the pressure of ‘we cannot waste a moment’. But the reality is that you got to rest, and you got to laugh, and got to chill, you got to relieve some of that stress. The only way you can do that is go outside and play. It’s going to take a long time for them to catch up. They can’t help it that they’re poor and hungry. It’s not their fault. Something is not their first priority. I think some teachers just don’t really think about that.”

Iraida’s comments touch on what she calls the “testing culture” of education today. Pressure to perform and achieve high-test scores seems to override any need for students to relax or have down time.

Cory, who has taught in two Marathon Kids-implementing schools, says:

“But I think, personally, I feel like the kids need, no matter how bombarded by testing you are, I personally feel the kids need that time outdoors exercising, and so no matter how bombarded we might be I just kind of push it aside and do something for ourselves. And it’ll probably help you out with the testing. I mean, yeah, you do get bombarded with it. It does tend to rule your teaching style, your curriculum. You’re kind of guided by that...Personally, I feel like okay there’s only so much you can do with that. Your body also needs exercise and fresh air. Let’s go out there and separate ourselves from the testing issues and curriculum. That’s my belief. I don’t want to feel like I’m driven by it [testing]”.

Both Iraida and Cory are teachers who have implemented Marathon Kids in their own classes while focusing on the testing requirements of their schools. They both share essentially the same views on the matter of testing as well as the potential benefits of the Marathon Kids program on achieving high-test scores.

Discussion and Avenues for Future Exploration

Qualitative data analysis revealed several insights into how Marathon Kids is implemented and facilitated on the school level. This section discusses and interprets the results of the qualitative component of the Marathon Kids Evaluation Project in light of the purpose of this research. That is, the qualitative component of this project seeks to understand the ways in which the Marathon Kids program is actually implemented in elementary schools with regards to strengths and benefits as well as barriers and obstacles to the program. Finally, avenues for future exploration based on the study results and themes are also discussed in this section.

Two major conclusions are realized from this study (Table 8). Firstly, schools essentially modify or “individualize” the Marathon Kids program to fit their own needs. In terms of conducting the program, schools use a variety of strategies in order implement Marathon Kids. These strategies include: structured time for running/ walking; incorporating running/ jogging clubs; using modified mileage forms; hosting non-Marathon Kids school running events; and incorporating Marathon Kids as a school tradition. Different schools employ a combination of strategies to facilitate the program. The most salient example

of this individualizing strategy is the modification of the Marathon Kids Mileage Log by the majority of participating schools. Due to differences in track and playground lengths, Marathon Kids school coordinators and supporting teachers use the original Marathon Kids Mileage Log as a template for their own versions of the log. Additionally, some schools adapt Marathon Kids as a part of a school's tradition in the form of school-sponsored events and celebrations, which are not “officially” part of the Marathon Kids program. These events and celebrations, such as the Turkey Trot and Marathon Kids t-shirt day, serve to boost school spirit as well as providing a fun opportunity to accrue laps and mileage with support and active participation by students as well as faculty and students.

Secondly, the Marathon Kids program is situated within a dynamic setting that incorporates both the school system and the students' individual neighborhoods/ communities. Thus, the implementation (“success”) of Marathon Kids is subject to a combination of the school and community/ family environmental factors and competing interests. Obviously, school administration and staff support play a large role in program implementation at individual schools. This can be seen, for example, to assist the program by having school supported events, and it can also hinder the program by some schools' focus on TAKs testing, which may influence school staff to overlook Marathon Kids. Additionally, the students' community and family life can influence their participation in the program. If the community infrastructure (sidewalks, parks, tracks, etc.) does not exist or exists in substandard conditions then that too can play a role in students' participation in the program outside of school.

Finally, it is important to mention the role of students' and parents' cultural lifestyles within the culture of their own schools. Cultural practices and beliefs can and do shape students' behaviors in regards to exercise and nutrition choices. Specifically, this can be seen through the cultural miscommunications and misunderstandings of several Marathon Kids coordinators and Hispanic students regarding the program. The practice of running or jogging for exercise may not be as firmly established within some Hispanic populations. On the other hand, several schools have reported a strong running community outside of school, which for all intents and purposes can be defined as a running culture among students and their parents. To be sure, cultural misunderstandings and miscommunications occur between both program coordinators/ teachers and their respective students. A better understanding of any differences in lifestyle and/ or culture is needed from both parties.

To reiterate, the study conclusions are: 1) Schools employ an “individualizing” strategy in order to make the Marathon Kids program their own; and 2) the Marathon Kids program is a component situated within a dynamic setting made up of the school system and individual neighborhoods and communities. Based on these conclusions, two practical implications can be made (Table 8). First, the applied implication of the “individualization” strategy is that it may prove beneficial to schools (and Marathon Kids) if this strategy is actively advocated amongst schools. Second, in order to positively support the success of the Marathon Kids program at schools, any changes made must address the dynamic setting in which the program is situated. Both sustainable and meaningful changes should be advocated in the school and community environments. The importance of these conclusions and their implications can serve to guide and strengthen the Marathon Kids program and how it is implemented on the school and community levels. To this end, several avenues for future exploration are made in the next section.

Table 8. Summary of Conclusions and Implications

| Conclusion | Implication |
|--|--|
| 1. Schools employ an “individualizing” strategy in order to make the Marathon Kids program their own. | It may prove beneficial to schools (and Marathon Kids) if this strategy is actively advocated amongst schools |
| 2. The Marathon Kids program is a component situated within a dynamic setting made up of the school system and individual homes, neighborhoods, and communities. | In order to positively support the success of the Marathon Kids program at schools, any changes made must address the dynamic setting in which the program is situated. Both sustainable and meaningful changes should be advocated in the school, home, and community environments. |

Avenues for Future Exploration

This section presents 3 avenues for future exploration concerning the implementation of the Marathon Kids program on both the school and community levels. These suggestions for exploration are made in light of the study conclusions and implications (Table 9).

Table 9. Summary of Avenues for Future Exploration

| Avenue |
|--|
| 1. Advocate for program implementation on all "levels" |
| 2. Include student and staff motivators and incentives |
| 3. Encourage Marathon Kids committee creation |
| 4. Strengthen communication with parents |

1. Advocate for Marathon Kids program implementation at schools on all “levels”.

To a large extent, the relative success of the Marathon Kids program on the individual school level is a product of the program coordinator. However, the role of school administration and staff support may have a dramatic affect on this success. To clarify, schools that support the program on every level (administration, faculty, and staff) are better able to sustain successful completion of the program. These schools are, for example, ones that have a large number of students participating in the program and have successfully “individualized” Marathon Kids to make it their own.

Marathon Kids is a tradition at these schools, and such a phenomenon could not happen without school-wide support for the program. For cases such as these, support is defined as actively participating in the program, not merely an intangible philosophical/ moral support for the program. In order for program implementation to occur on all “levels”, school faculty and staff need to “buy into” the program and believe in the vision and goals of the program before they will actively implement the program. Otherwise, program coordinators and participating teachers take the main brunt of the responsibilities on

top of their normal day-to-day responsibilities. Considering this, it would seem very difficult to “successfully” implement the program.

Excluding the program coordinator, first and foremost, the school principal needs to “buy into” and actively support the program. Though not a man of many words, Albert illustrates this point, *“If it [Marathon Kids] comes from me, I’m just the PE coach. If it [Marathon Kids] comes from an administrator or when it comes from a principal, they’ll put a little more weight on it. It’s almost like a directive. I mean, when they [teachers] see my email [concerning Marathon Kids school participation] they’ll read it but they’re like, ‘whatever’”*. Furthermore, in order to gain “buy in” from school faculty and staff, a Marathon Kids staff member could conduct a presentation about the program to faculty and staff, students, and/or parents yearly.

2. Include student and staff motivators or incentives.

One successful strategy employed by several schools involved using small prizes as a way to build and maintain motivation among students. Specifically, the strategy rewarded students by handing out “feet pendants” after achieving a mileage goal or benchmark. These “feet pendants” can be attached to shoe laces (or conceivably anything else on a string). Essentially, these “feet pendants” serve as prize motivators for students to continue participating in Marathon Kids. The use of these “feet pendants” may be a practice that could be officially adopted and promoted by the staff of the Marathon Kids program. This may especially help low implementing schools increase recruitment and completion of the program.

Additionally, several teachers suggested that Marathon Kids provide a teacher incentive (for example, t-shirts) for participation in the program. Teacher incentives, like “feet pendants” for students, may also serve as a motivating factor for teachers. PE coach, Carrie, puts it best, *“I think if we could give t-shirts to those teachers that are really turning in their logs, do the same thing, fill out the registration, be like a model for the kids. I think that would improve the program even more.”*

3. Encourage MK committee creation (coaches, teachers, parent-support specialists, counselors, and parents).

The participant interviews revealed that only one school (Zelda, a high implementing school) interviewed actually had a Marathon Kids committee that aided the program coordinator. This committee consisted of teachers and parents as well as the program coordinator. The committee was responsible for creating a modified mileage form as well as assisting in student recruitment and t-shirt distribution. As a practice, the program may benefit from the creation of a Marathon Kids committee in each implementing school. Ideally, such a committee would consist of the PE coach, teachers, parent support specialist, and parents. A program committee should serve to discover and agree on best practices to implement Marathon Kids in their own respective schools. Furthermore, a committee could serve to increase school-wide communication and potentially increase parent involvement, especially if committees include parent support specialists and parents as members. This may serve to be particularly helpful in schools that experience cultural barriers with minority students and parents. Parent support specialists and parent committee members may be able to act as a bridge/ mediator for parents and school staff in order to increase school involvement.

4. Strengthen communication with parents to promote child and family engagement in Marathon Kids outside of school.

Similar to the purpose of creating a MK committee, further strengthening of parent communication may potentially increase child and family engagement in Marathon Kids outside of school. Aside from occasional PTA/ PTO meetings and some afterschool events, the main mode of communication between schools and parents regarding the program is the MK recruitment packets. Very few schools reported that their students engaged in walking/ running for MK outside of school, much less with parents or other family members. While the underlying reasons on the lack of family engagement in MK outside of school are likely complex, it should prove worthwhile for the staff of MK to increase communication with parents as well as explore other channels of communication with parents.

There are two cited observations/ suggestions by interview respondents that should be taken into consideration. Some interview respondents have stated that the MK recruitment packets contain text and information that is too densely packed, which can hinder parent from thoroughly reading about the program and its benefits. Taking this into consideration, page layouts containing program information could be changed or modified in order to facilitate easier reading for parents, especially with tips and suggestions on parent engagement in the program with their children. In addition to the recruitment package, teachers have also suggested that the staff of MK attend school sponsored meetings and afterschool events to help inform and promote the program to parents in the audience. Though these are only two suggestions on how to increase parent communication, the combination of different channels of communication throughout the year should prove beneficial in terms of increasing family engagement and possibly increasing MK events attendance.

Conclusion

The qualitative component of this study generated a number of conclusions, implications, and a set of avenues for future exploration synthesized from the study results. Some of these results and conclusions may have reaffirmed previously held assumptions and hypotheses by Marathon Kids staff. Hopefully, these results have also shed light on several factors hitherto unknown. It is important to note that the results and their subsequent conclusions and recommendations from the qualitative component should be seen as exploratory in nature. That is, the qualitative data generated from this study component sheds light on salient topics that can be explored and addressed in future projects or policy planning. It should not, however, be viewed as representative of all Marathon Kids implementing schools but rather as a case series of schools.

Furthermore, in terms of the avenues for future exploration, practically and logistically, any changes made for the purposes of improving or strengthening Marathon Kids should be both meaningful and sustainable. That is, the incorporation of the respective school's input (meaningful change) can serve to increase the likelihood of implementing these changes over time (sustainable change). Finally, it should be noted that the majority of the suggestions for future exploration focus on strengthening Marathon Kids on the school level. This is to be expected as this study component focused on program coordinators and supporting faculty. However, these suggestions do recognize the role of family and community support and its potential role for the overall success of the Marathon Kids program.

Appendix D

Results Tables for Cross-sectional study of Marathon Kids in a Representative Sample of 4th Grade Students in Central Texas (Study B)

I. Spring 2008 Results Tables for Cross-Sectional Study of 4th Grade Students

Table 1. Participation in Marathon Kids among a representative sample of 4th grade students in Travis County^a, Spring 2008. (n = 32 elementary schools). *Marathon Kids Evaluation Project.*

| | Total Sample | Signed up for Marathon Kids | MK Partic. Sample | Of Those Participating, Signed up for Marathon Kids | | | Completed MK Mileage Log | | | Completed MK Fuel Log | | |
|-----------------------|--------------|-----------------------------|-------------------|---|----------------------|---------------------|--------------------------|----------------------|---------------------|-----------------------|----------------------|---------------------|
| | n (%) | Total % (n=1199) | n (%) | Total % (n = 697) | Girls % (n = 340) | Boys % (n = 357) | Total % (n = 698) | Girls % (n = 341) | Boys % (n = 357) | Total % (n = 656) | Girls % (n = 325) | Boys % (n = 331) |
| Total Sample | 1199 (100) | 44.7 | 699 (100) | 74.3 | 77.9* | 70.9* | 69.1 | 69.5 | 68.6 | 58.4 | 60.3 | 56.5 |
| Ethnicity | | | | | | | | | | | | |
| African American | 167 (14.0) | 40.7 | 93 (13.4) | 72.0 | 73.1 | 70.7 | 67.7 | 67.3 | 68.3 | 59.3 | 64.7* | 52.5 |
| Hispanic | 680 (57.0) | 43.7 | 389 (55.9) | 73.2 | 77.0 | 69.5 | 67.9 | 70.7 | 65.5 | 60.1 | 65.2* | 55.4 |
| White | 137 (11.5) | 43.8 | 85 (12.2) | 70.6 | 76.9 | 65.2 | 72.9 | 71.8 | 73.9 | 56.4 | 44.4* | 66.7 |
| Other ^b | 209 (17.5) | 51.7 | 129 (18.5) | 81.4 | 84.7 | 78.6 | 70.5 | 66.1 | 74.3 | 53.3 | 50.9* | 55.4 |
| Language with parents | | | | | | | | | | | | |
| Spanish | 437 (41.1) | 42.3 | 274 (40.8) | 70.8 | 75.9 | 65.7 | 69.0 | 72.3 | 69.6 | 60.3 | 66.2 | 54.3 |
| English | 678 (58.9) | 45.7 | 397 (59.2) | 75.8 | 78.0 | 73.5 | 68.5 | 67.7 | 65.7 | 56.3 | 55.7 | 57.1 |
| SES ^c | | | | | | | | | | | | |
| High income | 359 (29.9) | 49.6** | 226 (32.3) | 77.8 | 76.5 | 78.9* | 77.4*** | 73.3 | 82.6*** | 54.0 | 50.9* | 58.0 |
| Medium income | 376 (31.4) | 47.3** | 232 (33.2) | 74.6 | 79.2 | 70.6* | 72.8*** | 69.8 | 75.4*** | 60.9 | 60* | 61.7 |
| Low income | 464 (38.7) | 38.8** | 241 (34.5) | 71.0 | 78.2 | 63.9* | 57.3*** | 65.5 | 49.2*** | 59.7 | 69.6* | 49.5 |
| School District | | | | | | | | | | | | |
| AISSD | 1080 (90.1) | 43.6* | 615 (88.0) | 74.0 | 77.9 | 70.3 | 68.5 | 68.9 | 68.0 | 59.7 [§] | 61.5 | 57.8 |
| Non-AISSD | 119 (9.9) | 54.6* | 84 (12.0) | 77.1 | 78.0 | 75.6 | 72.6 | 73.8 | 73.2 | 48.1 [§] | 51.3 | 45.9 |

Data collection dates: March-April 2008. Abbreviations: MK, Marathon Kids; Partic., Participant; SES, socio-economic status; AISSD, Austin Independent School District.

p value: *<.05; **<.01; ***<.001, §=.05

^aIncludes schools from AISSD (n = 29); Manor ISD (n = 1),flugerville (n = 2).

^b"Other" ethnic group includes: American Indian/Native Alaskan (n=20), Asian (n=20), Native Hawaiian/Other Pacific Islander (n=1), and "Other" (n=88).

^cSES based on tertile distribution of SES for total sample. SES determined by school composition of economically disadvantaged students as per Texas Education Agency

Table 2. Participation in Marathon Kids events among a representative sample of 4th grade students in Travis County, Spring 2008 (n = 32 elementary schools).

| | Attended Kick-Off Event | | | Attended Final Mile Run Event | | |
|-----------------------|-------------------------|--------------------|-------------------|-------------------------------|--------------------|-------------------|
| | Total % (n=654) | Girls % (n=319) | Boys % (n=335) | Total % (n=621) | Girls % (n=307) | Boys % (n=314) |
| Total Sample | 31.2 | 29.8 | 32.5 | 29.8 | 34.2* | 25.5* |
| Ethnicity | | | | | | |
| African American | 38.9 | 31.4 | 48.7 | 31.6 | 34.7 | 26.7 |
| Hispanic | 30.6 | 31.6 | 29.9 | 30.9 | 35.1 | 27.0 |
| White | 24.4 | 21.6 | 26.7 | 28.8 | 33.3 | 25.0 |
| Other ^b | 32.2 | 29.8 | 34.4 | 26.5 | 33.3 | 21.2 |
| Language with parents | | | | | | |
| Spanish | 29.0 | 26.6 | 31.5 | 30.6 | 31.4 | 29.8 |
| English | 32.3 | 30.9 | 33.7 | 28.9 | 35.2 | 22.6 |
| SES ^c | | | | | | |
| High income | 25.6** | 22.3** | 29.4 | 30.6 | 32.1 | 29.4 |
| Medium income | 28.6** | 23.7** | 32.8 | 28.3 | 33.3 | 23.9 |
| Low income | 38.8** | 42.7** | 35.0 | 30.3 | 37.1 | 23.3 |
| School District | | | | | | |
| AISD | 33.3** | 31.7 | 34.8 | 30.6 | 36.1 | 25.4 |
| Non-AISD | 16.0** | 17.1 | 15.4 | 23.4 | 21.1 | 26.3 |

Data collection dates: March-April 2008. Abbreviations: SES, socio-economic status; AISD, Austin Independent School District.

p value: *<.05; **<.01; ***<.001

^aIncludes schools from AISD (n = 29); Manor ISD (n = 1), Plugerville (n = 2).

^b"Other" ethnic group includes: American Indian/Native Alaskan (n=20), Asian (n=20), Native Hawaiian/Other Pacific Islander (n=1), and "Other" (n=88).

^cSES based on tertile distribution of SES for total sample. SES determined by school composition of economically disadvantaged students according to Texas Education Agency for 2007-08.

Table 3. Student satisfaction and intentions to do Marathon Kids in the future among a representative sample of 4th grade students in Travis County, Spring 2008 (n = 32 elementary schools). *Marathon Kids Evaluation Project.*

| | How much students liked Marathon Kids | | | | | | | Intend to do MK next year | | |
|-----------------------|---------------------------------------|-------------------|----------------------------------|-----------|-------------------|---------------------------------|-----------|---------------------------|-----------------------|----------------------|
| | Total (A lot) (n=629) | Not very much (%) | Girls A little (%) (n=313) | A lot (%) | Not very much (%) | Boys A little (%) (n=316) | A lot (%) | Total % (n=675) | Girls % (n=331) | Boys % (n=344) |
| Total Sample | 64.7 | 8.6 | 26.8 | 65.4 | 8.2 | 26.9 | 64.9 | 82.4 | 85.5* | 79.4* |
| Ethnicity | | | | | | | | | | |
| African American | 66.3 | 8.7 | 19.6 | 71.7 | 5.9 | 35.3 | 58.8 | 78.0 | 76.9 | 79.5 |
| Hispanic | 65.2 | 8.2 | 28.7 | 63.2 | 7.5 | 25.4 | 67.1 | 82.6 | 85.2 | 80.1 |
| White | 60.8 | 10.8 | 35.1 | 54.1 | 7.1 | 26.2 | 66.7 | 81.9 | 89.5 | 75.6 |
| Other ^b | 64.2 | 8.9 | 23.2 | 67.9 | 11.9 | 26.9 | 61.2 | 85.0 | 91.1 | 79.7 |
| Language with parents | | | | | | | | | | |
| Spanish | 62.8 | 11.6 | 29.8 | 58.7 | 6.8 | 26.3 | 66.9 | 83.5 | 85.0 | 82.1 |
| English | 65.6 | 7.2 | 25.6 | 67.2 | 9.3 | 26.9 | 63.7 | 81.1 | 84.9 | 77.3 |
| SES ^c | | | | | | | | | | |
| High income | 61.7 | 9.3 | 28.7 | 62.0 | 5.7 | 33.3 | 61.0* | 84.8* | 86.8 | 82.4 |
| Medium income | 69.3 | 7.3 | 29.2 | 63.5 | 4.6 | 21.1 | 74.3* | 85.8* | 90.2 | 82.1 |
| Low income | 63.5 | 9.2 | 22.9 | 67.9 | 14.7 | 26.5 | 58.8* | 76.9* | 80.0 | 73.9 |
| School District | | | | | | | | | | |
| AI SD | 65.9 | 8.8 | 27.5 | 63.7 | 8.4 | 23.6 | 68.0** | 82.3 | 85.5 | 79.3 |
| Non-AI SD | 57.3 | 7.5 | 22.5 | 70.0 | 7.3 | 48.8 | 43.9** | 82.9 | 85.4 | 80.0 |

Data collection dates: March-April 2008. Abbreviations: SES, socio-economic status; AI SD, Austin Independent School District.

p value: *<.05; **<.01; ***<.001

^aIncludes schools from AI SD (n = 29); Manor ISD (n = 1), Plugerville (n = 2).

^b"Other" ethnic group includes: American Indian/Native Alaskan (n=20), Asian (n=20), Native Hawaiian/Other Pacific Islander (n=1), and "Other" (n=88).

^cSES (socio-economic status) based on tertile distribution of SES for total sample. SES determined by school composition of economically disadvantaged students according to Texas Education Agency for 2007-08.

II. Spring 2009 Results Tables for Cross-Sectional Study of 4th Grade Students

Table 4. Participation in Marathon Kids among a representative sample of 4th grade students in Travis County^a, Spring 2009. (n = 35 elementary schools). *Marathon Kids Evaluation Project.*

| | Total Sample Surveyed | % Participated in MK ^d | MK Partic. Sample ^e | % Signed up for Marathon Kids ^f | | | Completed MK Mileage Log ^g | | | Completed MK Fuel Log | | |
|-----------------------|--------------------------|--------------------------------------|-----------------------------------|---|-------------------------|------------------------|---------------------------------------|-------------------------|------------------------|--------------------------|-------------------------|------------------------|
| | n (%) (n=1803) | % (n = 1803) | n (%) (n = 1381) | Total % (n=1381) | Girls % (n = 637) | Boys % (n = 626) | Total % (n = 795) | Girls % (n = 403) | Boys % (n = 392) | Total % (n = 795) | Girls % (n = 403) | Boys % (n = 392) |
| Total Sample | 1803 (100) | 76.6 | 1381 (100) | 57.9 | 56.9 | 59.0 | 77.1 | 77.7 | 76.5 | 53.4 | 57.1 | 52.4 |
| Ethnicity | | | | | | | | | | | | |
| African American | 201 (11.4) | 73.1 | 147 (10.9) | 53.7 | 54.1 | 54.2 | 78.5* | 80.0 | 76.9** | 56.6 | 66.7** | 45.9* |
| Hispanic | 1078 (61.0) | 76.8 | 828 (61.2) | 57.0 | 58.4 | 55.6 | 73.0 | 75.7 | 70.5 | 59.1 | 60.6 | 57.5 |
| White | 215 (12.2) | 80.9 | 174 (12.9) | 65.5 | 67.0 | 63.5 | 85.1 | 78.0 | 92.6 | 35.1 | 36.2 | 34.6 |
| Other ^b | 272 (15.4) | 74.6 | 203 (15.0) | 56.2 | 54.3 | 58.2 | 80.7 | 80.0 | 81.3 | 53.7 | 56.3 | 51.7 |
| Language with parents | | | | | | | | | | | | |
| Spanish | 656 (38.1) | 77.4 | 508 (61.7) | 57.9 | 56.8 | 59.1 | 76.9 | 78.9 | 75.3 | 61.2** | 58.7 | 63.7** |
| English | 1066 (61.9) | 76.7 | 818 (61.7) | 58.0 | 59.6 | 56.4 | 76.7 | 76.2 | 77.3 | 50.7 | 55.6 | 45.7 |
| SES ^c | | | | | | | | | | | | |
| High income | 518 (28.7) | 75.7 | 495 (35.8) | 54.3 | 54.8 | 53.5 | 74.2* | 74.8 | 74.1** | 63.7 | 60.6 | 66.3 |
| Medium income | 615 (34.1) | 80.3* | 494 (35.8) | 59.6 | 63.0 | 55.8 | 73.8 | 77.8 | 68.0 | 56.6 | 59.7 | 52.5 |
| Low income | 670 (37.2) | 73.9 | 392 (28.4) | 59.1 | 57.8 | 60.5 | 82.5 | 79.7 | 84.9 | 46.8 | 51.1 | 43.0 |
| School District | | | | | | | | | | | | |
| AISD | 1557 (86.4) | 77.7** | 1210 (87.6) | 57.1 | 58.5 | 55.7 | 76.4 | 77.3 | 75.4 | 55.5 | 56.8 | 54.1 |
| Non-AISD | 246 (13.6) | 69.5 | 171 (12.4) | 63.7 | 62.5 | 64.8 | 81.7 | 80.0 | 83.1 | 50.5 | 59.2 | 42.6 |

Data collection dates: April-May 2009. Abbreviations: MK, Marathon Kids; Partic., Participant; SES, socio-economic status; AISD, Austin Independent School District.

p value: *<.05; **<.01; ***<.001, §=.05

^aIncludes schools from AISD (n = 29); Manor ISD (n = 2), Plugerville (n = 2), Del Valle (n=2).

^b"Other" ethnic group includes: American Indian/Native Alaskan (n=36), Asian (n=30), Native Hawaiian/Other Pacific Islander (n=10), and "Other" (n=166).

^cSES based on tertile distribution of SES for total sample. SES determined by school composition of economically disadvantaged students as per Texas Education Agency

^dBased on % of students who indicated "Yes" or "No" on question 64.

^eRepresents those students who indicated participating in Marathon Kids (excludes those students who indicated they didn't do MK this year).

^fOf those students participating, how many signed up to participate. Excludes students who indicated they "Didn't do Marathon Kids this Year" based on q64.

^gBased on students who indicated they signed up for the program.

Table 5. Participation in Marathon Kids events among a representative sample of 4th grade students in Travis County^a, Spring 2009 (n = 795 students & 35 elementary schools).

| | Attended Kick-Off Event | | | Attended Final Mile Run Event | | |
|-----------------------|-------------------------|--------------------|-------------------|-------------------------------|--------------------|-------------------|
| | Total % (n=795) | Girls % (n=403) | Boys % (n=392) | Total % (n=795) | Girls % (n=403) | Boys % (n=392) |
| Total Sample | 37.2 | 35.3** | 45.4** | 31.7 | 35.5 | 40.9 |
| Ethnicity | | | | | | |
| African American | 37.1* | 30.6 | 44.1 | 47.0 | 46.9 | 47.1 |
| Hispanic | 43.3* | 37.9 | 48.8 | 39.2 | 35.1 | 43.9 |
| White | 27.1* | 23.6 | 31.4 | 30.3 | 29.8 | 31.4 |
| Other ^b | 38.3* | 34.0 | 41.7 | 31.9 | 29.3 | 34.0 |
| Language with parents | | | | | | |
| Spanish | 47.1** | 42.2* | 51.5 | 42.4 | 40.3 | 44.5 |
| English | 35.4** | 30.0* | 41.3 | 35.3 | 31.3 | 39.7 |
| SES ^c | | | | | | |
| High income | 50.8*** | 48.9** | 51.5** | 49.1** | 52.4** | 44.7 |
| Medium income | 42.2*** | 34.9** | 52.6** | 35.8** | 31.2** | 42.5 |
| Low income | 31.1*** | 25.6** | 35.8** | 33.5** | 29.0** | 37.5 |
| School District | | | | | | |
| AISD | 41.5 | 36.2 | 47.2 | 39.9* | 37.0 | 43.2* |
| Non-AISD | 33.0 | 28.9 | 36.2 | 25.8* | 25.0 | 26.7* |

Data collection dates: April-May 2009. Abbreviations: MK, Marathon Kids; Partic., Participant; SES, socio-economic status; AISD, Austin Independent School District.

p value: *<.05; **<.01; ***<.001

^aIncludes schools from AISD (n = 29); Manor ISD (n = 2), Plugerville (n = 2), Del Valle (n=2).

^b"Other" ethnic group includes: American Indian/Native Alaskan (n=36), Asian (n=30), Native Hawaiian/Other Pacific Islander (n=10), and "Other" (n=166).

^cSES based on tertile distribution of SES for total sample. SES determined by school composition of economically disadvantaged students according to Texas Education Agency for 2007-08.

Table 6. Student satisfaction and intentions to do Marathon Kids in the future among a representative sample of 4th grade students in Travis County^a, Spring 2009 (n = 35 elementary schools). *Marathon Kids Evaluation Project.*

| | How much students liked Marathon Kids | | | | | | | Intend to do MK next year | | |
|-----------------------|---------------------------------------|-------------------|----------------------------------|-----------|-------------------|---------------------------------|-----------|---------------------------|-----------------------|----------------------|
| | Total % (A lot) (n=795) | Not very much (%) | Girls A little (%) (n=403) | A lot (%) | Not very much (%) | Boys A little (%) (n=392) | A lot (%) | Total % (n=795) | Girls % (n=403) | Boys % (n=392) |
| Total Sample | 64.6 | 6.3 | 31.3 | 62.4 | 8.2 | 24.7 | 67.0 | 92.3 | 92.5 | 92.3 |
| Ethnicity | | | | | | | | | | |
| African American | 72.4 | 2.6 | 28.2 | 69.2 | 10.8 | 13.5 | 75.7 | 93.9 | 94.3 | 93.5 |
| Hispanic | 65.9 | 5.4 | 31.0 | 63.6 | 6.0 | 25.3 | 68.7 | 92.4 | 92.8 | 92.4 |
| White | 56.3 | 8.6 | 39.7 | 51.7 | 13.2 | 24.5 | 62.3 | 94.7 | 97.8 | 91.5 |
| Other ^b | 63.1 | 12.0 | 24.0 | 64.0 | 11.5 | 26.2 | 62.3 | 89.1 | 85.1 | 92.6 |
| Language with parents | | | | | | | | | | |
| Spanish | 66.9 | 4.8 | 29.7 | 65.5 | 7.4 | 23.7 | 68.9 | 93.1 | 93.7 | 93.3 |
| English | 62.0 | 7.7 | 32.9 | 59.4 | 9.2 | 25.9 | 64.9 | 91.4 | 91.2 | 91.7 |
| SES ^c | | | | | | | | | | |
| High income | 76.6*** | 4.0** | 20.0** | 76.0** | 7.8* | 14.6* | 77.7* | 92.1 | 95.5 | 89.9 |
| Medium income | 64.3*** | 6.7** | 30.9** | 62.4** | 5.9* | 26.9* | 67.2* | 93.0 | 91.7 | 94.5 |
| Low income | 56.1*** | 7.6** | 40.5** | 51.9** | 10.4* | 29.9* | 59.7* | 91.7 | 91.1 | 92.3 |
| School District | | | | | | | | | | |
| AISSD | 66.6*** | 7.2** | 28.4** | 64.4** | 8.8* | 21.9* | 69.3* | 91.9 | 92.2 | 91.9 |
| Non-AISSD | 51.4*** | 0.0** | 52.1** | 47.9** | 5.3* | 40.4* | 54.4* | 94.6 | 94.9 | 94.4 |

Data collection dates: April-May 2009. Abbreviations: MK, Marathon Kids; Partic., Participant; SES, socio-economic status; AISSD, Austin Independent School District.

p value: *<.05; **<.01; ***<.001

^aIncludes schools from AISSD (n = 29); Manor ISD (n = 2); Plugerville (n = 2); Del Valle (n=2).^b"Other" ethnic group includes: American Indian/Native Alaskan (n=36), Asian (n=30), Native Hawaiian/Other Pacific Islander (n=10), and "Other" (n=166).^cSES (socio-economic status) based on tertile distribution of SES for total sample. SES determined by school composition of economically disadvantaged students according to Texas Education Agency for 2007-08.

Appendix E

PE Specialist Interview Process Evaluation Findings

(n=15 Marathon Kids Schools) (Study A)

Table 1. Descriptive characteristics of PE Specialist sample and Implementation of Marathon Kids in selected schools in Houston and Round Rock ISD. *Marathon Kids Evaluation Project, 2008-09.* (n = 15 schools: 8 Round Rock, 7 HISD)

| | Houston | | Round Rock |
|--|--------------|----------|------------|
| | Intervention | Control | |
| Sample (n, %) | 4 (100%) | 3 (100%) | 8 (100%) |
| Years of experience teaching school | | | |
| Mean | 12.50 | 2.67 | 18.63 |
| Median | 12.50 | 3.00 | 18.50 |
| Range | 15.00 | 3.00 | 21.00 |
| Schools currently implementing Marathon Kids (%) | 4 (100%) | 0 (0%) | 8 (100%) |
| Years school has been implementing MK | | | |
| Mean | 4.00 | N/A | 8.75 |
| Median | 4.00 | N/A | 8.00 |
| Range | 0.00 | N/A | 10.00 |
| Years PE specialist has been implementing MK | | | |
| Mean | 4.00 | N/A | 8.88 |
| Median | 4.00 | N/A | 6.00 |
| Range | 0.00 | N/A | 7.00 |
| Number of times PE specialist has attended: (q.13 c&d) | | | |
| Kick-Off Event | 3.75 | N/A | 5.00 |
| Final Mile Medal Celebration | 3.25 | N/A | 6.63 |

Table 2. Process-related characteristics of Marathon Kids implementation in selected schools in Houston ISD and Round Rock ISD. *Marathon Kids Evaluation Project*, 2008-09. (n = 15 schools: 8 Round Rock, 7 HISD)

| | Houston | | Round Rock |
|---|-----------------------|---------------------|------------|
| | Intervention n (%) | Control n (%) | n (%) |
| Sample (n, %) | 4 (100%) | 3 (100%) | 8 (100%) |
| Provides structured time for walking/running (see q.5 & q.18 for control schools) | 4 (100%) | 1 (33.33%) | 8 (100%) |
| How school structures time for walking/running (%) | | | |
| Class time dedicated to PA | 1 (25%) | N/A | 2 (25%) |
| Recess time | 3 (75%) | N/A | 3 (37.5%) |
| PE class | 4 (100%) | N/A | 7 (87.5%) |
| First thing in morning | 0 (0%) | N/A | 1 (12.5%) |
| Lunch time | 0 (0%) | N/A | 0 (0%) |
| After school program | 1 (25%) | N/A | 1 (12.5%) |
| Other ^a | 1 (25%) | N/A | 2 (25%) |
| How MK is implemented in school (MK schools only) | | | |
| Classroom teachers help students track miles | 3 (75%) | N/A | 1 (12.5%) |
| PE teacher helps students track miles | 4 (100%) | N/A | 6 (75%) |
| Peer leaders help students track miles | 0 (0%) | N/A | 1 (12.5%) |
| Mile logs displayed in classrooms and/or gyms | 3 (75%) | N/A | 5 (62.5%) |
| Other ^b | 1 (25%) | N/A | 1 (12.5%) |
| Do students have any PA or nutrition goal setting procedures and logs to track PA and food? (control schools only: q.19) | | 0 (0%) ^c | |
| Where 4th & 5th grade students complete Mileage and Fuel Logs | | | |
| <u>Mileage Log</u> | | | |
| Complete at home | 2 (50%) | N/A | 4 (50%) |
| Complete at school | 2 (50%) | N/A | 1 (12.5%) |
| Complete at home and school | 0 (0%) | N/A | 3 (37.5%) |
| Does not complete | 0 (0%) | N/A | 0 (0%) |
| <u>Fuel Log</u> | | | |
| Complete at home | 3 (75%) | N/A | 4 (50%) |
| Complete at school | 1 (25%) | N/A | 1 (12.5%) |
| Complete at home and school | 0 (0%) | N/A | 3 (37.5%) |
| Does not complete | 0 (0%) | N/A | 0 (0%) |

^a "Other" includes: (HISD) "Friday activities, sometimes"; (RRISD-High Imp.) "running club"; and (RRISD-Low Imp.) "run club".

^b "Other" includes: (HISD) "parent participation"; and (RRISD-High Imp.) "Stars on shoes to represent mileage; don't display actual mileage "

^c "not in PE, possibly elsewhere"

Table 3. Communication approaches for promoting Marathon Kids in selected schools in Houston ISD and Round Rock ISD. (Marathon Kids schools only). *Marathon Kids Evaluation Project*, 2008-09. (n = 15 schools: 8 Round Rock, 7 HISD)

| | Houston | | Round Rock |
|---|-----------------------|------------------|------------|
| | Intervention n (%) | Control n (%) | n (%) |
| Sample (n, %) | 4 (100%) | 3 (100%) | 8 (100%) |
| How did your school communicate to teachers about MK this year? | | | |
| Flyers/information packets about program were distributed to teachers | 4 (100%) | N/A | 4 (50%) |
| School-wide announcement made to inform teachers during a meeting or other gathering | 3 (75%) | N/A | 2 (25%) |
| An email was sent to teachers about MK | 4 (100%) | N/A | 6 (75%) |
| PE teacher or other leader verbally informed teachers | 4 (100%) | N/A | 3 (37.5%) |
| Classroom teachers were not contacted by anyone in school about MK this year | 0 (0%) | N/A | 0 (0%) |
| Other ^a | 1 (25%) | N/A | 1 (12.5%) |
| How did your school communicate to parents about MK this year? | | | |
| Classroom teachers distributed MK packets to students | 3 (75%) | N/A | 3 (37.5%) |
| PE teacher distributed MK info packets to students | 1 (25%) | N/A | 7 (87.5%) |
| Other ^b | 0 (0%) | N/A | 1 (12.5%) |
| How did your school communicate to parents about MK this year? | | | |
| PE and/or classroom teachers distributed MK information pages to students. | 4 (100%) | N/A | 4 (50%) |
| MK Info packets were distributed directly to parents | 1 (25%) | N/A | 1 (12.5%) |
| A flyer, letter, or email was sent directly to parents | 2 (50%) | N/A | 4 (50%) |
| Parents were informed at a school meeting | 1 (25%) | N/A | 1 (12.5%) |
| Parents were informed via a school newsletter | 2 (50%) | N/A | 3 (37.5%) |
| Parents were sent a reminder notice, letter, email about MK during course of MK program | 4 (100%) | N/A | 6 (75%) |
| Other ^c | 2 (50%) | N/A | 2 (50%) |

^a "Other" includes: (HISD) "school calendar"; (RRISD Low Imp.) "District meeting for PE teachers"

^b "Other" includes: (RRISD High Imp.) "email"

^c "Other" includes: (HISD) "Principal auto dialed parents and left recording about MK", "Verbal reminders (whenever there were random face-to-face encounters"; (RRISD High Imp) "kids word of mouth"; (RRISD Low Imp) "PE school website with a MK page; it has all forms and information about program".

Table 4. Instrumental and motivational support for Marathon Kids among selected schools in Houston ISD and Round Rock ISD that are implementing Marathon Kids. *Marathon Kids Evaluation Project*, 2008-09. (n = 15 schools: 8 Round Rock, 7 HISD)

| | Houston | | Round Rock |
|--|--------------|----------|------------|
| | Intervention | Control | |
| | n (%) | n (%) | n (%) |
| Sample (n, %) | 4 (100%) | 3 (100%) | 8 (100%) |
| School promotes Kick-Off and Final Mile Medal celebrations (n, % Yes) | 4 (100%) | N/A | 8 (100%) |
| School or district provides transportation to Kick-Off and Final Mile Medal celebrations | 4 (100%) | N/A | 2 (50%) |
| PE specialist attended this year's Kick-Off event | | | |
| Kick-Off Event | 3 (75%) | N/A | 4 (50%) |
| Final Mile Run Event | 3 (75%) | N/A | 6 (75%) |
| PE specialist has been asked to volunteer at Kick-Off or Final Mile Run events | 4 (100%) | N/A | 8 (100%) |
| PE specialist volunteered this year at the Kick-Off or Final Mile Medal Celebration events | 1 (25%) | N/A | 4 (50%) |
| PE specialist encourages students to attend events | | | |
| Kick-Off Event | 4 (100%) | N/A | 8 (100%) |
| Final Mile Run Event | 4 (100%) | N/A | 7 (87.5%) |
| PE specialist encourages students' parents and/or other family members to attend. | | | |
| Kick-Off Event | 4 (100%) | N/A | 8 (100%) |
| Final Mile Run Event | 4 (100%) | N/A | 7 (87.5%) |
| School implemented/maintained a school gardening project this year: | | | |
| Yes, with support from Marathon Kids | 1 (25%) | 0 (0%) | 0 (0%) |
| Yes, but developed separately from MK | 1 (25%) | 3 (100%) | 4 (50%) |
| No, school does not have gardening project | 2 (50%) | 0 (0%) | 3 (37.5%) |
| Not sure | 0 (0%) | 0 (0%) | 1 (12.5%) |

Table 5. Other health-related programs being implemented at school.*Marathon Kids Evaluation Project*, 2008-09. (n = 15 schools: 8 Round Rock, 7 HISD)

| | Houston | | Round Rock |
|------------------------------|-----------------------|------------------|------------|
| | Intervention n (%) | Control n (%) | n (%) |
| CATCH | 3 (75%) | 2 (66.7%) | 5 (62.5%) |
| "Durham Dashers" | 1 (25%) | N/A | 0 (0%) |
| Aspire After School | 0 (0%) | N/A | 1 (12.5%) |
| Karate after school | 0 (0%) | N/A | 1 (12.5%) |
| Jump rope class | 0 (0%) | N/A | 1 (12.5%) |
| Soccer after school | 0 (0%) | N/A | 1 (12.5%) |
| Power Up | 0 (0%) | N/A | 1 (12.5%) |
| Nutrition Classes w/ Parents | 0 (0%) | N/A | 1 (12.5%) |

Appendix F

PE Teacher/ Marathon Kids Coordinator Online Survey Results

Table 1. Sample size and response rates, *Marathon Kids School Coordinator Survey-Marathon Kids Evaluation Project, Spring 2009.*

| | Elementary Schools in School District | Participants Invited | Respondents | Response Rate ^b |
|--|--|-------------------------|------------------------|----------------------------|
| | n | n | n | % |
| School District | | | | |
| AISD | 80 | 80 | 42 | 52.5 |
| Del Valle | 7 | 7 | 3 | 42.9 |
| Eanes ISD | 8 | 8 | 6 | 75.0 |
| Houston ISD | 179 | 179 ^c | 24 | 13.4 |
| Lago Vista | 2 | 2 | 0 | 0.0 |
| Lake Travis ISD | 5 | 5 | 3 | 60.0 |
| Manor ISD | 5 | 5 | 1 | 20.0 |
| Plugerville ISD | 18 | 10 | 10 | 100.0 |
| Round Rock ISD | 30 | 29 | 24 | 82.7 |
| <i>Central Texas Total^a</i> | <i>155</i> | <i>146</i> | <i>89</i> | <i>61.0</i> |
| <i>Total Schools</i> | <i>321</i> | <i>320</i> | <i>119^d</i> | <i>37.2</i> |

^aCentral Texas represents respondents from AISD, Del Valle ISD, Lake Travis ISD, Manor ISD, Plugerville ISD, Round Rock ISD.

^bResponse rate represents number of respondents divided by number of participants invited.

^cSurvey link was sent by school district personnel. According to district personnel, link was sent to all PE teachers.

^dIncludes 6 schools which did not provide school district name.

Table 2. Demographic characteristics of respondents, Marathon Kids School Coordinator Survey-
Marathon Kids Evaluation Project, Spring 2009.

| | Total Sample (n = 119 ^b) | Central Texas ^a (n = 89) | AISD (n = 42) | Round Rock (n = 24) | Houston (n = 24) |
|---|---|--|------------------|------------------------|---------------------|
| Classification of school composition of economically disadvantaged students (%) | | | | | |
| 0 to 25% | 22.7 | 29.2 | 9.5 | 45.8 | 4.2 |
| 26 to 50% | 18.5 | 20.2 | 19.0 | 25.0 | 12.5 |
| 51 to 75% | 18.5 | 18.0 | 11.9 | 16.7 | 25.0 |
| 76% or more | 36.1 | 32.6 | 59.5 | 12.5 | 58.3 |
| Gender of respondent (% Female) | 73.9 | 77.5 | 78.6 | 75.0 | 79.2 |
| What is the majority ethnic composition of your school? (%) | | | | | |
| African American | 3.5 | 1.1 | 0.0 | 0.0 | 12.5 |
| Hispanic/Latino | 55.3 | 50.6 | 76.2 | 25.0 | 70.8 |
| White | 29.8 | 37.1 | 19.0 | 50.0 | 4.2 |
| Other majority ethnic | 0.9 | 1.1 | 0.0 | 4.2 | 0.0 |
| No one majority ethnic | 10.5 | 10.1 | 4.8 | 20.8 | 12.5 |
| What is your current position ? (%) | | | | | |
| PE teacher | 95.6 | 96.6 | 100.0 | 95.8 | 91.7 |
| Classroom teacher | 1.8 | 1.1 | 0.0 | 0.0 | 4.2 |
| School administrator | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other ^c | 2.6 | 2.2 | 0.0 | 4.2 | 4.2 |
| Number years teaching (mean) | 16.7 | 17.1 | 17.1 | 18.0 | 14.8 |
| Number years teaching at current school (mean) | 8.3 | 8.1 | 7.5 | 9.2 | 9.4 |
| Number years implemented Marathon Kids (mean) | 5.1 | 5.7 | 6.3 | 6.3 | 2.5 |
| n times attended Kick-Off (mean) | 5.1 | 5.8 | 7.3 | 5.6 | 2.6 |
| n times attended Final Mile (mean) | 4.8 | 5.4 | 6.7 | 5.3 | 2.3 |

^aCentral Texas represents respondents from AISD, Del Valle ISD, Lake Travis ISD, Manor ISD, Pflugerville ISD, Round Rock ISD.^bIncludes 6 schools which did not provide school district name.^cPE Associate, PE assistant.

Table 3. Participation in and school support for Marathon Kids. MK Coordinator Survey, *MK Evaluation Project*, Spring 2009.

| | Total Sample (n = 119) % | Central Texas ^a (n = 89) % | AISD (n = 42) % | Round Rock (n = 24) % | Houston (n = 24) % |
|---|--------------------------------|---|-----------------------|-----------------------------|--------------------------|
| Did you participate in Marathon Kids this year? (% Yes) | 95.8 | 98.9 | 100.0 | 100.0 | 83.3 |
| <i>Among those participating in MK...</i> | | | | | |
| Attended Kick-Off event this year | 63.2 | 64.4 | 75.6 | 58.3 | 75.0 |
| Attended Final Mile event this year | 62.3 | 65.5 | 81.0 | 56.5 | 65.0 |
| Ever asked to volunteer at kick-off or final mile medal celebration? | 82.5 | 88.6 | 97.6 | 95.8 | 75.0 |
| Respondent volunteered at MK event this year. | 43.0 | 49.4 | 57.1 | 56.5 | 30.0 |
| School provides structured time for MK's walking and running goals (% Yes) | 90.3 | 88.6 | 90.5 | 79.2 | 95.0 |
| Would recommend MK to other teachers (% Yes) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| <i>Among schools with structured time...</i> | | | | | |
| How does school structure time for running/walking? | | | | | |
| Class time dedicated to PA (e.g., "WOW") | 43.1 | 48.7 | 81.6 | 15.8 | 15.8 |
| Recess time | 52.0 | 52.6 | 71.1 | 21.1 | 47.4 |
| PE class | 69.6 | 65.4 | 44.7 | 78.9 | 84.2 |
| First thing in morning-before class | 7.8 | 6.4 | 5.3 | 10.5 | 10.5 |
| Lunch time | 2.9 | 3.8 | 7.9 | 0.0 | 0.0 |
| After school program | 10.8 | 10.3 | 5.3 | 31.6 | 15.8 |
| Other ^b | 8.8 | 10.3 | 7.8 | 15.9 | 5.3 |
| School implemented school gardening project | | | | | |
| Yes, with support from MK | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Yes, but developed separately from MK | 37.8 | 35.9 | 42.9 | 25.0 | 50.0 |
| No, don't have a school gardening project | 56.8 | 56.4 | 52.4 | 70.8 | 50.0 |
| Not sure. | 5.4 | 7.7 | 4.8 | 4.2 | 0.0 |

^aCentral Texas represents AISD, Del Valle ISD, Lake Travis ISD, Manor ISD, Pflugerville ISD, Round Rock ISD.

^bResponses included "before school", "home support", "Every Friday we take the kids to track where the complete laps for MK".

Table 4. Process of implementing Marathon Kids at school. Marathon Kids Coordinator Survey, *Marathon Kids Evaluation Project*, Spring 2009.

| | Total Respondents (n = 114 ^b) % | Central Texas ^a (n = 88) % | AISD (n = 42) % | Round Rock (n = 24) % | Houston (n = 20) % |
|---|---|---|-----------------------|-----------------------------|--------------------------|
| How is MK implemented in your school? | | | | | |
| Classroom teachers help students track miles walked or run | 49.1 | 53.4 | 90.5 | 16.7 | 30.0 |
| PE teacher(s) help students track miles | 64.9 | 61.4 | 42.9 | 70.8 | 90.0 |
| Peer leaders help students track miles | 2.6 | 3.4 | 7.1 | 0.0 | 0.0 |
| Mile logs are displayed in classrooms | 31.6 | 34.1 | 59.5 | 4.2 | 15.0 |
| Which best describes where the majority of your 3rd-5th grade students fill in Mileage Log ? | | | | | |
| Completes at home | 15.3 | 14.8 | 2.4 | 41.7 | 20.0 |
| Completes at school | 33.3 | 46.6 | 61.9 | 20.8 | 45.0 |
| Completes at home & school | 47.7 | 34.1 | 33.3 | 33.3 | 35.0 |
| Students do not complete | 3.6 | 4.5 | 2.4 | 4.2 | 0.0 |
| Which best describes where the majority of your 3rd-5th grade students fill in Fuel Log ? | | | | | |
| Completes at home | 28.3 | 22.7 | 5.0 | 52.2 | 52.6 |
| Completes at school | 12.3 | 14.8 | 25.0 | 8.7 | 21.1 |
| Completes at home & school | 17.0 | 11.4 | 17.5 | 0.0 | 15.8 |
| Students do not complete | 42.5 | 46.6 | 52.5 | 39.1 | 10.5 |

^aCentral Texas represents AISD, Del Valle ISD, Lake Travis ISD, Manor ISD, Pflugerville ISD, Round Rock ISD.^bSample size differs from sum of Central Texas and Houston as 6 respondents did not indicate school district.

Table 5. Communication channels for Marathon Kids. Marathon Kids Coordinator Survey, *Marathon Kids Evaluation Project*, Spring 2009.

| | Total Sample (n = 114) | Central Texas ^a (n = 88) | AISD (n = 42) | Round Rock (n = 24) | Houston (n = 20) |
|---|---------------------------|--|------------------|------------------------|---------------------|
| <i>Among those participating in MK...</i> | | | | | |
| How did you first hear about MK? | | | | | |
| A regional school district presentation | 39.5 | 34.1 | 35.7 | 45.8 | 65 |
| A presentation at my school | 1.8 | 2.3 | 0 | 8.3 | 0 |
| Marathon Kids Website | 6.1 | 6.8 | 4.8 | 4.2 | 0 |
| My schools' participation in MK | 40.4 | 42 | 42.9 | 37.5 | 20 |
| A friend outside of school | 1.8 | 2.3 | 0 | 0 | 0 |
| A parent lobbyist told me | 1.8 | 2.3 | 0 | 4.2 | 0 |
| A co-worker told me | 12.3 | 13.6 | 7.1 | 12.5 | 5 |
| Other ^b | 21.9 | 25 | 28.6 | 25 | 15 |
| How did your school communicate to students to participate in MK this year? ^c | | | | | |
| Classroom teachers distributed MK information packets to students | 23.7 | 23.9 | 40.5 | 4.2 | 25 |
| PE distributed MK information packets to students | 78.1 | 78.4 | 64.3 | 87.5 | 85 |
| Other ^d | 15.8 | 17 | 19 | 16.7 | 15 |
| How did your school communicate to parents about MK this year? ^c | | | | | |
| PE and/or classroom teachers distributed MK information to students. Students brought information home. | 89.5 | 90.9 | 90.5 | 91.7 | 95 |
| MK info packets distributed to parents | 7.9 | 8 | 9.5 | 4.2 | 10 |
| A flyer, letter, or email sent to parents | 34.2 | 37.5 | 40.5 | 29.2 | 30 |
| Parents informed about MK at a school meeting | 16.7 | 14.8 | 19 | 0 | 20 |
| Parents informed about MK via school newsletter | 48.2 | 53.4 | 50 | 33.3 | 40 |
| Parents were sent reminder notice during course of MK program | 48.2 | 52.3 | 40.5 | 41.7 | 35 |
| Other ^e | 8.8 | 10.2 | 4.8 | 20.8 | 5 |
| This year, how did you receive information regarding upcoming MK events? ^c | | | | | |
| Flyers | 32.5 | 35.2 | 54.2 | 12.5 | 25 |
| MK website | 37.7 | 39.8 | 47.6 | 33.3 | 35 |
| Email from MK | 79.8 | 85.2 | 83.3 | 83.3 | 70 |
| District Meeting | 57 | 64.8 | 92.9 | 54.2 | 30 |
| Email from district PE coordinator | 58.8 | 58 | 83.3 | 45.8 | 65 |
| Other ^f | 3.5 | 4.5 | 4.8 | 0 | 0 |

^aCentral Texas represents respondents from AISD, Del Valle ISD, Lake Travis ISD, Manor ISD, Pflugerville ISD, Round Rock ISD.^bOther includes: "I have participated from the beginning with MK"; "Learned about it from Whole Food Kirby while shopping"; "local newspaper"; "worked at another school that participated"; "runtex"; "MK rep visited all the school district PE coordinators"; "College"; "University of Texas".^cValues do not add to 100% as respondent was able to check 'all responses that apply'.^dOther includes: Information is sent home in student folders; "website"; "verbally through PE class"; "teacher webpage"; "school newsletter".^eOther includes: "Posted on our PE website at school"; "postings around school hallways"; "teacher webpage";^fOther includes: "Info packets from MK coordinator"; "Another PE Teacher would forward emails";

Table 6a. Teacher input on MK program process among MK Coordinators in Central Texas (n = 88)^a, *Marathon Kids Evaluation Project*, Spring 2009.

| Teacher ratings on MK process, with 1= Strongly Disagree, and 5= Strongly Agree | Summary Score Mean | Strongly disagree % | Disagree % | Neutral % | Agree % | Strongly Agree % | N/A or Never Rec'd % |
|---|-----------------------|------------------------|---------------|--------------|------------|---------------------|-------------------------|
| MK instruction packet is easy to follow | 4.78 | 1.1 | 0 | 2.3 | 19.3 | 77.3 | 0 |
| Reminder emails from MK have been helpful | 4.68 | 1.15 | 0 | 3.45 | 21.84 | 71.26 | 2.3 |
| I feel sufficiently supported by MK at my scho | 4.57 | 1.1 | 0 | 3.4 | 31.8 | 63.6 | 0 |
| MK makes an important contribution to the health and fitness of c hildren at our school. | 4.57 | 1.1 | 0 | 4.5 | 31.8 | 60.2 | 2.3 |
| Children at our school enjoy MK | 4.5 | 1.15 | 1.15 | 5.75 | 35.63 | 54.02 | 2.3 |
| MK is considered an important part of our coordinated school health plan. | 4.34 | 1.15 | 4.6 | 9.2 | 37.93 | 44.83 | 2.3 |
| It was easy for me to regsiter my students on the MK website. | 4.72 | 1.1 | 0 | 1.1 | 20.5 | 59.1 | 18.2 |
| In terms of communication between MK and you, what communication channel best for you? | % | | | | | | |
| Information mailed to you at your school (% Y | 53.2 | N/A | N/A | N/A | N/A | N/A | N/A |
| Email sent to you (% Yes) | 97.7 | N/A | N/A | N/A | N/A | N/A | N/A |
| Other (% marking this response) | 2.2 | N/A | N/A | N/A | N/A | N/A | N/A |
| Do you feel the need for more training on how to implement MK at your school? (% Yes) | 4.5 | N/A | N/A | N/A | N/A | N/A | N/A |

^aRepresents respondents from the following school districts: AISD (n = 42), Eanes ISD (n = 6), Del Valle ISD (n = 2), Manor ISD (n=1), Pflugerville ISD (n=10), Round Rock ISD (n =24), and Lake Travis (n=3)**Table 6b.** Teacher input on MK program process among MK Coordinators in Houston (n = 20), *Marathon Kids Evaluation Project*, Spring 2009.

| Teacher ratings on MK process, with 1= Strongly Disagree, and 5= Strongly Agree | Summary Score Mean | Strongly disagree % | Disagree % | Neutral % | Agree % | Strongly Agree % | N/A or Never Rec'd % |
|---|-----------------------|------------------------|---------------|--------------|------------|---------------------|-------------------------|
| MK instruction packet is easy to follow | 4.94 | 10 | 0 | 0 | 5 | 80 | 5 |
| Reminder emails from MK have been helpful | 4.81 | 10 | 0 | 0 | 15 | 75 | 0 |
| I feel sufficiently supported by MK at my scho | 4.88 | 10 | 0 | 0 | 10 | 80 | 0 |
| MK makes an important contribution to the health and fitness of c hildren at our school. | 4.63 | 10 | 0 | 0 | 30 | 60 | 0 |
| Children at our school enjoy MK | 4.69 | 10 | 0 | 0 | 30 | 60 | 0 |
| MK is considered an important part of our coordinated school health plan. | 4.38 | 10 | 0 | 10 | 40 | 40 | 0 |
| It was easy for me to regsiter my students on the MK website. | 4.88 | 10.53 | 0 | 0 | 10.53 | 78.95 | 0 |
| In terms of communication between MK and you, what communication channel best for you? | % | | | | | | |
| Information mailed to you at your school (% Y | 38.5 | N/A | N/A | N/A | N/A | N/A | N/A |
| Email sent to you (% Yes) | 100.0 | N/A | N/A | N/A | N/A | N/A | N/A |
| Other (% marking this response) | 5.0 | N/A | N/A | N/A | N/A | N/A | N/A |
| Do you feel the need for more training on how to implement MK at your school? (% Yes) | 0.0 | N/A | N/A | N/A | N/A | N/A | N/A |

Abbreviations: MK, Marathon Kids; N/A, Not Applicable.

Table 7. Facilitators, barriers and recommendations for strengthening participation in Marathon Kids among MK Coordinators in Central Texas (n = 88)^a and Houston (n=20), *Marathon Kids Evaluation Project*, Spring 2009.

| | Central Texas ^a (n = 88) % | Houston (n = 20) % |
|--|---|--------------------------|
| Reasons school participates in MK ^b (%) | | |
| Student physical activity and wellness | 77.3 | 60.0 |
| MK as a means of goal-setting and motivation for students | 37.5 | 30.0 |
| Kids love the program | 30.7 | 30.0 |
| Kids love the free MK t-shirts | 27.3 | 30.0 |
| MK promotes parent and family exercise | 18.2 | 20.0 |
| Barriers that make it difficult to implement MK at school ^c (%) | | |
| Lack of parent support | 33.0 | 25.0 |
| MK Coordinator's excessive workload | 26.1 | 15.0 |
| Lack of teacher support | 20.5 | 10.0 |
| Time constraints | 17.1 | 60.0 |
| Barriers that make it difficult for students to attend the Kick-Off and Final Mile Medal celebrations ^d (%) | | |
| Time/ date conflict with other events and sporting activities | 61.4 | 60.0 |
| No transportation | 33.0 | 45.0 |
| Inconvenient location | 26.1 | 35.0 |
| Lack of parent support | 25.0 | 50.0 |
| Recommendations for strengthening delivery of MK ^e (%) | | |
| Great-No complaints | 21.6 | 5.0 |
| Increased media advertisement | 13.6 | 20.0 |
| MK representative(s) should conduct school presentations | 10.2 | 25.0 |
| Provide transportation for events | 5.7 | 5.0 |

Abbreviations: MK, Marathon Kids.

^aRepresents respondents from the following school districts: AISD (n = 42), Eanes ISD (n = 6), Del Valle ISD (n = 2),

Manor ISD (n=1), Pflugerville ISD (n=10), Round Rock ISD (n = 24), and Lake Travis (n=3)

^bBased on open-ended responses to the following questions: "Please tell us three reasons your school participates in Marathon Kids."^cBased on open-ended responses to the following question: "Please tell us 3 barriers that make it difficult to implement Marathon Kids in your school."^dBased on open ended responses to the following question: "Please tell us the barriers that make it difficult for your students to attend the Kick-Off Celebration and the Final Mile Medal Celebration."^eBased on open-ended responses to the following question: "Please tell us 3 ways we can strengthen the delivery of Marathon Kids."