USING A COMMUNITY-BASED EVENT TO INCREASE PHYSICAL ACTIVITY IN CHILDREN

By

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In Partial Fulfillment of the Bachelors degree
With Honors in
Public Health
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Approved by:

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Acknowledgements

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Abstract

The effects of a community-based event to combat childhood obesity through improving physical activity were examined. The event used for analysis was the Tucson Marathon Family Fitness Festival 1-Mile Fun Run. Participation in the organization and coordination of the event was conducted. Literature regarding previous community-level efforts for increasing physical activity among children was reviewed. Survey instruments and literature related to the evaluation of knowledge, attitudes, and behavior regarding physical activity in youth was also reviewed. A survey was developed and delivered to participants of the Tucson Marathon Family Fitness Festival 1-Mile Fun Run regarding attitude and behavior of physical activity. Supplemental materials regarding physical activity were also developed. The results of the survey indicate positive attitudes toward the event and an overall increase in physical activity and other healthy behaviors.
Introduction

The Problem of Childhood Obesity

In the past decade, childhood obesity has become a primary health concern in the United States (Ebbeling, Pawlak, & Ludwig, 2002). The obesity prevalence among children and adolescents has almost tripled since 1980. Approximately 12.5 million children and adolescents between the ages of 2 and 19 years are obese (CDC, 2014). An inverse relationship has developed between a child’s level of physical activity and the amount of time spent sedentary. Children spend 75% of their waking hours inactive with an estimated rate of 12 minutes of vigorous physical activity per day (Ebbeling, Pawlak, & Ludwig, 2002). It is projected that by 2030, 51% of children will be classified as overweight and 11% of children will be classified as obese (American Heart Association, 2013). About 70% of obese children grow up to become obese adults (Akhtar-Danesh, Dehghan, & Merchant, 2005). A study demonstrated that overweight children who were followed up to the age range of 40 and 55 years were more likely to die from any cause as compared to those who were lean (Akhtar-Danesh, Dehghan, & Merchant, 2005). Type 2 diabetes was once rarely seen among adolescents and is now a common medical diagnosis. The prevalence of children who are prediabetic is extremely high in severely obese children regardless of ethnicity (Ebbeling, Pawlak, & Ludwig, 2002).

The Health Effects of Childhood Obesity

Childhood obesity is a multisystem disease. Similar to adults, childhood obesity can lead to hypertension, chronic inflammation, increased blood clotting, hyperinsulinaemia, dyslipidaemia, and endothelial dysfunction (Ebbeling, Pawlak, & Ludwig, 2002). Potential pulmonary complications include sleep-disordered breathing, exercise intolerance, and asthma (Ebbeling, Pawlak, & Ludwig, 2002). The development of type 2 diabetes results in increased
risk of heart disease, stroke, limb amputation, kidney failure, and blindness in adulthood (Ebbeling, Pawlak, & Ludwig, 2002). Serious musculoskeletal, renal, hepatic, and neurological consequences have also been recognized among children who are severely obese. Research has also demonstrated psychosocial consequences of obese children (Ebbeling, Pawlak, & Ludwig, 2002).

The Health Disparities of Childhood Obesity

Significant racial and socioeconomic health disparities lie in childhood obesity. African American and Hispanic children are at a greater risk for obesity-related complications of type 2 diabetes and cardiovascular disease (Ebbeling, Pawlak, & Ludwig, 2002). Approximately 1 in 5 African American children and 1 in 6 Hispanic children between the ages of 2 and 5 years are obese (CDC, 2013). Among preschool-aged children, it is estimated that 1 in 7 are obese (CDC, 2014). From 2003 to 2007, the obesity prevalence increased by 10% for all U.S. children, but increased by 23-33% for children of low-education, low-income, and high unemployment households (Kogan, Siahpush, & Singh, 2010). Children from low-income and low-education households had 3.4-4.3 times the risk of being obese than children from higher socioeconomic households (Kogan, Siahpush, & Singh, 2010).

Childhood Obesity as a Primary Target for Intervention

Research has led us to conclude that early intervention and prevention are more effective and less costly than treatment of childhood obesity (DeMattia and Denney, 2008). Children are considered to be a priority population for interventions in relation to obesity (Akhtar-Danesh, Dehghan, & Merchant, 2005). Weight loss is easier in children versus adults. It is also difficult to reduce excessive weight in adults once it has become established. Therefore, it
is sensible to focus on prevention and treatment of obesity during childhood (Akhtar-Danesh, Dehghan, & Merchant, 2005).

*Interventions Aimed to Counteract Childhood Obesity through Physical Activity*

In 2005 the Government Accountability Office reported increasing physical activity as a primary objective in designing intervention programs that target childhood obesity (American Heart Association, 2013). The Center for Disease Control and Prevention has identified a strong need for efforts to increase physical activity among youth (CDC, 2009). Based on the 2008 *Physical Activity Guidelines for Americans*, children are recommended to participate in 60 minutes or more of activity each day (CDC, 2008). The majority of the 60 or more minutes should be spent with moderate or vigorous aerobic physical activity (CDC, 2008). Physical activity contains numerous benefits in relation to counteracting childhood obesity. There is strong evidence that children benefit from physical activity through improved cardiorespiratory and muscular fitness, bone health, and body composition. Physical activity has also been shown to reduce symptoms of anxiety and depression (CDC, 2011). In the classroom, physical activity can positively influence concentration, behavior, and memory (CDC, 2008). Interventions aimed at improving physical activity is essential to long-term health, as introducing healthy behaviors of physical activity during childhood increases the ability to maintain an active lifestyle during adulthood.

*The Use of Community-Level Interventions in Promoting Physical Activity*

Communities are considered a primary source for public health interventions. The shared locality, shared values, and level of social interaction establish a camaraderie among community members that encourages one another to achieve optimum health and wellness. Previous
community-level interventions aimed at combating childhood obesity through increased physical activity have experience both positive and negative outcomes.

A quasi-experimental study was conducted in two rural communities in South Carolina to examine the effects of the community-based physical activity intervention Active Winners (Pate, Saunders, Ward, Felton, Trost, & Dowda, 2003). A total of 436 students participated in the intervention (Pate et. al, 2003). Active Winners consisted of an after-school summer physical activity program with home, school, and community components. The intervention occurred during an 18-month period (Pate et. al, 2003). The students reported their level of after-school physical activity at three separate data collection points prior to, during, and after the intervention using Previous Day Physical Activity Recall (PDPAR). A questionnaire was also designed to measure the hypothesized psychosocial and environmental detriments of active behavior (Pate et. al, 2003). The evaluation process included meeting records, documenting the program activities, interviews, focus groups, and heart rate monitoring to evaluate the planning and implementation of the intervention (Pate et. al, 2003). The results of the study indicated that there were no significant differences in physical activity variables and few significant differences in psychosocial variables of the intervention and comparison groups. It was concluded that the intervention did not have a significant effect on physical activity in the target population (Pate et. al, 2003).

Another study was conducted in three urban cities in Massachusetts to test the hypothesis that a community-based environmental change intervention could prevent weight gain in young children (Economos, Hyatt, Goldberg, Must, Naumova, Collins, & Nelson, 2007). In order to test the hypothesis a non-randomized controlled trial was conducted. A total of 1,178 children participated in the activity based intervention (Economos et. al, 2007). The intervention was
designed to analyze the participant's BMI z-score. The intervention communities had 36% and 43% of children scoring above the 85th percentile for BMI z-score (Economos et. al, 2007). Within the intervention community, BMI z-score decreased by -0.1151 compared to the control communities (Economos et. al, 2007). It was concluded that a community-based environmental intervention was able to successfully decrease BMI z-scores in children of high risk for obesity. The model presented in the study demonstrates encouraging results for combating childhood obesity with physical activity (Economos et. al, 2007).

Tucson Marathon Family Fitness Festival

The Tucson Marathon Family Fitness Festival (TMFFF) is a collaboration between the University of Arizona Center for Physical Activity and Nutrition (CPAN), the University of Arizona Canyon Ranch Center for Prevention and Health Promotion (CRCPHP), and the Tucson Marathon Group (Snyder, 2013). The Tucson Marathon Family Fitness Festival was initiated in 2010 to promote physical activity and health (Snyder, 2013). The Pima County Health Department’s Communities Putting Prevention to Work (CPPW) grant originally sponsored the event to promote physical activity with an emphasis on running for local school-aged children (Snyder, 2013).

Purpose of Thesis

The purpose of this thesis is to examine the effects of the Tucson Marathon Family Fitness Festival 1-Mile Fun Run in combating childhood obesity through improving physical activity. A survey was used for analysis of the attitudes and behaviors of event participants in relation to physical activity. The main question that the thesis seeks to answer is, “Can a community-based event improve physical activity in child participants?” The hypothesis is
therefore, “Children who participate in a community-based physical activity focused event will report greater activity post-event.”

**Methods**

*Targe Audience*

The target audience for the survey was participants in the Tucson Marathon Family Fitness Festival 1-Mile Fun Run. The Tucson Family Fitness Festival has a special focus on schools with a high percentage of low-income children (Snyder, 2013). To ensure that all are able to participate in the event, the Tucson Marathon Family Fitness Festival provided 500 free entries to be used by schools with economically disadvantaged students (Tucson Marathon, 2013). Transportation was also provided to bring the largest groups of students to the event. Event participants included school-aged children, parents, teachers, and other adults. The school-aged children were primarily from House of Neighborly Services, Challenger Middle School, Flowing Wells Jr. High School, Sierra Middle School, Billy Lane Lauffer Middle School, Gallego Elementary School, Borton Primary Magnet School, Rosemarie Rivers Elementary School, and John A. Valenzuela Youth Center. The participants for the 1-Mile Fun Run included individual registrations as well as same day registrations that were not associated with any of the above organizations.

*Tucson Marathon Family Fitness Festival 1-Mile Fun Run Event Specifics*

The main event of the Tucson Marathon Family Fitness Festival is a 1-Mile Fun Run. The Fun Run is intended for runners and walkers of all ages (Tucson Marathon, 2013). Families are encouraged to participate and all children who participate in the event receive a bib, medal, and a t-shirt. There are also 5k (3.1 miles) and 10K (6.2 miles) runs (Tucson Marathon, 2013). The 5K and 10K races welcome runners of all abilities, including individuals with walkers and
wheelchairs (Tucson Marathon, 2013). The event occurred Saturday, December 7th, 2013 on the University of Arizona Mall. Sponsors for the event included the University of Arizona College of Public Health, University of Arizona Canyon Ranch Center, Tucson Medical Center, the Alliance for a Healthier Generation, and the YMCA of Southern Arizona (Tucson Marathon, 2013).

*Tucson Marathon Family Fitness Festival Event Planning*

Planning for the Tucson Marathon Family Fitness Festival included monthly committee meetings. These included members of the Tucson Marathon Group, the University of Arizona Center for Physical Activity and Nutrition, the University of Arizona Canyon Ranch Center for Prevention and Health Promotion, and other individuals involved in the event. In order to gain a teacher’s perspective on the Tucson Marathon Family Fitness Festival, the Canyon Ranch Center for Prevention and Health Promotion conducted a Teacher’s for Wellness Retreat at Canyon Ranch. The teachers who participated in the workshop were from various local schools. The event included a wake up activity, a lecture from Dr. Cynthia Thomson on the state of physical inactivity in America, a lecture on living an active life from the nationally known runner Pam Reed, information on classroom activities and teacher modeling, overview of the Tucson Marathon Family Fitness Festival, and a group discussion on how the event and promotion of the event can be improved. In addition to the event, supplemental educational materials were developed on simple ways to increase activity in the classroom and prepare their students for the Tucson Marathon Family Fitness Festival.

*Tucson Marathon Family Festival 1-Mile Fun Run Survey Development*

A literature review was conducted to examine methods of survey development. The main literature relied upon for development of the Tucson Marathon Family Fitness Festival 1-Mile
Fun Run Survey was Questionnaire Research: A Practical Guide by Mildred Patten and Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method by Don Dillman, Jolene Smyth, and Leah Melani Christian. The survey was originally a full page but was shortened to one half page for ease of completion. The survey questions were developed to examine the participant’s attitudes and levels of physical activity. This included examining any changes pre and post event. Questions were also included in relation to the Tucson Marathon Family Fitness Festival and the University of Arizona campus. The questions regarding the University of Arizona were included to examine whether participating in an event on the campus sparked interest in attending college.

The survey initially asked participants to list their bib number and identify the survey compiler. The survey consists of 7 questions:

1. Have you attended the Family Fitness Festival before?
2. Do you plan to come back next year?
3. What part of the event did you like the best?
4. What part of the event did you like the least?
5. Since registering for the Family Fitness Festival I have (mark all that apply)
6. What is the longest distance you have ever run?
7. Have you been to the University of Arizona before? Do you plan to come back to the University of Arizona campus?

Each of the questions could be answered by marking an answer box. Some of the questions required one answer while others indicated to mark all answers that applied to the participant.
The survey was developed in English and Spanish to accommodate all participants. A native Spanish speaker verified the Spanish version of the survey for grammar and content.

The survey was distributed at the end of the 1-Mile Fun Run. A table was set up at the finish line allowing immediate access to participants. Volunteers also walked throughout the event venue with clipboards asking participants to complete the survey. To promote completion of the survey, participant’s bib numbers were entered into a drawing to win one of five iPod shuffles. The shuffles were mailed to the winning participants a week after the event.
The main method for data analysis is the participant registration form. Each of the participant’s bib numbers was connected to their personal information on the registration form. Basic participant information and the responses to the 7 questions were manually entered into an Excel spreadsheet for analysis. The components for analysis include the participant bib number, zip code, age, gender, and school.

Results

*Tucson Marathon Family Fitness Festival Level of Participation*

A total of 804 runners pre-registered for the 10K, 10K Relay, 5K, and 1-Mile Fun Run (Reed & Astalos, 2013). An additional 29 registered on the day of the event (Reed & Astalos, 2013). Of those who pre-registered, 153 individuals did not show up to the event (Reed & Astalos, 2013). The total number of participants for the 10K, 10K Relay, 5K, and 1-Mile Fun Run was 621 (Reed & Astalos, 2013). A total of 582 participants pre-registered and 16 participants registered on the day of the event for the 1-Mile Fun Run. There were a total of 450 free entries (Reed & Astalos, 2013). Of those who pre-registered, 153 individuals did not show up to the event (Reed & Astalos, 2013). The total number of participants for the 1-Mile Fun Run was 445, which was 8% higher than 2012 (Reed & Astalos, 2013). The overall no-show rate was 26% (Reed & Astalos, 2013). This was higher than the 24% no-show rate for the prior year (Reed & Astalos, 2013).

*Response Rate of Tucson Marathon Family Fitness Festival Survey*

A total of 145 participants completed the survey. There were 4 duplicate surveys and 6 surveys in which the participant name did not match the bib number. In this situation, the original runner registered to the bib number could not attend the event and a substitute student was sent in their place. These 6 surveys were included in the overall results of the survey but
were not included in the response results by gender and response results by age group.

Information from participants whose bib numbers were between 517 and 800 were not available due to registration issues and were not used for analysis. Therefore, the total response rate for the data by gender and age group is based off of a total of 116 participants rather than the 145 surveys completed. A total of 98 surveys were completed by a student, 26 surveys were completed by a parent, 3 surveys were completed by a teacher, 7 surveys were completed by another adult, and 11 surveys had no indication of who completed the survey.

Table 1: Basic Participant Information

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Characteristics of Tucson Marathon Family Fitness Festival Survey Participants

Of the 145 participants who completed the survey, 77 participants were female and 39 participants were male.
Table 2: Survey Participants by Gender

The age range of survey participants was from 3 years to 60 years. The ages of participants were categorized in groupings of 5 years. A total of 9 participants were in the age group of 0 to 5 years, 46 participants in the age group of 6 to 10 years, 39 participants in the age group of 11 to 15 years, 9 participants in the age group of 16 to 20 years, 0 participants in the age group of 21 to 25 years, 4 participants in the age group of 26 to 30 years, 1 participant in the age group of 31 to 35 years, 4 participants in the age group of 36 to 40 years, 0 participants in the age group of 41 to 45 years, 1 participant in the age group of 46 to 50 years, 2 participants in the age group of 51 to 55 years, and 1 participant in the age group of 56 to 60 years.

Table 3: Survey Participants by Age Group
The schools or teams include 1 participant from Anza Trail School, 4 participants from Borton Primary Magnet School, 9 participants from Challenger Middle School, 11 participants from House of Neighborly Services, 20 participants from Flowing Wells Junior High School, 6 participants from Gallego Elementary School, 11 participants from John Valenzuela Youth Center, 1 participant from Billy Lane Lauffer Middle School, 1 participant from Los Amigos Elementary School, 2 participants from Mission View Elementary School, 1 participant from Palaminas Elementary School, 16 participants from Rosemarie Rivera Elementary, 2 participants from Sierra Middle School, 1 participant from St. Mark’s Preschool, 1 participant from Sycamore Elementary School, 1 participant from the University of Arizona, and 28 participants did not indicate an association with a school or team.

Table 4: Survey Participants by School/Team
The majority of survey participants resided under the zip codes of 85701, 85705, 85706, and 85713. This includes a geographical area of North and South Tucson. Other zip codes of survey participants include 84615, 85037, 85249, 85615, 85641, 85653, 85710, 85711, 85712, 85719, 85730, 85735, 85741, 85745, 85746, 85750, 85756, and 85764. A total of 2 participants had no indication of zip code.

Table 5: Survey Participants by Zip Code

Responses of Tucson Marathon Family Fitness Festival Survey Participants

For 95 participants, this was their first time participating in the Tucson Marathon Family Fitness Festival. A total of 49 participants had attended the event in the past.
Table 6: Question 1-All Participants

When subdivided by gender, a total of 30 females and 15 males have attended the Tucson Marathon Family Fitness Festival in the past. The event was new to 48 females and 24 males.

Table 7: Question 1-By Gender
For the 0 to 5 age group, 4 participants had attended the event in the past and 5 participants were new to the race. For the 6 to 10 age group, 18 participants had attended the event previously and 28 participants were new. For the 11 to 15 age group, 11 participants were returning and 28 were new. For the 16 to 20 age group, 3 participants were returning and 6 participants were new. For the 26 to 30 age group, 3 participants were returning and 1 participant was new to the race. For the 31 to 35 age group, 1 participant has attended the race in the past. For the 36 to 40 age group, the attended was split evenly between returning and new. This was also the same for the 51 to 55 age group. The 1 participant in the 46 to 50 age group had never attended the event and the single participant from the 56 to 60 age group had attended the Family Fitness Festival previously.

Table 8: Question 1-By Age Group
After completion of the 1-Mile Fun Run, 124 participants would return to the Tucson Marathon Family Fitness Festival next year. Only 2 participants said they would not return next year and 18 participants were unsure if they would return for the 2014 Tucson Marathon Family Fitness Festival. One participant did not respond to the question.

Table 9: Question 2-All Participants

![Bar Chart for Question 2: Do you plan to come back next year? All Participants]

When subdivided by gender, 63 female participants and 35 male participants would participate in the Tucson Marathon Family Fitness Festival next year. The 2 participants that would not return to the event next year were both female. There were 10 female participants and 4 male participants who were unsure of whether they would participate in the event. The single participant that did not respond was a female.
All participants within the 0 to 5, 16 to 20, 26 to 30, 31 to 35, 46 to 50, and 51 to 55 age groups reported that they would return to the Tucson Marathon Family Fitness Festival next year. For the 6 to 10 age group, 38 participants would return to the event, 1 participant would not return, and 7 participants were unsure. For the 11 to 15 age group, 33 participants would return to the event next year, 1 participant would not return, and 6 participants are unsure. For the 36 to 40 age group, 3 participants would return to the event next year and 1 participant was unsure. The single participant in the 56 to 60 age group did not respond to the question.
When asked about what part of the event did the participant enjoy the best, 33 participants favored the booths, 57 participants favored the music, 101 participants enjoyed the race itself the best, 28 participants enjoyed the location, 46 participants favored the food. 12 participants enjoyed the obstacle course, 21 participants favored listening to the speakers, and 12 participants enjoyed a feature of the event that was not mentioned on the survey.
Table 12: Question 3-All Participants

A total of 19 females and 5 males enjoyed the booth, 33 females and 14 males favored the music, 54 female participants and 29 male participants enjoyed the race itself, 14 females and 10 males preferred the location, 22 female participants and 12 male participants enjoyed the food, 22 female participants and 12 male participants favored the obstacle course, 13 females and 4 males enjoyed the speakers, and 6 female participants and 2 male participants enjoyed an event at the race that was not mentioned on the survey the best.

Table 13: Question 3-By Gender
For the 0 to 5 age group, 2 participants favored the booths, 3 participants enjoyed the music, 8 participants preferred the race itself, 1 participant favored the location, 3 participants enjoyed the food, 3 participants enjoyed the obstacle course, and 2 participants favored the speakers. For the 6 to 10 age group, 8 participants enjoyed the booths, 16 participants favored the music, 31 participants enjoyed the rate itself, 12 participants favored the location, 16 participants enjoyed the food, 19 participants favored the obstacle course, 8 participants enjoyed the speakers, and 4 participants enjoyed a feature of the event that was not in the survey. For the 11 to 15 age group, 9 participants favored the booths, 16 participants enjoyed the music, 27 participants preferred the race itself, 5 participants enjoyed the location, 11 participants preferred the food, 7 participants favored the obstacle course, 4 participants enjoyed the speakers, and 2 participants enjoyed an aspect of the event not on the survey. For the 16 to 20 age group, 2 participants preferred the booths, 3 participants enjoyed the music, 8 participants favored the race itself, 3 participants enjoyed the location, 3 participants enjoyed the food, 7 participants favored the obstacle course, 4 participants enjoyed the speakers, and 2 participants enjoyed another feature of the event that was not on the survey. For the 26 to 30 age group, 2 participants enjoyed the booths, 4 participants favored the music, 3 participants enjoyed the race itself, 1 participant enjoyed the location, 1 participant enjoyed the food, and 2 participants preferred the obstacle course. For the 31 to 35 age group, the single participant enjoyed the race itself the best. For the 36 to 40 age group, 3 participants enjoyed the music, 4 participants favored the race itself, 1 participant enjoyed the location, and 1 participant enjoyed the obstacle course. The single participant from the 46 to 50 age group enjoyed the race the best. Each participant within the 51 to 55 age group enjoyed the booths, music, and speakers. The single participant in the 56 to 60 age group favored the music as the best part of the event.
When asked about which part of the event did they enjoy the least, 11 participants did not enjoy the booths, 5 participants did not enjoy the music, 9 participants did not enjoy the race itself, 9 participants did not enjoy the location, 8 participants did not favor the food, 8 participants did not enjoy the obstacle course, 7 participants did not favor the speakers, 33 participants had another aspect of the event that they did not enjoy, 39 participants enjoyed all aspects of the race, and 18 participants did not respond. Participant comments in the other category include the cold temperature, no chip timing, short length of races, and protestor.
Table 15: Question 4-All Participants

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When subdivided by gender, 6 female participants and 4 male participants did not find the booths interesting, 4 female participants and 1 male participant did not enjoy the music, 2 females and 1 male did not favor the race itself, 7 females and 1 male did not enjoy the location, 6 female participants and 1 male participant did not enjoy the food, 2 females and 5 males did not favor the obstacle course, 3 females and 3 males chose the speakers as their least favorite part of the event, 12 females and 12 males did not enjoy a certain aspect of the race that was not mentioned in the survey, 23 female participants and 8 male participants enjoyed all of the components of the event, and 12 females and 6 males chose not to respond.
For the 0 to 5 age group, 2 participants did not enjoy the booths, 1 participant did not like the obstacle course, 1 participant did not enjoy the speakers, 1 participant did not prefer an aspect of the event that was not featured in the survey, 1 participant enjoyed all aspects of the event, and 3 participants did not respond. For the 6 to 10 age group, 5 participants did not enjoy the booths, 3 participants did not favor the music, 4 participants enjoyed the location the least, 2 participants did not enjoy the food 2 participants did not favor, 9 participants did not enjoy a part of the event that was not mentioned on the survey, 13 participants enjoyed all aspects of the event, and 8 participants chose not to respond. For the 11 to 15 age group, 1 participant enjoyed the booths the least, 1 participant enjoyed the music the least, 2 participants did not favor the race itself, 3 participants did not favor the location, 2 participants did not enjoy the food, 5 participants did not prefer the obstacle course, 3 participants did not enjoy the speakers, 9 participants did not enjoy an aspect of the event that was not mentioned in the survey, 12 participants enjoyed everything,
and 1 participant did not respond. For the 16 to 20 age group, 1 participant did not enjoy the music, 1 participant did not enjoy the location, 3 participants did not favor the food, 1 participant did not prefer the obstacle course, 1 participant did not enjoy an aspect of the event that was not mentioned in the survey, and 3 participants enjoyed all aspects of the event. For the 26 to 30 age group, 1 participant enjoyed the booths the least and 3 participants chose not to respond. The single participant from the 31 to 35 age group did not enjoy a part of the event that was not on the survey. For 36 to 40 age group, 2 participants did not enjoy an aspect of the event that was not on the survey, 1 participant enjoyed everything, and 1 participant did not respond. For the 46 to 50 age group, 1 participant enjoyed the entire event. For the 51 to 55 age group, 1 participant did not enjoy the booths and 1 participant did not enjoy the race itself. The single participant from the 56 to 60 age group did not enjoy an aspect of the race that was not mentioned in the survey.

Table 17: Question 4-By Age Group
In reporting changes in the level of physical activity upon registering for the event, 58 participants ate more healthy foods, 38 participants joined a sports team, 63 participants played outside more, 31 participants played less video games, 28 participants rode their bike more, 86 participants ran more, 75 participants walked more, 9 participants limited their time watching TV, and 2 participants did not respond.

Table 18: Question 5-All Participants

When subdivided by gender, 33 female participants and 15 male participants increased their intake of healthy foods, 17 females and 16 males joined a sports team, 36 female participants and 19 male participants played outside more, 13 females and 13 males played less video games, 13 female participants and 10 male participants rode their bike more, 51 female participants and 19 male participants ran more, 45 female participants and 17 male participants walked more, 19 females and 11 males watched less TV, and 1 male participant did not respond.
Table 19: Question 5-By Gender

| Question 5: Since registering for the Family Fitness Fest I have (mark all that apply) |
| Participant Response by Gender |

<table>
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<th>Eaten more foods that are good for me</th>
<th>Joined a sports team</th>
<th>Played outside more</th>
<th>Played less video games</th>
<th>Rode my bike more</th>
<th>Ran more</th>
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For the 0 to 5 age group, 3 participants ate more healthy foods, 1 participant joined a sports team, 5 participants played outside more, 2 participants rode their bikes more, 2 participants ran more, 1 participant walked more, and 3 participants watched less TV. For the 6 to 10 age group, 14 participants increased their consumption of healthy foods, 13 participants joined a sports team, 21 participants played outside more, 9 participants played less video games, 9 participants rode their bikes more, 6 participants ran more, 26 participants walked more, 13 participants watched less TV, and 1 participant did not respond. For the 11 to 15 age group, 20 participants ate more healthy foods, 14 participants joined a sports team, 21 participants played outside more, 12 participants played less video games, 7 participants rode their bikes more, 29 participants ran more, 22 participants walked more, and 12 participants watched less TV. For the 16 to 20 age group, 4 participants ate more healthy foods, 2 participants joined a sports team, 4 participants played outside more, 3 participants played less video games, 6 participants ran more, 6 participants walked more, and 1 participant watched less TV. For the 26 to 30 age group, 2
participants increased their healthy food consumption, 1 participant played outside more, 2 participants played less video games, 2 participants ran more, 3 participants walked more, and 1 participant watched less TV. For the 31 to 35 age group, 1 participant ate more healthy foods and ran more. For the 36 to 40 age group, 2 participants increased their healthy food consumption, 1 participant played outside more, 1 participant rode their bike more, 2 participants ran more, and 2 participants walked more. For the 46 to 50 age group, the single participant increased their healthy food consumption, joined a sports team, played outside more, and ran more. For the 51 to 55 age group, 1 participant increased their healthy food consumption, both participants joined a sports team, 1 participant played outside more, 1 participant rode their bike more, 1 participant ran more, and 1 participant walked more.

Table 20: Question 5-By Age Group

![Question 5: Since registering for the event I have (mark all that apply)
Participant Response by Age Group](image-url)
When asked about the longest distance that the participant has ever run, 49 participants indicated 1 mile, 17 participants indicated 2 miles, 23 participants indicated 3 miles, 9 participants indicated 4 miles, 19 participants indicated 5 miles, 26 participants indicated more than 5 miles, and 1 participant did not respond.

Table 21: Question 6-All Participants

When subdivided by gender, 20 female participants and 17 male participants indicated 1 mile, 16 females and 1 male indicated 2 miles, 16 female participants and 5 male participants indicated 3 miles, 6 females and 2 males indicated 2 miles, 10 female participants and 5 male participants indicated 5 miles, 9 females and 8 males indicated more than 5 miles, and 1 male chose not to respond.
For the 0 to 5 age group, 7 participants indicated 1 mile, 1 participant indicated 2 miles, and 1 participant indicated more than 5 miles. For the 6 to 10 age group, 20 participants indicated 1 mile, 4 participants indicated 2 miles, 9 participants indicated 3 miles, 3 participants indicated 4 miles, 6 participants indicated 5 miles, and 4 participants indicated more than 5 miles. For the 11 to 15 age group, 6 participants indicated 1 mile, 10 participants indicated 2 miles, 8 participants indicated 3 miles, 2 participants indicated 4 miles, 5 participants indicated 5 miles, 7 participants indicated more than 5 miles, and 1 participant chose not to respond. For the 16 to 20 age group, 1 participant indicated a maximum of 1 mile, 1 participant indicated 2 miles, 1 participant indicated 3 miles, 1 participant indicated 4 miles, 2 participants indicated 5 miles, and 3 participants indicated more than 5 miles. For the 26 to 30 age group, 1 participant indicated 1 mile, 1 participant indicated 2 miles, 1 participant indicated 4 miles, and 1 participant indicated more than 5 miles. The participant in the 31 to 35 age group indicated a maximum of 1 mile. For the 36 to 40 age group, 2 participants indicated 3 miles and 2 participants indicated 5 miles.
miles. The participant in the 46 to 50 age group indicated a maximum distance of 3 miles. Each participant in the 51 to 55 age group indicated a maximum of 3 miles and 5 miles. The participant in the 56 to 60 age group indicated more than 5 miles.

Table 23: Question 6-By Age Group

A total of 120 participants had been to location of the event, the University of Arizona, before. There were 20 participants who were first time visitors to the campus and 4 participants who did not respond.
Table 24: Question 7a - All Participants

| Question 7a: Have you ever been to the University of Arizona before? |
|------------------------|------------------|
| All Participants       |                  |

When subdivided by gender, 66 female participants and 32 male participants have been to the University of Arizona before, 10 female participants and 5 male participants were had not attended the University of Arizona before, and 1 female and 2 males did not respond.

Table 25: Question 7a - By Gender

| Question 7a: Have you been to the University of Arizona before? |
|------------------------|------------------|
| Participant Response by Gender | |
|                       | Female | Male |

When subdivided by gender, 66 female participants and 32 male participants have been to the University of Arizona before, 10 female participants and 5 male participants were had not attended the University of Arizona before, and 1 female and 2 males did not respond.
For the 0 to 5 age group, 8 participants had been to the University of Arizona before and 1 participant was new to campus. For the 6 to 10 age group, 42 participants had been to the campus before and 4 were new. For the 11 to 15 age group 26 participants had been to the University of Arizona before, 10 participants were new to the campus, and 3 did not respond. All participants for the age groups of 16 to 20, 26 to 30, 31 to 35, 36 to 40, 46 to 50, 51 to 55, and 56 to 60 had been to the University of Arizona before.

Table 26: Question 7a-By Age Group

When asked if they would want to return to the University of Arizona campus, 140 participants said they would return, 1 participant would not return, and 3 participants did not respond.
Table 27: Question 7b-All Participants

For those who said that they would return to the University of Arizona campus, 76 participants were female and 37 participants were male. There was 1 male participant who would not return. There was also 1 female and 1 male who chose not to respond.

Table 28: Question 7b-By Gender

All participants within the age groups of 0 to 5, 26 to 30, 31 to 35, 36 to 40, 46 to 50, 51 to 55, and 56 to 60 would return to the University of Arizona. For the 6 to 10 age group, 45
participants would return to the University of Arizona and 1 participant chose not respond. For the 11 to 15 age group, 38 participants would return to the University of Arizona and 1 participant chose not to respond. For the 16 to 20 age group, 8 participants would return to the University of Arizona and 1 participant would not return.

Table 29: Question 7b-By Age Group

![Histogram showing participant response by age group]

**Discussion**

*Results of the Tucson Marathon Family Fitness Festival 1-Mile Fun Run Survey*

Overall, the results of the Tucson Family Fitness Festival Survey were encouraging. The majority of the surveys were completed by the student or by an adult on behalf of the student. This allowed for a proper analysis of the question and hypothesis of the thesis. The participants also varied by age, school/team, and zip code. This allowed the results to be considered comprehensive. The top four zip codes of participants were 85701, 5705, 85706, and 85713. Each of these zip codes have a mean household income that is lower than both the national mean household income and the mean household income for the State of Arizona (USA.com, 2010).
This is important, as childhood obesity disproportionately affects children from families of low socioeconomic status. The high rate of Tucson Marathon Family Fitness Festival participants from zip codes of low socioeconomic status provides inclusion to children who are at a high risk of obesity.

Based on the results of Question 1, this was the first time that most of the participants had attended the Tucson Marathon Family Fitness Festival. This pattern was the same when subdivided by gender. In terms of age group, most participants under 20 years had not attended the event in the past. After the age of 26 the number of participants that have attended the Tucson Marathon Family Fitness Festival was either greater or equal to the number of participants that were new to the event. This could be attributed to the participants being adult chaperones or teachers that have been involved with the event or assigned to assist at the event each year. With the exception of 2 participants, all of those who completed the survey would return or would consider returning to the 2014 Tucson Marathon Family Fitness Festival. This is especially encouraging considering that the majority of participants were new to the event. This suggests that the event was an enjoyable experience and left a positive first impression. This result was mirrored by gender and by age group. The only age groups that selected maybe for returning to the event were 6 to 10, 11 to 15, and 36 to 40. This could be due to certain external factors causing the uncertainty. One of the greatest problems on the day of the event was the weather. The temperature during the race was extremely frigid, and this could have influenced the participants when completing the survey.

For Question 3, the majority of the participants believed that the best part of the event was the race itself. This is positive, as the 1-Mile Fun Run was the primary event intended for this audience. The other popular aspects of the event included the music, food, and booths. These
were also predominant features of the event. This pattern is seen when subdivided by gender and by age group. In Question 4, the majority of participants enjoyed all aspects of the race. This again reinforces the positive outlook of the Tucson Marathon Family Fitness Festival. A large number of participants did not enjoy an aspect of the event that was not featured in the survey. In analyzing these comments, the majority of negative feedback was in relation to the cold weather. The pattern of response was similar when subdivided by gender and age group. The no response rate was greater for females than for males. Participants in the 6 to 10 and 11 to 15 age groups had the greatest response rates for enjoying all aspects of the event. This is encouraging as these age groups are the target population for the Tucson Marathon Family Fitness Festival.

Question 5 was especially indicative of the behavior changes of the participants since registering for the event. The majority of participants ran and walked more. This is sensible as one of the best ways to prepare for the 1-Mile Fun Run is to increase activity levels by running and walking. This is also encouraging as the intent to participate facilitated increased activity levels. Enjoyment of the preparation for and participation in the Tucson Marathon Family Fitness Festival created a positive association with physical activity. This has potential for an increase in activity levels and the development of habitual behaviors that last into adulthood. Other forms of behavior change that many participants reported include increasing healthy food intake, joining a sports team, and playing outside more. Each of these are positive steps in behavior change to develop a healthy lifestyle. There was an equal amount of female and male participants that have minimized their time playing video games. The number of participants who reported limiting the amount of time playing video games and watching TV decreased as the age of the participant increased. This could potentially be due to younger participants being more willing to report
their time watching TV or playing video games. It is clear that efforts were made to increase activity levels once registered for the Tucson Marathon Family Fitness Festival.

The greatest number of participants reported running 1 mile as their longest distance. An interesting result is that the second largest amount of participants reported running more than 5 miles. Thus there was a wide distribution of running abilities. The large degree of participants that have run more than 5 miles is encouraging because it demonstrates a high level of fitness. This could be attributed to an existing behavior or a recently developed behavior in preparation for the Tucson Marathon Family Fitness Festival. When subdivided by gender, the greatest number of female participants indicated a total of 1 mile, 2 miles, or 3 miles. The majority of male participants indicated 1 mile, 5 miles, or more than 5 miles. The majority of participants who ran 5 miles and beyond was under the age of 20 years. This again demonstrates the variety of running abilities of participants.

The majority of participants have previously been to the University of Arizona campus before. This adds a sense of familiarity to the event, which assists in producing a positive attitude toward the Tucson Marathon Family Fitness Festival. These results were seen when subdivided by gender and by age group. The only participants that recorded that they had never been to the University of Arizona campus before were those under the ages of 15 years. This may be due to the fact that these participants are not in college and may not have had the opportunity to be on a campus before. Allowing children to be exposed to a college campus is one of the goals of the Tucson Marathon Family Fitness Festival. The positive association of a fun event on campus can have a positive influence on the desire to attend college. This was clearly seen within the last question of the survey, as only all but 1 participant would return to the University of Arizona campus. All female participants would either return to the University of Arizona campus or did
not respond. A single male participant in the 16 to 20 age group would not return. All participants older than 26 years have been and will continue to return to campus. This is encouraging as adults have the potential to continue to bring their children or students to the campus. The extremely positive response rate of the University of Arizona campus demonstrates promising results for participant’s attitudes on college.

Overall the results of the Tucson Marathon Family Fitness Festival Survey indicate that a community-based fitness even can improve the level of physical activity. Although positive responses were observed among adults, the focus of this thesis is on children and childhood obesity. The results of adult participants do present the potential for future observation and study. The hypothesis that children who participate in a community-based physical activity will report greater participation in behaviors of physical activity in preparation for the event was also demonstrated. Participants established a positive experience toward the Tucson Marathon Family Fitness Festival and showed initiative to return to the event the following year. In addition, participants demonstrated an increase in running, walking, and playing outside since registering for the event. There was also an increase in the consumption of healthy foods. This suggests the potential for broader behavior change, including physical activity and healthy eating.

The results of the survey can also be applied to the Theory of Planned Behavior and the Social Learning Theory. In the Theory of Planned Behavior, a behavior is determined by the intention to preform the behavior as a function of attitude and subjective norm (University of Twente, 2014). The results of the survey indicated a positive attitude toward the event. The Tucson Marathon Family Fitness Festival provides a community-level support of an active lifestyle. This assists to create the subjective norm of maintaining physical activity. The social support of the community is vital to children. It fosters an environment where activity is
emphasized. This creates a subjective norm toward physical activity. The intention to preform a desired behavior is stronger when the attitude and subjective norm are more favorable (University of Twente, 2014). The positive attitudes and subjective norm created by a community-level event increases the intention of activity. This is especially related to the child participants. If a child experiences positive attitudes toward physical activity and acknowledges the subjective norm that is paired with social support, then the child will have the intention to preform the behavior of physical activity. This intention was evident from the results of the survey. The results also indicated the social support created by the event and the University of Arizona campus. The Tucson Marathon Family Fitness Festival was able to trigger the intention toward physical activity in children. The behavior changes demonstrated also reflect the application of the Social Learning Theory. The Social Learning Theory is especially relevant for children as it states that individuals learn through observation and modeling (Cherry, n.d.). This again can be demonstrated through the social support that was provided by the event and in the children’s social setting prior to the event. Teachers were encouraged to model these positive behaviors through the “Tucson Marathon Family Fitness Fest Facts and Fun!” handout that was created in relation to the event. The handout included information on the race along with examples of activities that could be modeled in the classroom. Certain groups that participated in the event, such as the House of Neighborly Services, had teachers, parents, and University of Arizona students from service courses assisting in modeling the behavior of physical activity. Children are also able to observe and model the behaviors through their peers demonstrating activity. The child participants are able to observe the community embracing physical activity and model within their own behavior.
Comparison to Other Community-Based Interventions Promoting Physical Activity in Children

The Active Winners study indicated that the intervention efforts did not have an effect on the level of physical activity. Despite the positive results of the Tucson Marathon Family Fitness Festival 1-Mile Fun Run Survey, there are significant differences in the formats of the study. The Active Winners study occurred over 18 months. It featured extensive measurements including interviews, focus groups, heart rate monitoring, questionnaires, and a structured school-based activity program. There were also 460 participants in the study. This is larger than the 145 participants who completed the survey. It is difficult to compare the results of this effort to the results of the Active Winners study, in that the Tucson Marathon Family Fitness Festival was delivered at the group level without protocol for objective outcome measures. In the study of BMI z-scores for children in Massachusetts, it was also demonstrated that a community-based intervention could reduce BMI z-scores of children who are at high risk for obesity. Again, the outcomes of the Tucson Marathon Family Fitness Festival 1-Mile Fun Run Survey were focused on self-reported behaviors without the assessment of the BMI z-score. The study of BMI z-scores also had 1,178 participants. However, the encouraging results of the studies and the Tucson Marathon Family Fitness Festival, involving over 1,600 children overall, demonstrate the potential benefits of community-based physical activity interventions.

Successes of the Tucson Marathon Family Fitness Festival 1-Mile Fun Run Survey

The greatest success of the Tucson Marathon Family Fitness Festival 1-Mile Fun Run Survey was the positive responses to the race itself and the indications of planned behavior to return to the University of Arizona campus. Participants were also willing to complete the survey with the chance of winning an iPod shuffle. This created a sense of excitement among the participants to complete the survey. Based on the results of the survey and the attitudes and
behaviors of the child participants on the day of the event, it was evident that the 1-Mile Fun Run was a positive and enjoyable experience. Another success of the survey was its distribution in both English and Spanish so that participants were able to complete the survey in a format that they were comfortable in. The size of the survey was at a proper length to gain insight on participant perspectives and behavior changes in relation to the event but not overwhelming for the participant to complete it. The ability to gain the participant information from the registration form was also successful. The connection of the participant bib number to their information on the registration form allowed the necessary personal information to be retrieved without providing the anxiety of asking participants to write down personal information. The participants appeared to enjoy this concept. Limiting the personal information to only the participant bib number provided a sense of security and ease. It also neutralized the random selection for the iPod raffle drawing.

Shortcomings of the Tucson Marathon Family Fitness Festival 1-Mile Fun Run Survey

The greatest shortcoming of the survey was the low number of participant responses. This can be attributed to a number of reasons. On the day of the event the weather was extremely frigid. This was a primary factor in the large number of individuals who registered but did not attend the event. The survey was distributed once participants crossed the finished line. At that point there was music, food, and booths, which were distracting. The volunteers walking around the event distributing surveys were a proper intermediate for this issue. The schools/teams that arrived via the bus transportation also left the event immediately after the race was completed. It was challenging to distribute the surveys to those participants. It was also difficult for the volunteers distributing the survey to monitor participants to ensure that the bib number matched the name and the information on the registration form. This is the main reason for which certain
participant surveys had to be excluded for analysis. This also contributed to the discretion of the number of total participants by gender and by age group. Another feature that made this issue especially difficult to monitor was the participant bib number was the only source of personal information being provided on the day of the event. There was also the issue of duplicate surveys. This could be attributed to a participant completing more than one survey to increase their chances to win the iPod shuffle. In this situation, each duplicate survey was not included in the drawing or the data analysis. There was also confusion in completing the survey with Question 4. There was not an option on the survey to indicate that the participant enjoyed everything about the race and preferred not to claim that they did not enjoy a certain part of the event. In this situation, participants either indicated that they enjoyed everything or left the question blank. This became a challenge in analyzing the data as an extra category had to be included. It was also difficult to determine if the participant chose not to respond because they enjoyed everything or simply chose not to respond. This could be corrected by including a category on the survey where participants could indicate that they enjoyed everything from the event. An alternative version of the survey is included within the Appendix.

Conclusion

*Success of the Tucson Marathon Family Fitness Festival and Increasing Physical Activity*

Overall, there was a high level of community engagement. The participants enjoyed the Tucson Marathon Family Fitness Festival and demonstrated enthusiasm during the 1-Mile Fun Run. The data produced from the survey portrayed these encouraging results. The survey also demonstrated a positive behavior change in increasing activity levels since registering for the event. This increase in activity levels has the potential to develop into lifelong habits that will continue into adulthood. Child obesity continues to be a primary concern in the field of Public
Health. The prevalence of childhood obesity has reached epidemic levels. If this pattern continues, future generations of children will be among the first to be unable to outlive their parents. Community-based events such as the Tucson Marathon Family Fitness Festival provide an environment that fosters positive attitudes and behaviors towards activity. This in turn creates the necessary behavior changes to decrease child obesity. Future implications include the establishment of an environment that fosters an active lifestyle on a community level. Overall, the Tucson Marathon Family Fitness Festival 1-Mile Fun Run Survey was able to successfully demonstrate the positive affects of a community-based fitness event in combating childhood obesity.
# Appendix

Tucson Marathon Family Fitness Festival 1-Mile Fun Run Survey-English

| Bib #: ______________________________ | Completed by: Student ☐ Parent ☐ Teacher ☐ Other ☐ |

*Please answer the following questions:*

**8.** Have you attended the Family Fitness Festival before? ☐ Yes ☐ No

**9.** Do you plan to come back next year? ☐ Yes ☐ No ☐ Maybe

**10.** What part of the event did you like the **BEST?** 😊

- ☐ Booths
- ☐ Food
- ☐ Music
- ☐ Obstacle course
- ☐ Race itself
- ☐ Location
- ☐ Speakers
- ☐ Other:

**11.** What part of the event did you like the **LEAST?** 😞

- ☐ Booths
- ☐ Food
- ☐ Music
- ☐ Obstacle course
- ☐ Race itself
- ☐ Location
- ☐ Speakers
- ☐ Other:

**12.** Since registering for the Family Fitness Festival I have (mark all that apply):

- ☐ Eaten more foods that are good for me
- ☐ Played less video games
- ☐ Played outside more
- ☐ Joined a sports team
- ☐ Rode my bike more
- ☐ Ran more
- ☐ Walked more
- ☐ Watched less TV

**13.** What is the longest distance you have ever run?

- ☐ 1 mile
- ☐ 2 miles
- ☐ 3 miles
- ☐ 4 miles
- ☐ 5 miles
- ☐ More than 5 miles

**14.** Have you ever been to the University of Arizona campus before? ☐ Yes ☐ No

Do you plan to come back to the University of Arizona campus? ☐ Yes ☐ No
Tucson Marathon Family Fitness Festival 1-Mile Fun Run Survey-Spanish

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<th>Completado por: Estudiante ___ Padres ___ Maestro(a) ___ Otra ___</th>
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**Por favor, conteste las siguientes preguntas:**

1. ¿Ha asistido a este Festival de condición física antes?  
   - [ ] Sí  
   - [ ] No

2. ¿Planea volver el próximo año?  
   - [ ] Sí  
   - [ ] No  
   - [ ] Quizás

3. ¿Qué parte del evento le gustó **MEJOR**? ☻  
   - [ ] Barracas  
   - [ ] Música  
   - [ ] Carrera  
   - [ ] Lugar  
   - [ ] Comida  
   - [ ] Carrera de obstáculos  
   - [ ] Altavoz  
   - [ ] Otra: [__________]

4. ¿Qué parte del evento le gustó **MENOS**? ☹  
   - [ ] Barracas  
   - [ ] Música  
   - [ ] Carrera  
   - [ ] Lugar  
   - [ ] Comida  
   - [ ] Carrera de obstáculos  
   - [ ] Altavoz  
   - [ ] Otra: [__________]

5. Desde que me regístre para el Festival de condición física (marque todos los que apliquen):  
   - [ ] Como más comidas que son mejores para mí  
   - [ ] Me uní a un equipo deportivo  
   - [ ] Juego afuera más  
   - [ ] Juego menos juegos de video  
   - [ ] Monté mi bicicleta más  
   - [ ] Corro más  
   - [ ] Camino más  
   - [ ] Veo menos televisión

6. ¿Cuál es la distancia más larga que ha corrido en su vida?  
   - [ ] 1 milla  
   - [ ] 2 millas  
   - [ ] 3 millas  
   - [ ] 4 millas  
   - [ ] 5 millas  
   - [ ] Más 5 millas

7. ¿Ha estado alguna vez en el campus de la Universidad de Arizona antes?  
   - [ ] Sí  
   - [ ] No

   ¿Planea volver al campus de la Universidad de Arizona?  
   - [ ] Sí  
   - [ ] No
Tucson Marathon Family Fitness Festival 1-Mile Fun Run Survey - Alternative Version

**Tucson Marathon Family Fitness Festival 1 Mile Fun Run – Participant Questionnaire**

Bib #: _______________________________  Completed by: Student ___ Parent ___ Teacher ___ Other ___

Please answer the following questions:

1. Have you attended the Family Fitness Festival before?  □ Yes  □ No

2. Do you plan to come back next year?  □ Yes  □ No  □ Maybe

3. What part of the event did you like the **BEST**? ☺
   - □ Booths
   - □ Music
   - □ Race itself
   - □ Location
   - □ Obstacle course
   - □ Speakers
   - □ Other: _______________________

4. What part of the event did you like the **LEAST**? 😞
   - □ Booths
   - □ Music
   - □ Race itself
   - □ Location
   - □ Obstacle course
   - □ Speakers
   - □ Other: _______________________

5. Since registering for the Family Fitness Festival I have (mark all that apply):
   - □ Eaten more foods that are good for me
   - □ Joined a sports team
   - □ Played outside more
   - □ Played less video games
   - □ Rode my bike more
   - □ Ran more
   - □ Walked more
   - □ Watched less TV

6. What is the longest distance you have ever run?
   - □ 1 mile
   - □ 2 miles
   - □ 3 miles
   - □ 4 miles
   - □ 5 miles
   - □ More than 5 miles

7. Have you ever been to the University of Arizona campus before?  □ Yes  □ No
   Do you plan to come back to the University of Arizona campus?  □ Yes  □ No
December 7, 2013

2013 Tucson Marathon Family Fitness Festival
1 Mile, 5K, 10K, 10K Relay Registration

www.tucsonmarathon.com

Location: University of Arizona Mall, 1303 E. University Blvd. Tucson, AZ

8:00 am. Health & Wellness Expo and kid’s activities begin on the Mall
9:00 am. 1 Mile start First 500 are FREE!
9:30 am. 5K start
10:15 am. 10K and 10K Relay start
11:30 am. Awards ceremony
12:00 pm. Expo closes

Go to www.tucsonmarathon.com to register online. The first 500 participants for the 1 Mile are free! Use coupon code "OneMile" when registering (limited to 3 registrations per registration cart).

The Tucson Marathon Family Fitness Festival is designed to be fun for the whole family. The 1 Mile Fun Run for kids is one lap on the Mall on the UA campus. Every child will receive a finisher’s medal and shirt. Parents are welcome to run with their kids. The 5K course takes runners of all ages and abilities around the UA Mall. This is a very safe, flat and fast course, perfect for families and friends to run together. Walkers and wheelchairs are welcome. The 10K is six laps around the Mall; relay runners each run one lap.

Entry fees are NOT refundable and NOT transferable.
Hard copy forms must be received by Nov. 30, 2013.
Event day registration is $5 more for each event.
Please print, complete and mail this form with a check payable to:
Tucson Marathon, PO Box 13292, Jackson, WY 83002 USA
Packet pick-up is on race day at the University of Arizona Mall.

First Name __________________________  Last Name __________________________

Mailing Address
_____________________________________________________________________
City __________________________ State _____ Zip ___________

Telephone Number (_______) __________________________

E-mail address _____________________________________________

School / organization name
___________________________________________________________________

Date of birth ____/____/____  Age on December 7, 2013 _____  Sex:  M  /  F
DAY  MTH  YR  Grade ______

Emergency Contact Name
____________________________________________________________________

Emergency Contact Phone Number (_______) ___________________

T-shirt size (please circle one):  Youth S  Youth M  Adult:  S  M  L  XL  XXL

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Separate forms for each relay participant. Relay teams are all 6 runners.

Waiver:
In consideration of the acceptance of this entry, I hereby, for myself and my heirs, executors and administrators, waive any and all rights, claims and damages I may have against the sponsors, volunteers, medical staff, coordination groups, Tucson Marathon Events LLC, Pima County, Pinal County, The University of Arizona, the State of Arizona, Endorphin Racing, LLC and any all other entities, volunteers and/or individuals associated with said event. None of the above are responsible for the loss of personal items nor any other form of aggravation in connection with said event. I also give permission for the free use of my name and picture in any broadcast, telecast, or print media account of the event. I understand that all participants must obey the lawful order of a police officer, safety official and medical staff. In filling out this form, I acknowledge I have read and fully understand my own liability and do accept the restrictions and responsibilities. Entry fees are NOT transferable and NON refundable. Baby jogger and/or strollers ARE NOT allowed on the course. All participants MUST run inside of the safety cones marking the course or risk disqualification.

_________________________  __________________________
SIGNATURE                 PRINT NAME

_________________________  __________________________
PARENT / GUARDIAN (if runner is under 18)  PRINT NAME
Who?

ALL children can join family, friends, teachers, and University of Arizona students and faculty for a fun day of fitness on the UA Mall.

Where?

University of Arizona Mall, 1303 E. University Blvd. Tucson, AZ

7:30 am. Mall opens/Expo and children’s activities open/registration opens
8:30 am. 5K start
9:45 am. 1 Mile start
10:30 am. 10K/10K relay start

When?

December 7, 2013

Why?

To promote physical activity in school-age children

Children who are physically active are less likely to be overweight, preform better on tests, and reduce feelings of depression and anxiety.
How?

Get your classroom ready!

Register at www.tucsonmarathon.com to register online. The first 500 participants for the 1 Mile are free! Use coupon code “OneMile” when registering (limited to 3 registrations per registration cart)

Plan daily activities to build confidence

Jump-Hop: Alternate hopping up and down on one foot
Dizzy Dancing: Dance really fast to a favorite song. Don’t stop until the music does
Goofy Dribbling: Dribble a ball with your non-dominant hand
Trash Can Basketball: Crunch up a paper ball and see if you can make it into the trashcan
Kooky Coordination: Alternate using one hand to pat your head while the other rubs your belly
Run the Loop: Run a lap around the field or designated perimeter
Jumping Jack Sing-a-long: Sing-a-long to your favorite song while performing jumping jacks

Role model these behaviors to create active classrooms
Screenshot of the Tucson Marathon Family Fitness Festival Webpage
References


Cheng et al. (2013). Patient-Centered Approaches to Childhood Obesity Care. Childhood


Jacobs et. al. (1986). Community-Wide Prevention Strategies: Evaluation Design of the Minnesota Heart Health Program, Journal of Chronic Diseases, 39(10), 775-788


