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Educating Mothers of Obese Hispanic Preschoolers to Create Lifelong Healthy Habits

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Educating Mothers of Obese Hispanic Preschoolers to Create Lifelong Healthy Habits

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By

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Abstract

Problem and Background: Childhood obesity has doubled in children and quadrupled in adolescents in the past 3 decades, increasing from 5% to 17% in one generation. The highest rates of childhood obesity are among Mexican Americans. Obesity can increase health morbidities, and as obese children continue to grow, these health concerns progress to adulthood. In spite of enhanced education and communication between mothers of obese children and their primary care providers, minimal improvement has taken place in terms of outcomes and lifestyle changes.

Methods: Fourteen obese Hispanic 2- to 5-year-olds and their mothers participated in the study. The children’s BMIs were evaluated at baseline and at project end. Mothers completed a brief survey at baseline and at project end. Education modules on four interventions were provided to the mothers once the pre-survey was completed. The following interventions were implemented over a 3-month period after education was provided: (a) 11 hours of nightly sleep; (b) 1 hour of activity daily; (c) no more than 2 hours of screen time daily; and (d) no more than four fast food meals a month. Daily calendar logs were provided to the mothers to track the interventions.

Results: Results validate that evidence-based interventions reduce obesity in the Tri-Cities area of southeastern Washington. Specifically, 36% of child participants’ BMI decreased, and 80% increased their nightly sleep ($p = 0.007$). Additionally, results showed that 64% of participants increased nightly sleep, 36% increased minutes of daily exercise, 28% decreased daily screen time, and 7% decreased fast food consumption.

Conclusion: It is important that medical providers identify the mothers of obese preschoolers’ educational need for guidance and interventions to decrease and prevent obesity. Increased maternal awareness and daily evidence-based intervention monitoring both demonstrate
decreased BMI in conjunction with increased nightly sleep, increased physical activity, and decreased TV screen time. The project results show that obesity is more than a food consumption issue; it is a multifactorial problem that improves with a healthy lifestyle.

*Keywords:* childhood obesity, Mexican American, preschoolers, mothers
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Educating Mothers of Obese Hispanic Preschoolers to Create Lifelong Healthy Habits

Problem

Childhood obesity is increasing throughout the United States. The Tri-Cities, Washington, is ranked the ninth most obese geographical area in the United States (Benton-Franklin Health Department, 2013). Childhood obesity has increased from 5% to 17% in one generation, with the highest rates being among Mexican Americans and female African Americans (White House Task Force on Childhood Obesity, 2010). In spite of enhanced education and communication between mothers of obese children and their primary care providers (PCPs), minimal improvement has been made related to outcomes and lifestyle changes (White House Task Force on Childhood Obesity, 2010).

Problem Change

The purpose of this project is to educate Hispanic mothers about preschoolers’ health and wellness needs and to implement evidence-based interventions to reduce Hispanic preschoolers’ obesity rates. The Scholarly Project includes mothers of obese Hispanic 2- to 5-year-olds with high body mass indexes (BMI). The mothers completed a brief survey prior to receiving one-on-one education modules (Appendices A, B, & C) to support four healthy lifestyle interventions, which were 11 hours of sleep nightly, 1 hour of physical activity daily, no more than 2 hours of screen time daily, and no more than four fast food meals a month. During a 12-week implementation phase, mothers tracked these four interventions on three monthly calendar logs, June, July, and August (Appendix D). The mothers completed a post-intervention survey and the children’s BMIs were re-evaluated. Educating the mothers about evidence-based interventions was correlated with a decrease in preschoolers’ BMI. The information gained is used to develop an educational pop-up for auto population purposes when an obese child is seen at a primary care
The pop-up reminds the provider to educate the mother about the evidence-based interventions. This electronic medical record tool is implemented at the child’s wellness visits to provide guidance regarding maintaining a healthy lifestyle.

**Background**

The relevant scholarly literature validates the problem of obesity in preschool-aged Hispanic children. Teaching mothers about nutritional interventions, exercise duration, and coping skills reduces obesity in the mothers’ children (Berry et al., 2011). Food has a greater meaning than simple nutrition. It can serve as a means of interaction and as a way to show affection, which creates a possible association between feeding and positive emotion (Washington, Reifsnider, Bishop, Ethington, & Ruffin, 2010). The four evidence-based interventions decrease BMI and improve healthy lifestyle habits. These interventions include engaging in physical activity for at least 60 minutes daily, sleeping 11 hours nightly, limiting screen time to less than 2 hours daily, and limiting fast food consumption.

Physical activity or active play of 60 minutes daily is recommended for young children (American Academy of Pediatrics, 2015; Rome, 2011). Guerrero, Slusser, Barreto, Rosales, and Kuo (2010) found that respecting the family structure while increasing physical activity, decreasing strict control over food, and developing family strategies for dietary and healthy lifestyle practices led to success in controlling obesity. Guerrero et al. also found that levels of physical activity were typically lower than the recommended 1 hour daily for the preschool age group. Sedentary behavior increases obesity risk (Reilly, 2008).

The American Academy of Pediatrics (2016) recommends 10–13 hours of sleep for this age group, including naps. If a preschooler received the recommended 11 hours of sleep, obesity would be less prevalent (National Sleep Foundation, 2015). There is a relationship between sleep
deprivation and increased weight due to children being too tired during the day to participate in activities or play (Must & Parisi, 2009). Research shows that leptin levels decrease with shorter sleep duration, increasing daytime appetites (Speigel, Tasali, Penev, & Van Cauter, 2004; Taheri, Lin, Austin, Young, & Mignot, 2004). Leptin is the satiety hormone, a protein that is made by adipose tissue that regulates energy intake and use; it balances energy and hunger levels (Mandel, 2014).

The American Academy of Pediatrics recommends limiting media time to no more than 1–2 hours per day (Must & Parisi, 2009). It was discovered that time spent participating in sedentary behaviors, specifically watching television, is linked with heavier body weights (Must & Parisi, 2009). Although interacting through media and watching television provide useful exposure to the English language, research has shown that children who watch television snack more frequently and thus increase unhealthy habits (Schmidt & Rich, 2006).

Healthy eating habits play a large role in decreasing obesity. Children’s daily food consumption is often influenced by that of their mothers (Chang & Nayga, 2010). The mothers are typically in control of the child’s eating habits. One environmental difference to be considered is an increased amount of fast food or packaged food in the United States that is not accessible or available in Mexico. The increasing frequency of fast food intake is associated with greater availability of soda and chips in the home and with reduced intake of vegetables or milk in Hispanic homes (Poti, Duffey, & Popkin, 2014).

The literature highlights several areas of importance to this project, including (a) importance of mother–child relationship and in-depth cultural and family influence that alters mother’s perspective on her child’s weight status (Berry et al., 2011; Kersey, Lipton, Quinn, & Lantos, 2010; Rosas et al., 2009); (b) the concept that food is valued for more than its simple
nutritional value (Gallagher, 2010; Guerrero et al., 2010; Washington et al., 2010); (c) importance of building a trusting relationship between the primary care provider (PCP) and mother to improve mother and child lifestyle habits while respecting the mother’s cultural traditions (Small, Mazurek-Melnyk, Anderson-Gifford, & Hampl, 2009); and (d) the need for healthcare providers to understand patients’ and mothers’ perspectives related to culturally astute interactions, open communication, and motivational interviewing (Small et al., 2009). The level of evidence and tables that synthesize the literature can be seen in Appendices E and F.

**Theoretical Model and Project Framework**

Social cognitive theory (SCT) framework evaluates social learning behavior—specifically, behavior change strategies. The population of interest has multiple influences, including culture, family, emotions, and environment, that directly influence the potential for change. Glanz, Burke, and Rimer (2011) surmised that SCT is based on personal factors, environmental influences, and behavior, and on how they interact simultaneously. The goal of SCT is to reduce obstacles to change and to provide informed decision making. Doing so requires a combination of cognitive, behavior, and emotional models with the premise that people learn not only from their own actions but also from actions of others and observed consequences.

The SCT practice strategy provides teaching and counseling aimed at increasing collaboration between providers and the population of interest. The theory supports lifestyle changes through brief educational counseling sessions emphasizing self-efficacy as the main concept in behavior change. The framework specifically highlights three types of strategies: setting small achievable goals, using behavior contracts, and engaging in monitoring and reinforcement (Glanz et al., 2011). The SCT is applicable and is appropriately used as a
behavioral change model related to the influence the mother has on her child (Berry et al., 2011, Kersey et al., 2010, Rosas et al., 2009; Small et al., 2009) (Appendix G).

**Implementation Process Analysis**

**Setting and Target Population**

The Tri-Cities area boasts 300 days of sunshine each year. The Columbia River runs through the community, providing a venue for water-skiers, kayakers, scuba divers, and jet skiers. Miles of trails are available for running, walking, and biking. Physical activity is improved by the exposure to greenery, which also encourages walking behaviors (De Vries, Van Dillen, Groenewegen, & Spreeuwenberg, 2013). The Tri-Cities area has potential to be an active community due to its positive outdoor attributes with increased community awareness and motivation. According to the United States census, the Tri-Cities area was the fastest-growing metropolitan area in the nation from April 2010 to July 2011 (Benton Franklin Health District, 2013).

There are three hospitals in the Tri-City area: Trios Medical Center, Kadlec Regional Medical Center, and Lourdes Health Network. All three hospitals are not-for-profit organizations. Other healthcare services are also available for the Tri-Cities population, including Yakima Valley Farm Workers Clinic, The Grace Clinic, La Clinica, Miramar, and Planned Parenthood, all of which provide care on a sliding scale or free of charge, depending on patient income and accept Medicaid.

Pasco Primary Care (PPC) is part of the Tri-Cities area of Washington State and is the setting for this project. It is an outpatient family practice clinic that is part of a larger, well-known parent hospital, Kadlec Region Medical Center. The clinic is conveniently located at the edge of a residential area where the majority of the patient population resides. The clinic has four
family practice providers and one pediatrician. The project participants are mothers of obese Hispanic preschoolers and their children (2–5 years of age) with a BMI greater than the 95th percentile of the growth curve. Mothers with two children who qualify in the age range were accepted into the project. The key stakeholders for this project were the pediatrician, the family practice providers, and the clinic manager. The Information Systems Department was enlisted for assistance to develop a structured EMR integration with educational intervention pop-ups that recognize the obese BMI criteria.

**Economic, Social, and Political Environment**

The Tri-Cities has a large Hispanic population and an increased rate of obesity. This community was ranked as the ninth most obese geographical area in the United States (Benton-Franklin Health Department, 2013). The latest data show that the population of Franklin County (Pasco) is 51.4% Hispanic/Latino. Other races are white/Caucasian and, to a lesser extent, African American, American Indian, Asian/Native Hawaiian, and Pacific Islander (Benton-Franklin Health District, 2013). Twenty-two percent of the population in Pasco is impoverished, and the unemployment rate is 5.6% (Benton-Franklin Health District, 2013). In the Tri-Cities area, 94% of all children have health insurance (Benton Franklin Health District, 2013). The Tri-Cities is located in southeastern Washington, which is, congressionally, a Democratic state. Legislative districts 8 and 9 that include the Tri-Cities is represented by Republicans (Washington State Legislature, 2016). This political dynamic creates differences in opinions between this area and the Capital.

**Implementation Strategies**

The project uses evidence-based interventions to decrease obesity and educates mothers of obese Hispanic preschoolers about the rationale behind and background of these interventions.
The mothers then keep daily logs of the interventions for 3 months for tracking purposes. The pediatrician and family practice providers promoted awareness for potential project candidates at children’s wellness exams and follow-up appointments. Information about the project was provided to the potential candidates via marketing flyers, and appointments were made for voluntary enrollment and education (Appendix H). The educational sessions/modules were individual meetings with the mothers that took place in the form of one-on-one sessions with the project leader. These modules cater to the specific learning needs and questions of each mother. The goal is for the mothers to take their new knowledge and put it into practice, at home and in the community. The project leader led enrollment and education sessions with great enthusiasm, which created a motivating environment. The height and weight input fields were structured in the current EMR of the clinic. The BMI percentage was automatically calculated by the EMR. The initial measurement for BMI validity was reinforced by the policy and procedures of the clinic: Height and weight were obtained at the enrollment session. These data were objective and factual, limiting bias in the project.

The goal was to keep all participants active in the project throughout the time frame of 3 months. Toward the end of each month, reminder calls and texts were placed to offer encouragement and answer questions. At the end of June and July, a calendar exchange took place and the child was given a safe activity toy. At the end of August, the final calendar was submitted by the mothers, and the child received the last toy. After the mothers completed the post-intervention survey, they received a $30 gift card to Walmart.

**Program Outcomes**

1. Mothers of obese Hispanic preschoolers consent to participate in the program by end of May 2016.
2. Pre-Educational Intervention Survey for Mothers of Preschoolers (EISMP) completed by the mother participants of obese Hispanic preschoolers by June 2016.

3. Provide educational modules to promote the healthy lifestyle interventions by end of May 2016.

4. Post-EISMP surveys completed by the mother participants by the end of August 2016.

5. BMI assessment conducted pre- and post-intervention with 1% improvement in BMI in 50% the participants by August 2016.

6. 25% of the participating preschoolers sleep 1 hour more per night within 3 months (August 2016), as reported by the mothers and as compared to the pre-EISMP survey.

7. 50% of project participants will decrease their screen time by 25% within 3 months (August 2016) when compared to pre-EISMP survey.

8. 50% of participants will decrease fast food dining by 50% within 3 months (August 2016) when compared to pre-EISMP survey.

9. 50% of participations will increase activity levels by 25% in 3 months (August 2016) when compared to pre-EISMP survey.

10. Grant funding secured for project spring 2016.

11. 70% of participants retained through the completion of the implementation portion of the project by September 2016.

12. Structured EMR integration with educational intervention pop-ups achieved and recognized by 25% of the providers at Pasco Primary Care by April 2017.

The data collected were quantitative, including BMI percentile, which was plotted on a growth curve in the EMR (Outcome 5). The accuracy of the information entered into the medical
record was vital because the EMR calculates the BMI from the height and weight of each participating child. The EMR calculated the BMI percentile, which was plotted on a growth chart by age. One-on-one educational modules were presented to the mothers after they had given consent and the initial surveys were completed (Outcome 3). The project included the data collected from the mother’s logs of each child’s nightly hours of sleep (Outcome 6), hours of daily screen time (Outcome 7), minutes of daily activity (Outcome 8), and number of times dined at fast food restaurants each month (Outcome 9). The comparison of the surveys provided data of change in regard to sleep, physical activity, screen time, and fast food consumption (Outcomes 2 and 4).

The Educational Intervention Survey for Mothers of Preschoolers (EISMP) was adapted by the project leader from the Data Resource Center for Children and Adolescent Health’s (2012) Measurement Initiative. The EISMP was completed by the participating mothers. The EISMP consisted of eight questions, four demographic and four specifically about the interventions. The participants were selected according to three criteria: having Hispanic heritage, being ages 2–5 years old, and being obese or having high BMIs. If the preschooler BMI fit the criterion, the project was explained to the mother and her participation was requested. The mother signed a consent form and completed a baseline pre-EISMP (Outcome 1). The providers were informed of the project, screening criteria, goals of the project, interventions, and pre- and post-test procedures. Then the providers were apprised of the educational intervention plan to promote the interventions to all obese children though an EMR pop-up (Outcome 12). A timeline was created for the project from inception to dissemination; this time line can be seen in Appendix I. The outcomes as listed and explained above were developed using The W. K.
Kellogg Foundation’s (2004) Logic Model Development Guide; the models for this project can be seen in Appendices J and K.

**Project Evolution**

Because there was a large population of Hispanic preschoolers with weight problems at PPC, the project leader chose this community to conduct an educational intervention with the goal of decreasing BMIs among Hispanic preschoolers. The project included an educational module and the implementation of four evidence-based interventions proven to improve healthy habits in the preschool population, families, and the community (American Academy of Pediatrics, 2015, 2016).

The project was presented to the pediatric and family practice providers at PCC and promoted as a healthy lifestyle program in efforts to recruit mothers of obese Hispanic preschoolers. Consent forms for participation were created in English and Spanish and were made available to all providers. The providers were instructed to inform the participants that their participation was voluntary and that they were free to withdraw from the project at any time (Appendix L).

The educational sessions/modules were one-on-one meetings between the mother and with the project leader. These modules catered to the specific learning needs and questions of each mother. The goal was for the mothers to take their new knowledge and put it into practice, at home and in the community.

Prior to attending the educational module and after signing the consent, the mother completed a brief survey (pre-EISMP) for baseline data purposes. To track the interventions, each mother was given a June calendar with a key on the bottom to address the four interventions daily on the calendar. At the end of June, the mothers returned the calendar to the clinic and the
project leader provided an activity toy for the child and exchanged June with July. This process was repeated at the end of July. At the end of August, the mothers completed a survey (post-EISMP) and the children’s BMIs were measured. At each calendar exchange, brief question-and-answer sessions took place between the mother and the project leader, and encouragement was given and module education was reinforced.

The long-term goals included decreasing Hispanic preschoolers’ BMI by 2% each year for the next 3–5 years, and providing structured EMR integration with educational intervention pop-ups to recognize the obese BMI criteria used by 50% of the providers at Pasco Primary Care by the summer of 2018.

**Quality Assurance**

**Bias and Threats to Quality**

The population was limited to patients at Pasco Primary Care Clinic, located in west Pasco, representing a small portion of the larger community at risk. The participant selection process may be construed as biased due to the project leaders’ subjective opinion of the potential participants. The participation was voluntary, but a patient that chronically does not show for appointments, would not necessarily be considered for participation in the project. The EISMP survey included measurements of the interventions at baseline and post-implementation with the goal of congruency between the study design and the problem statement (Rouen, 2014). Bias was lowered by having the participant surveys in the patients’ native language thereby increasing effective communication (Holden, McDonald-Scott, Hoonakker, Hundt, & Carayon, 2015). The project leader was present during the implementation process to monitor any threats to the quality of the evaluation. The primary subjects of the project were the mothers and their
preschoolers. Children are incapable of protecting their own interests, making them a vulnerable population (Block & Gordon, 2015).

**Institutional Review Board**

The project leader received approval from the Swedish Medical Center Institutional Review Board and from the Institutional Review Board at Boise State University (Appendices M, N, & O). Prior to implementation, the participants and the project leader reviewed the informed consent, making sure each potential participant had a clear understanding of the project prior to signing and enrolling. Adequate time was provided for the consent process and to answer any of the participants’ questions.

**Organizational Letter of Understanding**

A memorandum of understanding was signed by the Pasco Primary Care (Appendix P) administration. An agreement between the BSU IRB and the Swedish IRB (Appendix Q) was signed, granting responsibility to the Swedish IRB for ongoing review and oversight of the project. The Kadlec Research committee was involved in the application process with the Swedish IRB.

**Results/Outcome Analysis**

**Techniques for Data Collection and Analysis**

The main purpose of the project was to improve the current and future health of 2- to 5-year-old Hispanic obese children and to create a mechanism to promote healthy lifestyle interventions for future populations. The evaluation of performance measures (Outcomes 2, 4, 5, 6, 7, 8, and 9) demonstrated the project’s effectiveness through short- and long-term outcomes. Outcome 5 measured the difference in BMI percentage among the participating preschoolers. Outcomes 6, 7, 8, and 9 measured the time intervals of the mothers’ log documentation and the
pre- and post-EISMP surveys. Outcome 12 evaluated the usefulness of the educational pop-up for primary care providers as evidenced by the percentage of use. Evidence-based quality indicators set the performance measure relating to sleep, screen time, and daily physical activity time (Healthy People 2020, 2014).

In the process of evaluating the data, the project leader needed to code the survey answers to obtain numerical data. Answer options for the survey included ages, gender, numbers, and number ranges. The survey used number ranges for fast food outings and for screen time. These ranges were coded to a single digit to run the paired $t$ tests. See Appendix W for coding details.

**Measures/Indicators for Assessing Project Outcomes**

Quantitative data relating to BMIs, hours of sleep, hours of screen time, minutes of activity, and fast food consumption before and after the implementation of the educational module were analyzed and summarized in discrete terms for enumerative purposes (Goodrick & Rogers, 2015). The data were organized and categorized using Excel spreadsheets. A $p$-value of paired $t$ tests between each category of pre- and post-samples was used to signify statistical significance.

**Outcome Evaluation Analysis**

The ultimate goals of this project were to provide evidence-based education to the mother and to implement evidence-based interventions in order to reduce the overall obesity among Hispanic preschoolers. The ongoing process of evaluation and education will continue until implementing these practices becomes policy within the clinic. Sustaining this important project may provide an optimistic sense of change for the future within the Pasco community and beyond (Appendix R Outcome Evaluation Plan).
Of the initial enrollment of 22 mother–child pairs (Outcomes 1, 11) all 22 mothers completed the EISMP survey, all preschoolers’ BMIs were measured, and all of the mothers participated in the educational modules (Outcomes 2, 3). Calendar logs tracking the four interventions were collected at the end of June (18), July (16), and August (14), showing that participation decreased with each month. Of the original 22 participants, 14 mother–child pairs completed the project. The mothers completed the post-EISMP survey (Outcome 4) and 14 preschoolers’ BMIs were measured. Retention throughout the project was 64%, 14 out of 22 (Outcome 11). The mother’s ages ranged from 30 to 39. Overall, the mothers had an average of 1–2 years of education post high school. The child participants consisted of seven boys and seven girls with an average age of 3.86 years.

Evaluation of the remaining outcomes—hours of sleep, minutes of daily activity, hours of screen time, and fast food outings—was dependent on the comparison of the pre- and post-EISMP surveys. The statistical assumptions for the paired t test were validated. The data samples had equal variances, and the samples had enough differences to represent a sample of the population. The data samples were random and independent.

A decrease in BMI was seen in 36% of participants (5). Among those participants, the average decrease in BMI was 1.974% (Outcome 5). A paired t test used to compare the before and after matched pairs showed statistical significance ($p = .02$). Appendix S displays abnormal distribution patterns and box plots of starting and ending BMIs, supporting Berry et al.’s (2011) study demonstrating that increasing mothers’ knowledge of healthy lifestyle improves the health and weight of their children.

Of the participants who decreased their BMI, 80% increased their hours of nightly sleep (4). Sixty-four percent of the total participants increased their sleep hours per night. Among
those participants, the average increase in sleep was 1.2 hours per night ($p = .007$) (Outcome 6). The outcome supports the concept that 11 hours of sleep per nightly reduces obesity, validating the recommendation that daily sleep, including naps, be 10–13 hours for this age group (American Academy of Pediatrics, 2016; National Sleep Foundation, 2015). An abnormal distribution pattern of pre-sleep survey data shows a normal distribution of post-survey data (Appendix T). The box plot demonstrates a dramatic improvement in nightly sleep hours.

Twenty-eight percent of participants (4) decreased their screen time each day ($p = 0.385$) (Outcome 7). Appendix U displays an abnormal distribution of data and no difference in the median box plots. The American Academy of Pediatrics recommends limiting media time to no more than 1–2 hours per day (Must & Parisi, 2009). More than 2 hours of screen time, specifically watching television, has been qualified as sedentary behavior and is linked to heavier body weights (Must & Parisi, 2009). Research shows that while enjoying this sedentary behavior of watching television, children snack more frequently (Schmidt & Rich, 2006).

Only one participant decreased the number of fast food meals per week (Outcome 8). Chang and Nayga (2010) found an association between a mother’s fast food and soft drinks consumption and her child’s consumption of those same items. One environmental difference between Mexico and the United States is a greater number of fast food restaurants in the United States. Fast food dining convenience and availability in the United States has been shown to be a challenging hurdle to creating healthy lifestyle habits.

Sixty minutes a day of physical activity is recommended for children (American Academy of Pediatrics, 2015; Rome, 2011). Research shows that respecting the family structure along with increasing physical activity and decreasing strict control over food improves both dietary and healthy lifestyle practices (Guerrero et al., 2010). Thirty-six percent of the 14
participants (5) increased their minutes spent exercising each day (Outcome 9). Among those participants, there was an average increase in exercise of 18 minutes per day \( (p = .43) \), supporting with increased knowledge, awareness, and control by mothers, the recommended goals can be achieved. Appendix V displays graphical summaries and box plots showing this improvement.

**Gap Analysis**

Gap analysis compares actual analysis with potential analysis (Harris, 2016). The intended outcomes of the project were the potential performance, and the results are actual performance. Outcome 11 was to retain 70% of the participants. In actuality, 64\% (14) of the group participated throughout the program. The actual percentage of this project’s participants who remained with the project until the end did not exceed the outcome goal but did exceed a typical response rate.

Outcome 5 required a potential of 1\% improvement of BMI in 50\% of the participants. The actual results showed that 36\% of participants decreased their BMI by an average of 1.974\%. It is possible that this result might have improved if the project had covered a longer time frame. Outcome 6 required sleep duration to increase by 1 hour in 25\% of the participants. That outcome was seen in 64\% of participants, with an average increase of 1.21 hours nightly. Mothers who had increased knowledge and awareness were able to make the greatest impact on their children’s sleep habits. Stated potential regarding screen time was a 25\% decrease in 50\% of the participants for Outcome 7. The actual outcome showed that 36\% of the participants decreased screen time. Mothers were instructed to be aware of screen time. Screens were considered to include phones, tablets, computers, and televisions. Recorded observations showed
the mothers handing their phones over to the children as a form of entertainment during the education modules.

Outcome 8 stated the potential of decreasing fast food consumption by 50% in half of the population. The actual outcome showed that 7% of participants decreased fast food outings. Perspective on this result ties back to the many influences that a child has at this age, including grandparents, fathers, older siblings, busy schedules, and working moms. This environment of multiple influences of family and social stressors can lead to decreased control of the child’s fast food intake. Outcome 9 required 50% of participants to increase their daily physical activity by 25%. The actual result showed that physical activity time increased by 36%, with an average increase of 18 minutes daily. The project took place during the summer season in an area that offers multiple outdoor activities in reliably good weather. The intervention of increasing a child’s activity and play was expected to have been natural during this time of year.

Unanticipated Consequences

The mothers expressed enthusiasm at the beginning of the project. The potential to incorporate healthier lifestyle habits appeared to be exciting to them, and meeting the goals within the project period seemed achievable. The participants were promised that a reminder call or text would be made prior to each monthly calendar exchange. At the outset of the project, the participants understood that participation in the project was voluntary before giving their consent. The mothers’ knowledge that they could stop at any time may have contributed to the 64% participation rate. The calendar logs may have been too arduous for the mothers, as evidenced by the decreasing participants and diminishing calendar returns. The attrition rate was greater than anticipated, and an increased effort might have increased the mothers’ participation.
Another factor contributing to the low completion rate was that many of the mothers were the project leader’s patients and may have felt an initial unstated obligation to participate in the project, a feeling that did not carry through to completion. The project took place during the summer season, which also may have had some bearing on the inability to complete. However, the interventions were reasonable to conduct regardless of the time of year. Greater success with decreasing screen time was expected due to the summer weather and the increased availability of outdoor activities.

Financial Analysis

The budget (Appendices X, Y, & Z) supported the project implementation and evaluation. The project leader’s time and labor are detailed in Appendix AA. A grant was secured from the Kadlec Foundation in the amount of $900 to cover the cost of gift cards for the participants in the project (Outcome 10, Appendices BB & CC). In-kind donations of the Kadlec Clinic included the key stakeholders’ time and efforts as well as supplies and facilities. United Way in-kind donations of books and plates were also included in the budget to supplement the cost of activity toys. The budget was balanced at project end after 14 gift cards were purchased and distributed to those participants who completed the project. The 3- to 5-year budget (Appendix CC) and statement of operations (Appendix DD) are available in the appendices.

Discussion and Recommendations

Maintaining and Sustaining Change

The results of the project demonstrated positive changes in the BMI of the Hispanic preschoolers. The interventions added to the evidence suggesting that there is a correlation between hours of sleep and reduction in BMI (American Academy of Pediatrics, 2016; Must & Parisi, 2009; National Sleep Foundation, 2015).
Building an educational reminder into the EMR that promotes the interventions used in the project will be beneficial in promoting healthy lifestyles. The goal is to have the educational “pop-up” used at every child’s wellness visit for continued education and guidance. The consistent use of this educational tool will provide long-term improvement in obesity rates. The project’s educational pop-up will be easily reproducible through the EMR system, EPIC, that is used throughout the Kadlec outpatient clinics. The management of the EMR tool will include periodic updates of evidence-based practice and recommendations from the American Academy of Pediatrics.

The goal of the project over a 3- to 5-year timespan is to be self-sustaining, with minimal updating to the EMR system needed. The project will be sustainable and reproducible through 2020 and beyond.

**Informed Decisions and Recommendations**

The mother participants were attentive during the educational module sessions. The premise was that with education and increased awareness, the interventions would become an integral part of the participants’ daily lifestyle. Subjective input of data may skew the results if the project leader is not careful to limit bias and to provide instructions. Two- to five-year-old children may move during the height portion of the BMI measurement, creating a variance even in the hands of experienced medical assistants. Another area of subjectivity lies in the survey itself. The mothers answered the surveys in an exam room with their children waiting, which may have created a rushed atmosphere.

Recommendations include promoting the project to all Kadlec Primary Care clinics to increase initial enrollment. In order to evaluate greater change over time, future researchers
should consider a longer implementation period. To narrow the focus, researchers may consider evaluating one intervention at a time to determine each intervention’s effectiveness.

**Strategic Plan Congruence**

The mission statement of Kadlec Regional Hospital and Pasco Primary Care is “to provide quality healthcare for every patient” (Kadlec Clinic Administration, 2014). Their vision portrays a comprehensive regional integrated health delivery system (Kadlec Clinic Administration, 2014) that aligns well with this project’s goal: to educate mothers of obese Hispanic preschoolers to create lifelong healthy habits, focusing on the family unit and role modeling. The health provider goal is to provide quality care through prevention and wellness, with the long-term goals of preventing childhood obesity and population obesity over many years by promoting healthy habits through interventions. This practice aligns with the goal of providing comprehensive care. The evaluation of the project showed that obese preschoolers’ weight could be reduced through promotion of healthy habits in accordance with valuing the mothers’ system, culture, and family unit.

**Implications for Practice**

The outcomes of the project align with evidence-based interventions (American Academy of Pediatrics, 2015; Chang & Nayga, 2010; Must & Parisi, 2009; National Sleep Foundation, 2015; Poti et al., 2014; Rome, 2011; Schmidt & Rich, 2006). The project results demonstrate that BMIs can decrease if the recommended amount of sleep is consistently achieved. Increased knowledge of the interventions proved helpful to a subset of the participants following the recommended 11 hours of nightly sleep (National Sleep Foundation, 2015). The results also demonstrate that increasing awareness of activity levels and screen time does promote and project a healthy lifestyle.
Establishing a trusting relationship between the providers and the mother is important. While respecting the mother’s cultural traditions, a provider can increase the mother’s knowledge about weight management to improve mother–child lifestyle habits (Small et al., 2009). Healthcare providers need to understand the mother’s perspective to achieve successful, culturally astute interactions, open communication, and motivational interviewing (Small et al., 2009). During clinic appointments, providers should take any opportunity to educate mothers about the risks of childhood obesity and the advantages of choosing a healthy lifestyle.

**Policy Implications**

Globally, the United States is an obese nation. Obesity resolution and prevention is at the front line of county, state, national, and global plans to improve population health. National government organizations such as Let’s Move focus on childhood obesity by initiating interventions in early childhood and empowering parents (Let’s Move, 2016). Healthy People 2020 looks at health and disease concerns that develop over time (Healthy People 2020, 2016). Combating obesity is a public health priority that can reshape health policy with simple interventions. Prevention in primary care aligns well with the organizations initiatives. It is important that the primary care provider research the strengths and the challenges different cultures face to attain cultural competence in the community (Daniels & Hassink, 2015).

As the project outcomes demonstrate, healthcare providers have prime opportunities to provide encouragement and motivation to create change among individuals and families. Using this trusting relationship between the mother and child’s primary care provider proves beneficial in improving healthy lifestyles.
Lessons Learned

Lessons were learned during all phases of the project. The results would have been more significant if a larger sample size had been available during the planning phase. The implementation phase could have been improved by extending the length of appointments for the education modules to increase opportunity for long question and answer sessions. Completion rates might have improved had motivation and encouragement been offered more often with increased interactions. The evaluation process might have been enhanced if the survey had included more information about the mother’s healthy lifestyle practices. This could be an opportunity for mothers to document their own screen time, minutes of activity daily, nightly hours of sleep, and fast food-eating habits. The results of this small study provide an opportunity for a larger study in the future to add to the evidence that these interventions are beneficial. Continued reinforcement and encouragement must be offered at wellness visits and follow-up appointments to achieve the continuation of healthy lifestyle habits.

Dissemination to Key Stakeholders and/or Community/Organization(s)

In May of 2017, these results were disseminated, including to the key stakeholders of the Pasco Primary Care Providers of the Clinic, Boise State University, the Columbia Basin Nurse Practitioners Association, and the Tri-Cities United Way. The Scholarly Project manuscript will be submitted for publication to the *Journal of Nutrition Education and Behavior* and to *Hispanic Health Care International* in the summer of 2017.

Conclusion

Obesity among Hispanic preschoolers can be addressed through primary care providers’ attention to the children’s BMIs, eating habits, physical activity levels, hours of screen time, and hours of sleep. Providing evidence-based education to mothers who participate in healthy
interventions with their preschoolers is a realistic and sustainable path to decreasing childhood obesity. Although the study size was small, statistical evidence showed that BMI decreases when a child has the recommended amount of nightly sleep, activity levels, and screen time. PCPs have the ability to influence, educate, and provide guidance that is likely to decrease childhood obesity and create healthy lifestyles.
References


Taheri, S., Lin, L., Austin, D., Young, T., & Mignot, E. (2004). Short sleep duration is associated with reduced leptin, elevated ghrelin, and increased body mass index. *PLos Medicine, 1*(3), 210–217. doi:10.1371/journal.pmed.0010062


Appendix A

Educational Intervention Survey of Mothers of Preschoolers

1. How old is your child?
   2 years  3 years  4 years  5 years

2. What gender is your child?
   Male  Female

3. What is your age range?
   Under 20  20–29  30–39  40–49

4. How many years of formal education/training do you have past high school?
   0 years  1–2 years  3–4 years  5–6 years  7+ years

5. During the past week, how many hours did your child sleep on average each night?
   8 hours  9 hours  10 hours  11 hours  12 hours  13 hours+

6. During the past week, for how many minutes each day did your child exercise, play
   a sport, or participate in a physical activity that made him/her sweat and breathe
   hard?
   30 minutes  40 minutes  50 minutes  60 minutes

7. During the past week, how many days did you or any family member take your
   child to a fast food restaurant?
   0–1 times  2–3 times  4–5 times

8. On any average weekday, how much time does your child usually spend in front of a
   TV, watching TV programs, videos, playing video games, computers, cell phones,
   handheld video games, or other electronic devices?
   1 hour  2–3 hours  3+ hours
Encuesta de Información antes y después

1. Que edad tiene su Hijo/a?
   2 años    3 años    4 años    5 años

2. El género de su Hijo/a?
   Masculino    Femenino

3. El rango de su Edad?
   20 o menos    20–29    30–39    40–49

4. Qué tipo de Educación o Entrenamiento formal tuvo después de la terminar la Preparatoria?
   0 años    1–2 años    3–4 años    5–6 años    7+ años

5. En la última semana, cuántas horas aproximadamente durmió su hijo/a por noche?
   8 horas    9 horas    10 horas    11 horas    12 horas    13 horas+

6. Durante la semana pasada, cuántos minutos de cada día hizo ejercicio su hijo/a, como jugar deportes o participó en alguna actividad física que lo hizo sudar y respirar fuertemente y sudar?
   30 minutos    40 minutos    50 minutos    60 minutos

7. En la última semana cuántas veces fue su Hijo/a con usted o alguien más a un restaurante de comida rápida?
   0–1 veces    2–3 veces    4–5 veces

8. En el promedio de una semana, cuánto tiempo pasa su hijo/a viendo la Televisión mirando programas, jugando videojuegos o en el celular (o viendo videos) o simplemente jugando con un aparato electrónico?
   1 hora    2–3 horas    3 horas o más
Appendix B

Education Modules Outline

A. Sleep

a. The evidence: Gallagher et al. (2010) examined the mother–child relationship in relation to decreased sleep duration and increased rate of obesity; the study did not produce evidence of a correlation, though other factors were recognized. The study found multiple biological and behavioral causes for obesity that originate with decreased sleep duration. Must and Parisi (2009) mentioned that multiple studies show an association between sleep deprivation and increased appetite.

b. The benefits: A preschooler typically needs eleven hours of sleep nightly (National Sleep Foundation, 2015).

c. Intervention: Eleven hours of sleep nightly

B. Screen Time

a. The evidence: Must and Parisi (2009) discovered that time spent participating in sedentary behaviors, specifically watching television, was linked with heavier body weights. Research has shown that children who watch television snack more frequently.

b. The benefits: The American Academy of Pediatrics recommend limiting media time to no more than 1–2 hours per day (Must & Parisi, 2009).

c. Intervention: No more than 2 hours of screen time daily

C. Activity Time

a. The evidence clearly shows that levels of physical activity are typically lower than recommended at 1 hour daily for the preschool age group; this sedentary behavior increases obesity risk (Reilly, 2008). Physical activity was not encouraged but was used as an incentive to eat food. The other change is that in the United States, everyone has a car and a television, and in Mexico families had to walk everywhere, which increased physical activity. For many families, nutritional intake changes and a sedentary life is created with television and cars after they migrate to the United States.

b. The benefits: Levels of physical activity are typically lower than recommended at one hour daily for the preschool age group, this sedentary behavior increases obesity risk (Reilly, 2008).

c. Intervention: One hour of activity and play daily

D. Fast Food:

a. The evidence: Parents perceive fast food as a form of reward for their children, and the play equipment and toy only enhance that perception (Kersey et al., 2010). Chang and Nayga (2010) found an association between a mother’s fast food and soft drinks consumption behavior and her children’s fast food and soft
drinks consumption. The mother’s own relationship with food and her weight status influence her own perception of a quality role model. A study by Poti, Duffey, and Popkin (2014) found that with increasing frequency of fast food intake, there was an associated greater availability of soda and chips in the home and reduced intake of vegetables or milk with home meals. In the United States convenience foods are more readily available, through fast food or packaged food, than in Mexico.

b. Benefits: Focus on decreasing fast food restaurant eating and encourage eating at home as a family

c. Intervention: Eat at fast food restaurants less than four times a month
Appendix C

Participant Educational Module Outline

Healthy Lifestyle Project Instructions

A. Sleep
   a. The evidence: Research shows a relationship between sleep duration and weight gain. The studies show multiple biological and behavioral causes for obesity that originate with decreased sleep duration. There is proof of an association between sleep deprivation and increased appetite. Evidence also shows that when children are fatigued due to not getting enough sleep, they are less active during the day.
   
   b. The benefits: A preschooler typically needs 11 hours of sleep nightly
   
   c. Goal: Eleven hours of sleep nightly

B. Screen Time
   a. The evidence: Time spent participating in sedentary behaviors, specifically watching television, is linked with heavier body weights. Research has shown that children who watch television snack more frequently. Increased amounts of screen time equals less activity and play time.
   
   b. The Benefits: The American Academy of Pediatrics recommends limiting media time to no more than 1–2 hours per day.
   
   c. Goal: No more than 2 hours of screen time daily

C. Activity Time
   a. The evidence clearly shows that levels of physical activity are typically lower than recommended at 1 hour daily for the preschool age group; this inactivity leads to weight gain. In the United States everyone has a car and a television, and in Mexico families had to walk everywhere, which increased physical activity. Less activity and play time is linked to decreased nighttime sleepiness, and in turn to increased fatigue resulting in decreased play/activity.
   
   b. The benefits: Levels of physical activity are typically lower than recommended at 1 hour daily for the preschool age group; this sedentary behavior increases obesity risk.
   
   c. Goal: One hour of activity and/or play daily

D. Fast Food:
   a. The evidence: Parents perceive fast food as a form of reward for their children, and the play equipment and toy only enhance that perception. There is a link between a mother’s fast food and soft drinks consumption behavior and her children’s consumption of those items. Results found that increasing frequency of fast food intake is associated with greater availability of soda and chips in the
home and reduced intake of vegetables or milk with home meals. In the United States, more convenience foods are available through fast food or packaged food.

b. Benefits: Focus on decreasing fast food restaurant eating and encourage eating at home as a family.

c. **Goal: Eat at fast food restaurants less than four times a month**

Instrucciones para una vida saludable durante este proyecto

A. El sueño

a. Los Estudios: Demuestran varias causas por la obesidad, tal como de comportamiento y biológico, que originan por el disminuye del sueno nocturnal. Hay pruebas relacionadas en la falta de sueno y el aumento de apetito.

b. Los beneficios: Un niño preescolar típicamente necesita once horas de sueno por la noche.

c. Meta: Once horas de sueño por la noche

B. Tiempo de Pantalla

a. Los Estudios: Mientras mas tiempo se participe en el comportamiento sedentario, especialmente mirando la televisión se relaciona con el aumento de peso. Las investigaciones también enseñan niños/as que miran mas televisión les apetece comer un bocadillo o snack mas a menudo.

b. Los Beneficios: La Academia Americana de Pediatría recomiendan limitan el tiempo en los medios de comunicación a no mas de una a dos horas al día.

c. Meta: No mas de dos horas de pantalla al día

C. Tiempo de actividad

a. Las evidencias claramente nos demuestran que los niveles de actividad física son típicamente menos de el tiempo recomendado, a lo que es menos de una hora diaria en los tramos de edad preescolar, y esto lleva a cabo el aumento de peso. En los EU todos tienen vehículo y una televisión. En Mexico muchas familias tienen que caminar mucho para llegar a su destino y esto aumenta la actividad física. Para muchas familias después de Emigrar  a los EU comienzan a ver a cambios por el consumo nutricional y una vida menos actividad fisicamente por el uso de vehículos y televisiones.

b. Los beneficios: los niveles de actividad física son menos de lo recomendado a lo que se recomienda una hora diaria para niños preescolar . Este comportamiento sedentario aumenta el riesgo des obesidad.

c. Meta: una hora de actividad física al día
D. Comida rápida:

a. Los estudios: Padres y Madres consideran comida rápida como recompensa para sus hijos, el equipo de juego y juguetes aumentan su visión. Hay una relación de comportamiento en una Madre que usa el consumo de comidas rápidas y refrescos con sus hijos. Y se han encontrado resultados que con el aumento de comidas rápidas, que vincula más accesible los refrescos y papas en casa y disminuye el consumo de frutas y verduras y leche con comidas hechas en casa. En los EU hay una gran cantidad de comidas preparadas, rápidas y empacadas.


c. Meta: disminuir las salidas al consumo de comidas rápidas por lo menos a cuatro veces por mes.
Appendix D

Project Calendar Logs

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JUNE 2016

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22 23 24 25 26 27 28 17 18 19 20 21 22 23
29 30 31 24 25 26 27 28 29 30
31 31

NOTES:

On each day mark:

- Number of hours slept at night
- Minutes of activity
- Minutes of screen time
- X the days you eat fast food
AUGUST

NOTES:

On each day mark:

- Number of hours slept at night
- Minutes of activity
- Minutes of screen time
- X the days you eat fast food
### Appendix E

#### Level of Evidence Table

<table>
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<tr>
<th>AUTHOR/TITLE</th>
<th>RESEARCH QUESTION</th>
<th>STUDY DESIGN</th>
<th>LEVEL OF EVIDENCE</th>
<th>DESCRIPTION OF SAMPLE</th>
<th>OUTCOMES MEASURED</th>
<th>RESULTS</th>
<th>LIMITS AND STRENGTHS</th>
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<tbody>
<tr>
<td>Berry, D., Colindres, M., Sanchez-Lugo, L., Sanchez, M., Neal, M., &amp; Smith-Miller, C. (2011)</td>
<td>Adapting, feasibility testing, and pilot testing a weight management intervention for recently immigrated Spanish speaking women and their 2- and 5- year old children. Hispanic Health Care International, 9(4), 186–193.</td>
<td>Quasi-Experimental Randomized controlled pilot study 3 phases</td>
<td>Level 2 Quality A</td>
<td>56 Mexican women from North Carolina, BMI greater than 25kg/m2, with a child between the ages of 2 and 9 years.</td>
<td>BMI, Lipid panels, skin fold measurements, waist circumference, fasting glucose, Hemoglobin A1C.</td>
<td>The mothers showed trends toward improved health responsibility, exercise knowledge, stress management, and eating and exercise self-efficacy. Their children’s weight was stable.</td>
<td>Limits: Small pilot study</td>
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<tr>
<td>Gallagher, M. R. (2010). Maternal perspectives on lifestyle habits that put children of Mexican descent at risk for obesity. Journal for Specialists in Pediatric Nursing, 15(1), 16–25.</td>
<td>The views that mothers of Mexican descent have related to lifestyle habits that put their children at risk for obesity.</td>
<td>Qualitative naturalistic design with ethnogenic interviews</td>
<td>Level 3 Quality A</td>
<td>9 mothers of Mexican descent recruited from a community center for Spanish-speaking community</td>
<td>Ethnographic interviews, observational experiences, maternal demographics, and maternal acculturation</td>
<td>Mothers provided an emic perspective on the role of food intake and nutrition, physical activity, television viewing, and health promotion</td>
<td>Limits: Participants had already received nutritional education from WIC</td>
</tr>
<tr>
<td>AUTHOR/TITLE</td>
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<td>Gallagher, M. R., Cron, S. G., &amp; Meininger, J. C. (2010).</td>
<td>Is there a relationship between nocturnal sleep duration and BMI?</td>
<td>Non-experimental Single group observational design</td>
<td>Level 3 Quality B</td>
<td>Latino women, 21–40, with 1 child at least between the ages of 2 and 6 and not in school</td>
<td>Maternal age, preschool age, maternal employment, marital status, income and BMI, nocturnal sleep time, maternal and child sleep diary</td>
<td>No statistical evidence to link sleep duration and BMI in mother and child</td>
<td>Limits: Lack of maternal variability of BMI, did not consider napping time, questions regarding the validity of the actigraphy</td>
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<td>Guerrero, A. D., Slusser, W. M., Barreto, P. M., Rosales, N. F., &amp; Kuo, A. A.</td>
<td>To understand Latina mothers’ definition of health and obesity in their children and perceptions of physician weight assessments</td>
<td>Qualitative design</td>
<td>Level 3 Quality A</td>
<td>24 low-income Spanish-speaking Mexican mothers of children ages 2–5 years, 4 focus groups</td>
<td>Each focus group was audiotaped and transcribed. 8 themes were identified</td>
<td>Mothers use physical limitations as a measure of obesity, recognize healthcare providers as a source of information. Mothers believe in role modeling and emotions have a direct influence on eating habits</td>
<td>Qualitative nature results are intended to create further study; answers may be biased due to interviewing environment, inability to generalize</td>
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<tr>
<td>AUTHOR/TITLE</td>
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<td>Kersey, M., Lipton, R., Quinn, M. T., Lantos, J. D. (2010).</td>
<td>To characterize the knowledge, attitudes, and beliefs regarding childhood obesity among parents of Latino preschoolers</td>
<td>Non-experimental</td>
<td>Level 3 Quality A</td>
<td>369 Mexican immigrant parents of 2–5-year-old parents were interviewed and the children were weighed and measured</td>
<td>Child’s BMI, patient demographics, parent’s knowledge about childhood obesity, parental ratings of their child’s weight status</td>
<td>Relatively good knowledge of ideal body size, parents underestimate their own child’s weight status, parents do not think advice is relevant for their child. Interventions need to be for all children</td>
<td>Limits: Weak measures of the parent’s knowledge. Strengths: Large study size</td>
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<td>Rosas, L. G., Harley, K.G., Guendelman, S., Fernald, L. CH., Mejia, F., &amp; Eskenazi, B. (2010).</td>
<td>Examine and compare mother’s perception of weight in Mexico and immigrant community in California</td>
<td>Non-experimental</td>
<td>Level 3 Quality B</td>
<td>314 mothers of 5-year-olds in Mexico and 60 mothers of 5-year-olds in California</td>
<td>Associations of maternal perceptions of satisfaction with weight according to socio-demographic characteristics</td>
<td>California mothers wanted their children to be smaller and Mexico mothers wanted their children to be bigger. Programs to address weight control would be best focused on healthy child development</td>
<td>Limits: Small sample size from California; groups differed in maternal education and food insecurity. Strengths: No significant difference in the answers between groups</td>
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<td>Small, L., Mazurek Melnyk, B., Anderson-Gifford, D., &amp; Hampl, J. S. (2009). Exploring the meaning of excess child weight and health: Shared viewpoints of Mexican parents of preschool children. <em>Pediatric Nursing, 35</em>(6), 357–366.</td>
<td>To explore the beliefs of Mexican parents of obese preschools regarding weight and health</td>
<td>Qualitative</td>
<td>Level 3 Quality A</td>
<td>11 Mexican parents focus group</td>
<td>Meanings and relationships about excess weight, causes of overweight and obesity, uncertainties, effects of society on parental goals, identified needs and action strategies</td>
<td>Providers must be empowered to understand the perspectives of their parents and offer culturally astute interactions, open communication and motivational interviewing</td>
<td>Limits: Small focus group  Strength: Detailed interviewing</td>
</tr>
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## Appendix F

### Synthesis Table

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<th>AUTHOR/ARTICLE</th>
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<td>Berry, D., Colindres, M., Sanchez-Lugo, L., Sanchez, M., Neal, M., &amp; Smith-Miller, C. (2011) Adapting, feasibility testing, and pilot testing a weight management intervention for recently immigrated Spanish speaking women and their 2- and 5-year-old children. <em>Hispanic Health Care International, 9</em>(4), 186–193.</td>
<td>56 Spanish-speaking mothers and their children</td>
<td>3 phases; first phase was focus groups for information gathering about nutrition and physical activity since moving to the U.S. Phase 2 nutrition and exercise education provided. Phase 3; pilot study randomized 2 groups experimental group or wait list group</td>
<td>Education levels of mothers’ income 81% worked in their homes, low income, 39% were single moms</td>
<td>The mothers showed trends toward improved health responsibility, exercise knowledge, stress management and eating and exercise self-efficacy. Their children’s weight was stable. Trusting relationships were built.</td>
</tr>
<tr>
<td>Gallagher, M. R. (2010). Maternal perspectives on lifestyle habits that put children of Mexican descent at risk for obesity. <em>Journal for Specialists in Pediatric Nursing, 15</em>(1), 16–25.</td>
<td>Mexican descent, Spanish as their first language, mothers of at least 2 children with 1 being between 2 and 5 years old</td>
<td>Individual interviews of standardized questions using informative redundancy and analysis</td>
<td>Low incomes, spoke mostly Spanish, Mexican born. Descriptive, structural and contrast questioning</td>
<td>Mothers provided an emic perspective on the role of food intake and nutrition, physical activity, television viewing and health promotion</td>
</tr>
<tr>
<td>Gallagher, M. R., Cron, S. G., Meininger, J. C. (2010). Nocturnal sleep duration and its relation to obesity in Latino women and preschool children. <em>Hispanic Health Care International, 8</em>(4), 209–216.</td>
<td>Hispanic, obese, mother–child dyads</td>
<td>Evaluation and observation of sleep patterns and length of sleep in comparison to mother and child’s BMI. Obesity has increased at the same time sleep time has decreased by 1-2 hours</td>
<td>The actigraph measurement tool, 5 nights evaluated</td>
<td>No statistical evidence to link sleep duration and BMI in mother and child, Correlation between the mother’s BMI and the child’s BMI</td>
</tr>
<tr>
<td>Guerrero, A. D., Slusser, W. M., Barreto, P. M., Rosales, N. F., &amp; Kuo, A. A. (2011). Latina mothers’ perceptions of healthcare professional weight assessment of preschool-aged children. <em>Maternal Health Child Journal, 15</em>, 1308–1315.</td>
<td>Mexican mothers with preschool-aged children</td>
<td>Eliminating nonnutritious foods from the house, increasing physical activity and involving the entire family. Comparing perceptions of obese moms versus nonobese moms</td>
<td>Concrete data needs to be shown to moms about the child’s weight status. Family members especially father and grandmothers are not concerned with the child’s weight and support excessive eating</td>
<td>Mothers use physical limitations as a measure of obesity, recognize healthcare providers as a source of information. Mothers believe in role modeling and emotions have a direct influence on eating habits</td>
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<tr>
<td>AUTHOR/ARTICLE</td>
<td>POPULATION</td>
<td>INTERVENTIONS</td>
<td>BARRIERS</td>
<td>OUTCOMES</td>
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<td>Kersey, M., Lipton, R., Quinn, M. T., &amp; Lantos, J. D. (2010). Overweight in Latino Preschoolers: Do parental health beliefs matter? American Journal of Health Behavior, 34(3), 340–348.</td>
<td>Mexican immigrant parents, obese and not obese 2–5-year-old Mexican children</td>
<td>Evaluation of parent’s knowledge, attitudes and beliefs about the child’s diet, activity level, weight status. Questions designed to look at behaviors with open-ended questions; provided education promoted motivational change</td>
<td>90% of mothers responded, 10% of fathers; results and perceptions were similar in parents of obese and non-obese children</td>
<td>Relatively good knowledge of ideal body size, parents underestimate their own child’s weight status, parents do not think advice is relevant for their child. Interventions need to be for all children. Primary prevention is the key.</td>
</tr>
<tr>
<td>Rosas, L. G., Harley, K.G., Guendelman, S., Fernald, L. CH., Mejia, F., &amp; Eskenazi, B. (2010). Maternal perception of child weight among Mexicans in California and Mexico. Maternal Child Health Journal, 14, 886–894.</td>
<td>Mexican mothers of 5-year-olds from California and Mexico</td>
<td>Study the mother’s perception of their children’s weight. Comparing perceptions between similar demographics in the U.S. and Mexico. Understand the level of misconception</td>
<td>Education levels, Perceptions influenced by migration, Mexican cultural norm is toward larger body type</td>
<td>California mothers wanted their children to be smaller and Mexico mothers wanted their children to be bigger. Programs to address weigh control would be best focused on healthy child development</td>
</tr>
<tr>
<td>Small, L., Mazurek Melnyk, B., Anderson-Gifford, D., &amp; Hampl, J. S. (2009). Exploring the meaning of excess child weight and health: Shared viewpoints of Mexican parents of preschool children. Pediatric Nursing, 35(6), 357–366.</td>
<td>Mexican parents of preschoolers and primary care providers</td>
<td>Increased awareness and program development for obesity problem has not shown a change in the Mexican parental perception of this child health issue. Obesity equals poor self-care</td>
<td>Cultural bias and naïveté of providers. Adiposity rebound, overweight as desired state; Parents work long work days in U.S., children play outside less in U.S.; U.S. has more Xbox and PlayStations</td>
<td>Providers must be empowered to understand the perspectives of their parents and to offer culturally astute interactions, open communication, and motivational interviewing</td>
</tr>
<tr>
<td>Washington, P. S., Reifsnider, E., Bishop, S. L., Ethington, M. D., &amp; Ruffin, R. E. (2010). Changes in family variables among normal and overweight preschoolers. Issues in Comprehensive Pediatric Nursing, 33, 20–38.</td>
<td>Mexican American children ages 2-3 receiving WIC services</td>
<td>Educate on the BMI, less TV, healthy eating habits, obesity prevention, cues of hunger, change the relationship to feed and feeding practices</td>
<td>Eating rewards and behaviors, mother’s weight and the meaning of food to her</td>
<td>Multiple ecologic factors influence the BMI of the preschooler leading to obesity. Providers can teach parents the importance of managing the environmental factors</td>
</tr>
</tbody>
</table>
Appendix G

Theoretical Model: Social Cognitive Theory

Premed HQ Social Cognitive Theory

Appendix H

Project Marketing Flyers

Lynette Marshall, ARNP, in coordination with Boise State University, is looking for 2-5 year old Hispanic preschoolers to participate in an improvement study promoting healthy lifestyle choices in children.

**Participating families must be willing to:**
- Receive one-on-one education from Lynette Marshall, ARNP
- Complete a pre- and post-project survey
- Track their preschooler’s daily screen and activity time, hours of sleep at night and fast food restaurant outing each month

**Children in the program must work to maintain the following goals:**
- No more than 2 hours of screen time daily
- 1 hour of activity daily
- 11 hours of sleep nightly
- No more than 4 fast food outings a month
- Pre- and post-project height and weight

All participating children will receive a special appreciation toy and gift card upon completion of the program!

To learn more, please schedule an appointment with Lynette Marshall afternoons May 5, 12, or 19, 2016

www.kadlecclinic.org
En coordinación con la Universidad de el Estado de Boise y Lynette Marshall ARNP se busca de Niños/a Hispanos Preescolares de 2 a 5 años de edad para participar. A base de prueba para un proyecto de mejoramiento, para promover decisiones a un estilo de vida saludable.

**Educación uno a uno con Lynette Marshall ARNP**

** Padres llenarán una encuesta antes y después de el proyecto**

**Monitorear horas de pantalla, tiempo de actividad, horas de sueño por la noche, y viajes a comida rápida**

**Metas:** No más de dos horas de pantalla al día.
- Una hora diaria de actividad
- Once horas de sueño por la noche
- No más de de cuatro salidas a comidas rápidas al mes

Estatura y peso antes y después

**Se le darán juguetes como motivación, y una tarjeta regalo.**

Si está interesado/a hable para hacer una cita con Lynette Marshall para Mayo 5,12 o 19, 2016 por las tardes.

Pasco Primary Care
9005 Sandifur Parkway
Pasco, WA

www.kadlecclinic.org
Appendix I

Timeline:

**Educating Mothers of Obese Hispanic Preschoolers to Create Lifelong Healthy Habits**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Fall 14</th>
<th>Spring 15</th>
<th>Summer 15</th>
<th>Fall 15</th>
<th>Spring 16</th>
<th>Summer 16</th>
<th>Fall 16</th>
<th>Spring 17</th>
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<tr>
<td>Literature review, mission, vision, problem statement</td>
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<td>Develop project proposal</td>
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<td>Develop pre-assessment questionnaire and post test</td>
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<td>Evaluation plan developed and conducted throughout project</td>
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<td>Form advisory committee and meeting plan</td>
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<td>Apply for a grant</td>
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<td>Develop a marketing plan</td>
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<td>Recruit 30 mothers and 30 preschoolers to participate in evidence-based</td>
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<td>Train MAAs on height/weight and project procedures</td>
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<td>Implementation of project with pretests and baseline BMI over 3 months</td>
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<td>Posttest and BMI evaluation</td>
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<td>Report to clinic providers; educational plan</td>
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<td>Create EMR pop-ups/smart set for clinic-wide distribution of education</td>
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<td>Final report</td>
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<td>Present project to the local nurse practitioner associations</td>
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<td>Publish project article to selected journals</td>
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</table>
Appendix J

Logic Model Step 2

Educating Mothers of Obese Hispanic Preschoolers to Create Lifelong Healthy Habits

**Problem or Issue 1**
- Childhood obesity is increasing throughout the US. Tri Cities is ranked 9th most obese in the US.
- Childhood obesity has increased from 5% to 17% in one generation, highest rates are among Mexican Americans.
- Obesity rate in the Tri-cities are 31%.
- Childhood obesity increases risk of mortality both physically and mentally.

**Goals and Guiding Principles 2**
- **Goal:** Identify and educate mothers on preschoolers dietary and nutritional needs and implement evidence-based interventions to reduce Hispanic preschoolers obesity rates in the Tri Cities region.
- **Organization guiding principles:** treat everyone with acceptance, valuing individual and cultural differences.
- Lead the community to better health and quality of life through the delivery of exceptional, patient-centered care.

**Desired Results 5**
- Decrease obese Hispanic preschoolers BMI.
- Obese Hispanic preschoolers will:
  - Increase activity to 1 hour a day.
  - Decrease screen time to 2 hours a day.
  - Sleep 11 hours each night.
  - Eat at Fast food restaurants no more than 4 times a month.
  - Educational plan will be shared throughout PPC.
  - Report to NP organization.

**Define Strategies**
- Develop a supportive team to motivate mothers to participate in an evidence-based interventional project with their obese Hispanic preschoolers, with a goal of 30.
- Evaluate pre and post educational surveys and BMI's.
- Report educational plan to fellow providers.
- Develop a EMR avenue to promote education at visits.
- Report results to NP conference.

**Population Needs & Strengths 3**
- Health care providers need to understand the mothers perspective on childhood obesity and their own child's health status.
- Access to physical therapist, nutritionists, and primary care providers.
- Access to healthy activities and food sources.

**Influential Factors, Resources & Assets 4**
- Spanish speaking staff; intuitive/user-friendly electronic medical record.
- Pasto Primary Care Clinic (PPC)/ stakeholders support.
- 50% of restaurants in the community are fast food chains.
- 55% of the population in the community is Mexican American.
- Safe, convenient, outdoor trail systems; 300 days of sunshine a year.
Appendix K
Logic Model Step 3

<table>
<thead>
<tr>
<th>Inputs (What we will invest)</th>
<th>Activities (Our actions)</th>
<th>Outputs (What we will provide)</th>
<th>Objectives</th>
<th>Immediate Outcomes (Within 6 months) SMART!</th>
<th>Long-Term Outcomes (1-3 years) SMART!</th>
<th>Impacts (what is desired result)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Resources</td>
<td>1. Engage and collect a multi-disciplinary team of experts in their fields as a resource for project development and training</td>
<td>1. Interactive team has monthly communication for continual evaluation of the project path</td>
<td>1. Enroll participants</td>
<td>1. 30 obese Hispanic preschooler mothers consent to participate in the program by May 2016 (Outcome 1)</td>
<td>13. Educational plan to promote interventions at Well Child visits used by 50% of providers at Pasco primary Care by spring 2018 (Outcome 13)</td>
<td>Empowered mothers with normal BMI children and lifelong healthy habits</td>
</tr>
<tr>
<td>Project leader</td>
<td>2. Coordinate with all stakeholders to identify the population participant</td>
<td>2. Constructive feedback from the team members to increase participation</td>
<td>2. Develop an education and training module for MAs</td>
<td>2. MA training of height and weight measure and project process, enrollment, consenting, log distribution, and instruction by April 2016 (Outcome 2)</td>
<td>14. Decrease in Hispanic preschoolers BMI by 2% each year for the next 3–5 years as compared with 2016 Well Child visit BMI reading in 25% of obese Hispanic preschoolers at Pasco Primary Care (Outcome 14)</td>
<td>Obesity in remission in the Hispanic preschool population</td>
</tr>
<tr>
<td>Pediatrists</td>
<td>4. Identify evidence-based interventions at baseline Well Child visits</td>
<td>4. Provider buy-in and promotion of the project at clinic visits</td>
<td>4. Implement evidence-based intervention plan to reduce the obesity in Hispanic preschoolers throughout Pasco Primary Care pediatric and family</td>
<td>4. Posttest questionnaire completed by same mothers and compared with pretest (same test) by August 2016 (Outcome 4)</td>
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<tr>
<td>Clinic manager</td>
<td>5. Measure height, weight and assess BMI at each clinic visit</td>
<td>5. Applicable and accurate data obtained at clinic visit</td>
<td>5. Applicable and accurate data obtained at clinic visit</td>
<td>5. BMI assessment conducted pre and post intervention with</td>
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<tr>
<td>Clinic staff</td>
<td>6. Develop a tool for the mothers to record information</td>
<td>6. User friendly tool/calendar provided to mothers to record compliance with interventions</td>
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<td>Interpreter</td>
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<tr>
<td>Inputs (What we will invest)</td>
<td>Activities (Our actions)</td>
<td>Outputs (What we will provide)</td>
<td>Objectives</td>
<td>Immediate Outcomes (Within 6 months) SMART!</td>
<td>Long-Term Outcomes (1-3 years) SMART!</td>
<td>Impacts (what is desired result)</td>
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<td>during the intervention</td>
<td>practice providers by December 2016</td>
<td>1% improvement of BMI in 50% of the participants by August 2016 (Outcome 5)</td>
<td>6. 25% of the participating preschoolers will increase sleep by 1 hour a night within 3 months (August 2016) as reported by the mothers as compared to pre-intervention questionnaire (Outcome 6)</td>
<td>7. 50% of project participants will decrease their screen time by 25% within 3 months’ time (August 2016) when compared with pre-intervention questionnaire (Outcome 7)</td>
<td>8. 50% of participants will decrease fast food restaurant dining by 50% within 3 months’ time as compared with pre-intervention questionnaire (Outcome 8)</td>
</tr>
<tr>
<td>Inputs (What we will invest)</td>
<td>Activities (Our actions)</td>
<td>Outputs (What we will provide)</td>
<td>Objectives</td>
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<td>Long-Term Outcomes (1-3 years) SMART!</td>
<td>Impacts (what is desired result)</td>
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</table>
| **Financial Resources**      | 1. Apply for a grant to be able to provide incentives for participation in the project for mothers  
| Grants/Donations             | 2. Coordinate with the Kadlec Foundation to attain funding for project materials for pretest, posttest, pamphlets, educational supplies, and motivational postcards | 1. Appropriate and accurate information for the grant application  
|                              |                          | 1. Complete grant application with adequate amount of time to use funding by Spring 2016  
|                              |                          | 2. Build a strong relationship with the foundation to attain additional funds if needed by spring 2016 | 9. 50% of participant will increase activity levels by 25% in 3 months (August 2016) as compared with pre-intervention questionnaire (Outcome 9) |                              | 10. Grant funding secured project Spring 2016 (Outcome 10)  
|                              |                          | 1. Produce a successful marketing plan to promote the project to the clinic by March 2016 |                              |                              | Additional funding secured spring 2016 (outcome 10) | 1. Successful marketing plan reproducible for future projects |
| Community Resources/M      | 1. Volunteers to hang fliers (English/Spanish) in the clinic to entice mothers to participate in the program  
| Marketing Volunteers at:    | 2. Develop motivational and informative | 1. Coordinated community/organization effort to pool resources to promote community physical activities, increase knowledge and resources |                              |                              |                          | 1. Self-funded program through routine Well Child exams  
<p>| Kadlec Regional Medical Center |                          | 1. Produce a successful marketing plan to promote the project to the clinic by March 2016 |                              |                              |                          | 2. Self-funded program through routine Well Child exams |</p>
<table>
<thead>
<tr>
<th>Inputs (What we will invest)</th>
<th>Activities (Our actions)</th>
<th>Outputs (What we will provide)</th>
<th>Objectives</th>
<th>Immediate Outcomes (Within 6 months) SMART!</th>
<th>Long-Term Outcomes (1-3 years) SMART!</th>
<th>Impacts (what is desired result)</th>
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<tbody>
<tr>
<td>Technology Materials EMR Information Systems Support</td>
<td>postcards to send to participants’ homes to enhance continued commitment to project participation</td>
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<td>by September 2016 (Outcome 11)</td>
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<tr>
<td>1. Document health assessments and BMI</td>
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<td>1. EMR data identifies trends and population for the project</td>
<td>1. Develop a EMR mechanism with the IT department in the EMR to trigger pop-up questions if a preschooler is overweight</td>
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<tr>
<td>2. Meet with IT to build an education pop-up with appropriate interventions as proven by the project</td>
<td>12. Structured EMR integration with educational intervention pop-ups to recognize the obese BMI criteria and recognized by 25% of the providers at Pasco Primary Care by Spring 2017 (Outcome 12)</td>
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<tr>
<td></td>
<td>16. Structured EMR integration with educational intervention pop-ups to recognize the obese BMI criteria and used by 50% of the providers at Pasco Primary Care by Summer 2018 (Outcome 16)</td>
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<td></td>
<td>Permanent feature in the EMR for continued education of healthy lifestyle choices and used by 100% of the providers at Kadlec Family Practice clinics</td>
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<td></td>
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</tr>
</tbody>
</table>
APPENDIX L

Parental Informed Consent

CONSENT FORM
Educating Mothers of Obese Hispanic Preschoolers to Create Lifelong Healthy Habits

IRB# 5956S-16

INVESTIGATOR(S): Lynette Marshall, Family Nurse Practitioner; 9605 Sandifur Parkway, Pasco Primary Care. 509-942-3170

24-HOUR PHONE: 509-949-7114

This is a type of research study. Research studies include only people who choose to take part. Please take your time to make your decision to participate. Discuss it with your friends and family.

You are being asked to take part in this study because you have a child who is an obese preschooler of Hispanic race. This particular research on humans is designed by Lynette Marshall.

This consent form may contain words that you do not understand. Please ask the study Nurse Practitioner or study staff any questions that you have.

PURPOSE, POTENTIAL FOR BENEFIT

WHY IS THIS STUDY BEING DONE?

This research is being done because childhood obesity has doubled in children in the last 30 years. In 2012, the Tri-Cities was ranked the ninth most obese area in the United States. Studies have shown that healthy habits like decreasing screen time, increasing activities, getting good sleep, and not eating fast food will decrease the risk of obesity. The study will last for 3 months.
HOW MANY PEOPLE WILL TAKE PART IN THE STUDY?

About 30 mothers and 30 children will take part in the study, all from Pasco Primary Care Clinic.

ARE THERE BENEFITS TO TAKING PART IN THE STUDY?

The possible benefits of this study include activity toys for the preschoolers and newly found healthy lifestyle habits that will benefit them and your family for a lifetime. The information gained from this research may help educate providers and physicians to help other children and families with these same interventions.

The information collected may not benefit you directly. We hope the information learned from this study will benefit other children with obesity in the future.

PROCEDURES

WHAT IS INVOLVED IN THE STUDY?

In this study, you will be asked to attend an educational module explaining the proof behind the healthy goals; this will take about 15 minutes. Your child’s height and weight will be obtained from their health record to calculate a body mass index (BMI). You will complete a brief survey; this will take about 5 minutes. Four new healthy habits will be practiced during a 12-week period: a goal of 11 hours of sleep nightly, 1 hour of activity daily, no more than 2 hours of screen time daily, and decrease eating fast food to four times month. At the close of the 12 weeks, a repeat survey will be completed by the mothers and the children’s BMI will be re-evaluated.
RISKS

WHAT ARE THE RISKS OF THE STUDY?

Your child may feel stress being weighed and measured; every effort will be made to reduce this stress. Special attention will be given to the preschoolers’ self-esteem and respectfully addressing BMI issues with your preschooler. It may also cause emotional stress for the children to have screen time limited, or your child may be tired from increased daily activity. There are no health risks associated with any of the interventions, but the discomfort of change may be felt.

If you have any questions regarding the risks, please ask the researcher and/or study staff.

OTHER INFORMATION

AUTHORIZATION TO USE AND DISCLOSE INFORMATION FOR RESEARCH PURPOSES

Efforts will be made to keep your personal information confidential, but we cannot guarantee absolute confidentiality. Your personal information may be disclosed for purposes related to the study, or if required or allowed by law. By law, you have certain rights related to your health information. These include the right to know who will be able to get the information and why they may be able to get it.

Information collected about you during this study becomes part of the research record for this study if you agree to participate. This information may include the following:

- Your name, address, telephone number, Social Security Number, Health Plan Number, and other details about you;
- Information obtained from procedures used to find out whether you are eligible to take part in this study. This may include height and weight assessment and any other information that you may release to us, including information about your health history;
• Information obtained in the course of the study including information about your response to any study treatments you receive, information related to study visits and phone calls, physical examinations, and other medical information relating to your participation in this study.

In addition, your regular medical records become part of the research record for this study if you agree to participate.

By signing this consent form, you are allowing the research team to have access to this information. The research team includes the investigators listed on this consent form and other staff involved in this specific study. The information collected about you will be used for the purposes of conducting this study as described in this consent form.

You have the right to know who else may be seeing your information. If you agree to participate in this study and you sign this consent form, you are also agreeing to allow the research team to share your information with any or all of the following:

• doctors and other healthcare providers taking part in this study;
• Swedish Medical Center and entities within Swedish Health Services;
• Swedish Medical Center IRB;
• Pasco Primary Care Clinic and Kadlec Regional Hospital Research Committee

The results of the research study may also be presented at meetings or in publications, but your identity will not be disclosed in those presentations or publications.

You do not have to agree to allow these groups to look at your information, but if you do not, you may not be allowed to participate in this study.

If you give your permission to give your information to a person or business, the information may no longer be protected by federal or state privacy laws. There is a risk that your information will be released to others without your permission.
You may revoke (“take back”) your agreement to participate in this study and authorization to use your health information for this research study by contacting the principal investigator in writing. If you revoke, you will not be able to continue being in this study. If you decide to revoke your agreement and authorization, information that has been collected about you before you revoke may still be used for purposes of the study.

Unless revoked in writing, your agreement and authorization to use your health information for this research will end on May 31, 2017.

WHAT ARE THE COSTS?

Taking part in this study is not expected to lead to added costs to you or your insurance company.

Will I be paid for participating?

A $30 Walmart card will be rewarded at the end of the 12-week project after the post survey is completed. No partial payment will be given if the 12-week period is not completed.

WHO IS PAYING FOR THIS STUDY?

Funding for this study comes from Kadlec Regional Hospital Foundation

WHAT ARE MY RIGHTS AS A RESEARCH SUBJECT?

Taking part in this study is voluntary, and you may choose not to take part. If you decide not to participate in this study, there are no penalties or a loss of benefits to which you are otherwise entitled and your decision will not change your future medical care here. In addition, if you do want to be part of this study, but later change your mind, you may leave the study at any time without penalties or a loss of benefits to which you are otherwise entitled and your decision to leave the study will not change your future medical care here.
Your participation in this study may be stopped at any time by the study doctor or the sponsor without your consent because:

- You have not followed study instructions;
- The sponsor stops the study; or
- Administrative reasons require your withdrawal.

We will tell you about new information that may affect your health, welfare, or willingness to stay in this study. We will tell you about the new information from this or other studies that may affect your health, welfare, or willingness to stay in this study.

**WHOM DO I CALL IF I HAVE QUESTIONS OR PROBLEMS?**

- For questions about the study, contact Lynette Marshall at 509-949-7114
- For questions about your rights as a research subject, contact the SMC Institutional Review Office (IRO) Manager. The IRO Manager administers the Institutional Review Board (a group of people who review this research to protect your rights and welfare) and may be contacted at (206) 215-2536.

**WHERE CAN I GET MORE INFORMATION?**

Information on Childhood Obesity can be found at The Kadlec Healthplex Library in Richland, WA, or at the Public Library, Richland, WA.

**CONSENT**

I have been given the information about the use and disclosure of my health information for this research study. My questions have been answered.

I authorize the use and disclosure of my health information to the parties listed in the authorization section of this consent for the purposes described above.

I have read the information in this consent form. All my questions about the study and my participation in it have been answered. I freely consent to be in this research study.
If you agree to be in this study, you will receive a signed and dated copy of this consent form for your records.

**SUBJECT’S CONSENT AND AUTHORIZATION**
My signature indicates that I have been given a copy of this consent form.

Subject’s Signature:  
Subject’s Name (Printed):  
Date:  

**CERTIFICATE OF PERSON OBTAINING CONSENT:**
I have provided an explanation of the above research study and have encouraged the subject to ask questions and request additional information regarding the study and possible alternatives. A copy of this consent form has been given to the subject.

Signature of person obtaining consent:  
Name (Printed):  
Date:  

**CERTIFICATE OF INVESTIGATOR:**
I certify that this subject has been consented.

Signature of investigator:  
Investigator Name (Printed):  
FORMULARIO DE CONSENTIMIENTO

Educar a las madres de niños preescolares hispanos obesos para crear hábitos saludables de por vida

IRB# 5956S-16

INVESTIGADOR(ES): Lynette Marshall, Enfermera Familiar; 9605 Sandifur Parkway, Pasco Atención Primaria. 509-942-3170

TELEFONO 24-HORAS: 509-949-7114

Este es un tipo de estudio de investigación. Los estudios de investigación incluyen sólo a las personas que elijan participar. Por favor, tómese su tiempo para tomar su decisión de participar. Hable con su familia y amigos.

Se le ha pedido que tome parte en este estudio porque tiene un hijo en pre-escolar con obesidad y de raza hispana. Esta investigación con seres humanos está diseñada por Lynette Marshall.

Este formulario de consentimiento puede contener palabras que usted no entienda. Por favor, pregúntele a la enfermera del estudio o personal del estudio cualquier duda que usted tenga.
PROPOSITO, POTENCIAL DE BENEFICIO

¿POR QUE SE ESTÁ LLEVANDO A CABO ESTE ESTUDIO?

Esta investigación se está llevando a cabo porque la obesidad infantil se ha duplicado en los niños en los últimos 30 años. En el 2012, Tri-Cities ocupó el noveno lugar con mayor obesidad en los Estados Unidos. Los estudios han demostrado que los hábitos saludables así como disminución de tiempo de la pantalla, incrementar el número de actividades, obtener un buen sueño y no comer comida rápida ayuda a disminuir el riesgo de obesidad. El estudio durará 3 meses.

¿CUANTAS PERSONAS VAN A PARTICIPAR EN EL ESTUDIO?

Alrededor de 30 madres y 30 niños que acuden a la Clínica de Atención Primaria de Pasco participarán en el estudio.

¿HAY BENEFICIOS EN TOMAR PARTE EN EL ESTUDIO?

Los posibles beneficios de este estudio incluyen juguetes interactivos para los niños en preescolar y nuevos hábitos de vida saludables que los beneficiará a ellos y a su familia para toda la vida. La información obtenida en esta investigación puede ayudar a educar a los proveedores y a los médicos para ayudar a otros niños y familias con estas mismas intervenciones. La información recopilada quizás no le beneficie directamente. Esperamos que la información adquirida en este estudio beneficiará a otros niños con obesidad en el futuro.

PROCEDIMIENTOS

¿QUIEN ESTÁ INVOLUCRADO EN ESTE ESTUDIO?

En este estudio, se le pedirá que asista a un módulo didáctico explicando la prueba detrás de los objetivos saludables, esto llevará unos 15 minutos. La estatura y el peso del niño serán
obtenidos a partir de su registro de salud para calcular un índice de masa corporal (IMC). Usted deberá completar una breve encuesta que le llevará unos 5 minutos. Cuatro nuevos hábitos saludables serán practicados durante doce semanas: la meta de once horas de sueño cada noche, a una hora de actividad diaria, no más de dos horas de tiempo de la pantalla diariamente y disminuir la comida rápida a cuatro veces mensuales. En la clausura de la doceava semana, una segunda encuesta será completada por las madres y la re-evaluación del IMC de los niños.

**RIESGOS**

¿CUALES SON LOS RIESGOS DEL ESTUDIO?

Su niño puede sentir estrés siendo pesado(a) y medido(a). Se hará todo lo posible para reducir el estrés. Se prestará especial atención a la autoestima de los niños preescolares y nos dirigiremos respetuosamente a su niño acerca de sus problemas de IMC. También puede causar estrés emocional en los niños el limitar su tiempo con la pantalla o aumentar su cansancio al aumentar la actividad diaria. No hay riesgos para la salud con ninguna de las intervenciones, pero puede sentir algo de incomodidad con el cambio.

Si usted tiene cualquier pregunta con respecto a los riesgos, por favor pregunte al investigador y/o el personal del estudio.

**OTRA INFORMACION**

AUTHORIZACION PARA UTILIZAR Y REVELAR INFORMACION CON FINES DE INVESTIGACION

Se procurará mantener confidencial su información personal, pero no podemos garantizar la absoluta confidencialidad. Su información personal puede ser revelada para propósitos
relacionados con el estudio, o si es requerido o permitido por la ley. Por ley, usted tiene ciertos derechos relacionados con su información de salud. Estos incluyen el derecho a saber quién va a ser capaz de obtener la información y por qué se puede ser capaz de conseguirlo.

La información recopilada sobre usted durante este estudio pasa a formar parte del registro de investigación de este estudio, si están de acuerdo en participar. Esta información puede incluir lo siguiente:

- Su nombre, dirección, número de teléfono, número de Seguro Social, el número de plan de salud y otros detalles acerca de usted;
- información obtenida de los procedimientos utilizados para averiguar si usted es elegible para participar en este estudio. Esto puede incluir la altura y el peso de evaluación y cualquier otra información que usted pueda revelarnos, incluyendo información acerca de su historial de salud;
- Información obtenida en el transcurso del estudio, incluyendo información sobre su respuesta a cualquier estudio de tratamientos que usted recibe, información relacionada con las llamadas telefónicas y visitas de estudio, exámenes físicos y otra información médica relativa a su participación en este estudio.

Además, sus registros médicos regulares pasan a formar parte del registro de investigación de este estudio, si están de acuerdo en participar.

Al firmar este formulario de consentimiento, usted permite que el equipo de investigación tenga acceso a esta información. El equipo de investigación incluye a los investigadores que aparecen en este formulario de consentimiento y otros agentes implicados en este estudio específico. La información recopilada sobre usted será utilizada para los fines de la realización de este estudio, tal como se describe en este formulario de consentimiento.

Usted tiene derecho a saber quién puede ver su información. Si acepta participar en este estudio y a firmar este formulario de consentimiento, también está de acuerdo para permitir que el equipo de investigación comparta su información con alguno o todos de los siguientes:

- Médicos y otros proveedores de salud que participan en este estudio;
- Swedish Medical Center y otras entidades de servicios de salud;
Los resultados del estudio de investigación también podrán ser presentadas en las reuniones o en publicaciones, pero su identidad no será revelada en las presentaciones o publicaciones.

Usted no tiene que dar autorización para que estos grupos analicen su información, pero si no, no puede ser autorizado a participar en este estudio.

Si usted da su permiso para dar su información a una persona o negocio, la información ya no puede ser protegido por las leyes de privacidad federales o estatales. Existe el riesgo de que su información será liberada a terceros sin su permiso.

Usted puede revocar su acuerdo para participar en este estudio y la autorización para utilizar su información de salud para este estudio de investigación poniéndose en contacto con el Investigador principal por escrito. Si usted revoca su acuerdo, usted no podrá continuar siendo parte de este estudio. Si decide revocar su consentimiento y autorización, la información que haya recopilado acerca de usted antes de que usted revoque aún pueden ser utilizados para los fines del estudio.

A menos que sea revocada por escrito, su consentimiento y autorización para el uso de su información de salud para esta investigación concluirá el 31 de mayo del 2017.

¿CUÁLES SON LOS COSTOS?

Tomar parte en este estudio no se espera que conduzca a costos añadidos a usted o a su compañía de seguros.
¿SE ME PAGA POR PARTICIPAR?

Una tarjeta de Walmart de treinta dólares será recompensada al final de las 12 semanas posteriores a la encuesta y ya que el proyecto se haya completado. Ningún pago parcial se dará si el período de doce semanas no se ha completado.

¿QUIEN ESTA PAGANDO POR ESTE ESTUDIO?

Los fondos para este estudio provienen de Kadlec Regional Hospital Foundation

¿CUALES SON MIS DERECHOS COMO SUJETO DE INVESTIGACION?

Tomar parte en este estudio es voluntaria y usted puede elegir no participar. Si decide no participar en este estudio, no existen sanciones o pérdida de beneficios a los cuales usted tenga derecho y su decisión no cambiará su futura atención médica aquí. Además, si desea ser parte de este estudio, pero posteriormente cambia de opinión, puede abandonar el estudio en cualquier momento sin sanciones o pérdida de beneficios a los cuales usted tenga derecho y su decisión de abandonar el estudio no cambiará su futura atención médica aquí.

Su participación en este estudio puede ser detenida en cualquier momento por el médico del estudio o el patrocinador sin su consentimiento porque:

- Usted no ha seguido las instrucciones del estudio;
- El patrocinador pare el estudio; o
- Razones administrativas requieran que se retire del estudio.

Le informaremos acerca de nueva información que pueda afectar su salud, el bienestar o su voluntad de permanecer en este estudio. Le informaremos acerca de nueva información de este u otros estudios que puedan afectar su salud, bienestar, o su voluntad de permanecer en este estudio.
¿A QUIÉN DEBO LLAMAR SI TENGO PREGUNTAS O PROBLEMAS?

- Para preguntas sobre el estudio, póngase en contacto con Lynette Marshall al 509-949-7114
- Para preguntas acerca de sus derechos como sujeto de investigación, póngase en contacto con el gerente de la Oficina de Revisión Institucional SMC (IRO). El gerente de la IRO administra la Junta de Revisión Institucional (un grupo de personas que revisan esta investigación para proteger los derechos y el bienestar) y puede ser contactada al (206) 215-2536.

¿EN DONDE PUEDO OBTENER MAS INFORMACIÓN?

Información sobre la obesidad infantil se puede encontrar en la biblioteca Healthplex Kadlec en Richland WA o en la Biblioteca Pública, Richland, WA

CONSENTIMIENTO

Me han dado la información sobre el uso y la divulgación de mi información de salud para este estudio de investigación. Mis preguntas han sido contestadas.

Autorizo el uso y la divulgación de mi información de salud a las partes enumeradas en la sección autorización de este consentimiento para las finalidades anteriormente descritas.

He leído la información en este formulario de consentimiento. Todas mis preguntas sobre el estudio y mi participación en él ya han sido contestadas. Puedo dar libremente su consentimiento a estar en este estudio de investigación.

Si usted acepta estar en este estudio, usted recibirá una copia firmada y fechada de este formulario de consentimiento para sus registros.
AUTORIZACION Y CONSENTIMIENTO DEL SUJETO

Mi firma indica que me han dado una copia de este formulario de consentimiento

Firma del Sujeto: ________________________________

Nombre del Sujeto: ________________________________

(Impreso): ______________________________________

Fecha: __________________________________________

CERTIFICADO DE LA PERSONA QUE RECIBE EL CONSENTIMIENTO:

He proporcionado una explicación del mencionado estudio de investigación, y he alentado a los sujetos a hacer preguntas y solicitar información adicional sobre el estudio y las posibles alternativas. Una copia de este formulario de consentimiento se ha dado al sujeto.

Firma de la persona obteniendo consentimiento: ________________________________

Nombre (Impreso): ______________________________________

Fecha: __________________________________________

CERTIFICADO DEL INVESTIGADOR:

Certifico que se le ha dado la forma de consentimiento al sujeto.

Firma del Investigador: ________________________________

Nombre del Investigador (Impreso): ________________________________

Fecha: __________________________________________

Numero de teléfono de Emergencia: ________________________________

Lugar de Investigación: ______________________________________

cc: Archivo del Sujeto e Investigador
Appendix M

Swedish Medical Center IRB Certification

Swedish IRB Approval Certificate

Swedish IRB approval certificate.pdf
Appendix N

BSU IRB Application

IRB application

Lynette Marshall IRB application bsu.pdf
Appendix O

Boise State University IRB Certification

187-SB16-040, Original Approval

187-SB16-040, Original Approval.pdf
Appendix P

Letter of Acknowledgement

November 30, 2015

Boise State University
Institutional Review Board
1910 University Drive
Boise, ID 83725

Re: Project: “Educating the mothers of obese Hispanic preschoolers to create lifelong healthy habits”

To whom it may concern:

The purpose of this letter is to acknowledge Lynette Marshall, ARNP, has permission to use the Kadlec Clinic Pasco Primary Care facility as the project site for the Doctor of Nursing Program at Boise State University project, “Educating the mothers of obese Hispanic preschoolers to create lifelong healthy habits”.

If there are any questions I can be reached at 509-942-3171. Thank you for your time.

Sincerely,

Julie E. Chavez
Practice Administrator
Kadlec Clinic Pasco Primary Care
Appendix Q

IRB Agreement

Swedish IRB BSU IRB Agreement

swedish IRB BSU IRB agreement.pdf
Appendix R

Pre- and Post-Education Survey Code

How old is your child?
2 years = 2
3 years = 3
4 years = 4
5 years = 5

What gender is your child?
Male Female

What is your age range?
Under 20 = 1
20–29 = 2
30–39 = 3
40–49 = 4

How many years of formal education/training do you have past high school?
0 years = 1
1–2 years = 2
3–4 years = 3
5–6 years = 4
7+ years = 5

During the past week, on how many hours did your child sleep on average each night?
8 hours = 8
9 hours = 9
10 hours = 10
11 hours = 11
12 hours = 12
13 hours+ = 13

During the past week, in how many minutes each day did your child exercise, play a sport, or participate in a physical activity that made him/her sweat and breathe hard?
30 minutes = 30
40 minutes = 40
50 minutes = 50
60 minutes = 60
During the past week, how many days did you or any family member take your child to a fast food restaurant?

0-1 times = 1
2-3 times = 2
4-5 times = 3

On any average weekday, how much time does your child usually spend in front of a TV, watching TV programs, videos, playing video games, computers, cell phones, handheld video games, or other electronic devices?

0–1 hour = 1
2–3 hours = 2
3+ hours = 3
### Appendix S

**Evaluation Outcome Plan**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Outcome Instrument Data</th>
<th>Analysis Goal</th>
<th>Analytic Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. BMI assessment conducted pre and post intervention with 1% improvement of BMI in 50% the participants by August 2016</td>
<td>Interval dependent variable Nominal independent variable Bivariate EMR record Pre and post height and weight on reliable scale to calculate the BMI</td>
<td>Compare, analyze and summarize the BMIs in the preschool participants before and after and show adequate sample size showing statistical significance</td>
<td>Quantitative inferential statistical analysis using paired ( t ) test with a 95% confidence level</td>
</tr>
<tr>
<td>2. 25% of the participating preschoolers will increase sleep by 1 hour a night within 3 months (August 2016) as reported by the mothers when compared to the pre-intervention questionnaire.</td>
<td>Ratio dependent variable Nominal independent variable Bivariate Log provided to mothers’ records hours of sleep nightly Pre and post intervention questionnaires</td>
<td>Analyze and summarize hours of sleep nightly to the preschool participants</td>
<td>Quantitative inferential statistical analysis using paired ( t ) test with a 95% confidence level</td>
</tr>
<tr>
<td>3. 50% of project participants will decrease their screen time by 25% within 3 months (August 2016) when compared to pre-intervention questionnaire.</td>
<td>Ratio dependent variable Nominal independent variable Bivariate Log provided to mothers to record daily screen time Pre and post interventions questionnaires</td>
<td>Analyze and summarize screen time of the preschool participants proven by decreased screen time over the 3-month implementation period</td>
<td>Quantitative inferential statistical analysis using paired ( t ) test with a 95% confidence level</td>
</tr>
<tr>
<td>4. 50% of participants will decrease fast food dining by 50% within 3 months (August 2016) when compared to pre-intervention questionnaire.</td>
<td>Ratio dependent variable Nominal independent variable Bivariate Log provided to mothers to mark the days they eat fast food Pre and post intervention questionnaires</td>
<td>Analyze and summarize the number of times participants eat at fast food restaurants by heightening the awareness of healthy eating at home over the 3-month implementation period</td>
<td>Quantitative inferential statistical analysis using paired ( t ) test with a 95% confidence level</td>
</tr>
<tr>
<td>Outcome</td>
<td>Outcome Instrument Data</td>
<td>Analysis Goal</td>
<td>Analytic Technique</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------</td>
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<td>-------------------</td>
</tr>
<tr>
<td>5. 50% of participations will increase activity levels by 25% in 3 months (August 2016) when compared to pre-intervention questionnaire.</td>
<td>Ratio dependent variable&lt;br&gt;Nominal independent variable&lt;br&gt;Bivariate&lt;br&gt;Log provided to mothers to record minutes of activity daily&lt;br&gt;Pre and post intervention questionnaires</td>
<td>Analyze and summarize the activity levels of play and physical activity proven by log data consistently through the 3-month implementation period</td>
<td>Quantitative inferential statistical analysis using paired $t$ test with a 95% confidence level</td>
</tr>
<tr>
<td>6. Structured EMR integration with educational intervention pop-ups and recognized by 25% of the providers at Pasco Primary Care by April 2017.</td>
<td>Nominal dependent variable&lt;br&gt;Nominal independent variable&lt;br&gt;Univariate&lt;br&gt;EMR data proving participation and acknowledgement of the pop-up</td>
<td>Analyze and summarize the use of the educational interventional pop-up with children that are overweight or obese for continual healthy lifestyle education</td>
<td>$t$ test to produce the statistic of use of the tool versus not using the tool</td>
</tr>
</tbody>
</table>
Appendix T

Summary of BMI Data

Summary for Starting BMI

Summary for Ending BMI

Anderson-Darling Normality Test
A-Squared 0.76
P-Value 0.037

Mean 95.976
StDev 3.816
Variance 14.565
Skewness -0.58803
Kurtosis -1.32901
N 14

Minimum 89.900
1st Quartile 91.930
Median 97.125
3rd Quartile 99.508
Maximum 100.000

95% Confidence Interval for Mean
93.772 98.179
95% Confidence Interval for Median
92.186 99.502
95% Confidence Interval for StDev
2.767 6.148

Anderson-Darling Normality Test
A-Squared 0.65
P-Value 0.072

Mean 97.223
StDev 2.580
Variance 6.655
Skewness -1.05252
Kurtosis 0.2691
N 14

Minimum 91.570
1st Quartile 95.425
Median 98.295
3rd Quartile 99.070
Maximum 100.000

95% Confidence Interval for Mean
95.733 98.712
95% Confidence Interval for Median
95.469 98.999
95% Confidence Interval for StDev
1.870 4.156
Appendix U

Summary of Sleep Data

### Summary for Starting Sleep

<table>
<thead>
<tr>
<th>Anderson-Darling Normality Test</th>
<th>A-Squared</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.85</td>
<td>0.022</td>
</tr>
<tr>
<td>Mean</td>
<td>9.1429</td>
<td></td>
</tr>
<tr>
<td>StDev</td>
<td>1.0271</td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>1.0549</td>
<td></td>
</tr>
<tr>
<td>Skewness</td>
<td>0.669357</td>
<td></td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.355469</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>8.0000</td>
<td></td>
</tr>
<tr>
<td>1st Quartile</td>
<td>8.0000</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>9.0000</td>
<td></td>
</tr>
<tr>
<td>3rd Quartile</td>
<td>10.0000</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>11.0000</td>
<td></td>
</tr>
</tbody>
</table>

95% Confidence Interval for Mean: 8.5498 - 9.7359

95% Confidence Interval for Median: 8.0000 - 10.0000

95% Confidence Interval for StDev: 0.7446 - 1.6547

### Summary for Ending Sleep

<table>
<thead>
<tr>
<th>Anderson-Darling Normality Test</th>
<th>A-Squared</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.62</td>
<td>0.086</td>
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<tr>
<td>Mean</td>
<td>10.357</td>
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</tr>
<tr>
<td>StDev</td>
<td>1.008</td>
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<tr>
<td>Variance</td>
<td>1.016</td>
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<tr>
<td>Skewness</td>
<td>0.193010</td>
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<tr>
<td>Kurtosis</td>
<td>-0.819417</td>
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</tr>
<tr>
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<td>14</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>9.000</td>
<td></td>
</tr>
<tr>
<td>1st Quartile</td>
<td>9.750</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>10.000</td>
<td></td>
</tr>
<tr>
<td>3rd Quartile</td>
<td>11.000</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>12.000</td>
<td></td>
</tr>
</tbody>
</table>

95% Confidence Interval for Mean: 9.775 - 10.939

95% Confidence Interval for Median: 9.949 - 11.000

95% Confidence Interval for StDev: 0.731 - 1.624
Appendix V

Summary of Screen Time Data

### Summary for Starting Screen Time

<table>
<thead>
<tr>
<th>Anderson-Darling Normality Test</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A-Squared</td>
<td>1.02</td>
</tr>
<tr>
<td>P-Value</td>
<td>0.008</td>
</tr>
</tbody>
</table>

| Mean                           | 2.0000 |
| StDev                          | 0.7845 |
| Variance                       | 0.6154 |
| Skewness                       | -0.0000 |
| Kurtosis                       | -1.2568 |
| N                               | 14 |

| Minimum                        | 1.0000 |
| 1st Quartile                   | 1.0000 |
| Median                         | 2.0000 |
| 3rd Quartile                   | 3.0000 |
| Maximum                        | 3.0000 |

95% Confidence Interval for Mean
1.5471 2.4529

95% Confidence Interval for Median
1.0000 3.0000

95% Confidence Interval for StDev
0.5687 1.2638

### Summary for Ending Screen Time

<table>
<thead>
<tr>
<th>Anderson-Darling Normality Test</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A-Squared</td>
<td>1.24</td>
</tr>
<tr>
<td>P-Value</td>
<td>0.005</td>
</tr>
</tbody>
</table>

| Mean                           | 1.7857 |
| StDev                          | 0.6993 |
| Variance                       | 0.4890 |
| Skewness                       | 0.321352 |
| Kurtosis                       | -0.632909 |
| N                               | 14 |

| Minimum                        | 1.0000 |
| 1st Quartile                   | 1.0000 |
| Median                         | 2.0000 |
| 3rd Quartile                   | 2.0000 |
| Maximum                        | 3.0000 |

95% Confidence Interval for Mean
1.3820 2.1895

95% Confidence Interval for Median
1.0000 2.0000

95% Confidence Interval for StDev
0.5070 1.1266
Appendix W

Summary of Activity Data

Summary for Starting Exercise

- Anderson-Darling Normality Test
  - A-Squared: 1.78
  - P-Value: < 0.005

- Summary of Data:
  - Mean: 49.286
  - StdDev: 13.281
  - Variance: 176.374
  - Skewness: -0.53952
  - Kurtosis: -1.70575
  - N: 14

- Confidence Intervals:
  - 95% Confidence Interval for Mean: 41.618 to 56.954
  - 95% Confidence Interval for Median: 39.485 to 60.000
  - 95% Confidence Interval for StdDev: 9.620 to 21.396

Summary for Ending Exercise

- Anderson-Darling Normality Test
  - A-Squared: 2.51
  - P-Value: < 0.005

- Summary of Data:
  - Mean: 52.500
  - StdDev: 14.244
  - Variance: 202.685
  - Skewness: -1.92152
  - Kurtosis: 2.96717
  - N: 14

- Confidence Intervals:
  - 95% Confidence Interval for Mean: 44.278 to 60.724
  - 95% Confidence Interval for Median: 49.485 to 60.000
  - 95% Confidence Interval for StdDev: 10.326 to 22.947
Boxplot of Starting Exercise, Ending Exercise

Data

Starting Exercise

Ending Exercise
## Appendix X

### Cost and Data Table

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Outcomes</th>
<th>Resources</th>
<th>Data (Indicators)</th>
<th>Method to Gather Data</th>
<th>Technical Assistance Needed</th>
<th>Potential Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Develop an educational plan to decrease Hispanic preschoolers’ obesity by</strong></td>
<td><strong>30 obese Hispanic preschoolers and their mothers consent to participate in the program by May 2016</strong></td>
<td><strong>Education and training in the interventions and project plan</strong></td>
<td><strong>Informed consents signed by all 30 participants by May 2016</strong></td>
<td><strong>Interview</strong></td>
<td><strong>Yes</strong></td>
<td><strong>$12,000</strong></td>
</tr>
<tr>
<td><strong>identifying mothers’ perceptions about healthy lifestyles</strong></td>
<td><strong>Pre-test questions completed by 30 mother participants of obese Hispanic preschoolers by June 2016</strong></td>
<td><strong>Questionnaires completed pre evaluation</strong></td>
<td><strong>Mother-reported questions results baseline data June 2016</strong></td>
<td><strong>Survey</strong></td>
<td><strong>IT support for EMR data and potential issues</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Posttest questionnaire completed by same mothers and compared with pretest (same test) by August 2016</strong></td>
<td><strong>Posttest questionnaire at end of implementation phase</strong></td>
<td><strong>Mother-reported posttest answers August 2016</strong></td>
<td><strong>Survey</strong></td>
<td><strong>Yes</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>BMI assessment conducted pre and post intervention with 1% improvement of BMI in 50% of the participants by August 2016</strong></td>
<td><strong>Participants’ (preschoolers) height and weight</strong></td>
<td><strong>Physiological measures of Calculated BMI once height and weight recorded in EMR at beginning and end of 3-month period</strong></td>
<td><strong>Organizational data</strong></td>
<td><strong>Yes</strong></td>
<td></td>
</tr>
</tbody>
</table>

Cost of paper, office supplies, and printing used for questionnaires, consent forms, intervention information, Project leader’s time (salary and benefits $120/hr), Clinic staff time (salary and benefits $20/hr), IT support ($60/hr)
<table>
<thead>
<tr>
<th>Objectives</th>
<th>Outcomes</th>
<th>Resources</th>
<th>Data (Indicators)</th>
<th>Method to Gather Data</th>
<th>Technical Assistance Needed</th>
<th>Potential Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement evidence-based intervention plan to reduce obesity in Hispanic preschoolers throughout Pasco Primary Care pediatric and family practice providers by December 2016</td>
<td>25% of the participating preschoolers will increase sleep by 1 hour a night within 3 months (August 2016) as reported by the mothers as compared to pre-intervention questionnaire</td>
<td>Mother’s observations of the child’s sleep activities</td>
<td>Prospective logs/calendars for tracking sleep hours June 2016-August 2016</td>
<td>Tracking log</td>
<td>Yes</td>
<td>$6000</td>
</tr>
<tr>
<td></td>
<td>50% of project participants will decrease their screen time by 25% within 3 months’ time (August 2016) when compared with pre-intervention questionnaire</td>
<td>Mother’s reported amount of screen time observed by the child</td>
<td>Prospective daily log of screen time as recorded by the mothers to calendar tracking system June 2016-August 2016</td>
<td>Tracking log</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>50% of participants will decrease fast food restaurant dining by 50% within 3 months’ time as compared with pre-intervention questionnaire</td>
<td>Child self-reporting and mother’s control of food intake outside of the home</td>
<td>Calendar log with honest self-reported and mother-reported fast food restaurant consumption June 2016-August 2016</td>
<td>Tracking log</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>50% of participant will increase activity levels by 25% in 3 months (August 2016) as compared with pre-intervention questionnaire</td>
<td>Education and training on activity and play time</td>
<td>Mother-reported amount of activity time tracked on calendar log. June 2016–August 2016</td>
<td>Tracking log</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete grant application with adequate amount of time to use funding by Spring 2016</td>
<td>Grant funding secured for project Spring 2016</td>
<td>Grant application Grant committee</td>
<td>Amount of grant and details on how to account for the spending April 2016</td>
<td>Budget analysis</td>
<td>no</td>
<td>$1200</td>
</tr>
<tr>
<td></td>
<td>Grant application Grant committee</td>
<td>Amount of grant and details on how to account for the spending April 2016</td>
<td>Amount of grant and details on how to account for the spending April 2016</td>
<td>Budget analysis</td>
<td>no</td>
<td>$1200</td>
</tr>
<tr>
<td></td>
<td>Grant application Grant committee</td>
<td>Amount of grant and details on how to account for the spending April 2016</td>
<td>Amount of grant and details on how to account for the spending April 2016</td>
<td>Budget analysis</td>
<td>no</td>
<td>$1200</td>
</tr>
<tr>
<td></td>
<td>Grant application Grant committee</td>
<td>Amount of grant and details on how to account for the spending April 2016</td>
<td>Amount of grant and details on how to account for the spending April 2016</td>
<td>Budget analysis</td>
<td>no</td>
<td>$1200</td>
</tr>
<tr>
<td>Objectives</td>
<td>Outcomes</td>
<td>Resources</td>
<td>Data (Indicators)</td>
<td>Method to Gather Data</td>
<td>Technical Assistance Needed</td>
<td>Potential Cost</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>----------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>-----------------------</td>
<td>-----------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Build a strong relationship with the foundation to acquire additional funds if needed by Spring 2016</td>
<td>Additional financial and resource support secured by Spring 2016</td>
<td>Kadlec Foundation</td>
<td>Completed financial data on the project, grant funding minus expenditures April 2016</td>
<td>Budget analysis</td>
<td>no</td>
<td>$600</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Project leader’s time, e-mails/phone calls (5 hrs)</td>
</tr>
<tr>
<td>To produce a successful marketing plan to promote the project to the clinic by March 2016</td>
<td>Marketing, recruitment, and retention plan implemented with 30 participant pairs and 70% retention of participants through the completion of the implementation portion of the project by September 2016</td>
<td>Key stakeholders Clinic manager Project leader Clinic staff</td>
<td>Commitment from the goal number of participants with follow-through with incentives; Form marketing plan and motivational tools May 2016</td>
<td>Tracking log</td>
<td>Yes</td>
<td>$5,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Gift cards for participation, Motivational postcards, Flyers, Clinic manager’s time ($50/hr), Project manager’s time, Key stakeholders’ time ($200/hr), IT support ($60/hr)</td>
</tr>
<tr>
<td>Develop an EMR mechanism with the IT department in the EMR to trigger pop-up questions if a preschooler is overweight</td>
<td>Structured EMR integration with educational intervention pop-ups to recognize the obese BMI criteria and recognized by 25% of the providers at Pasco Primary care by Spring 2017</td>
<td>Information system department EPIC (EMR) specialists/super users</td>
<td>Mechanism within the EMR to capture levels of participation by providers Fall 2016</td>
<td>Extracted data from the EMR</td>
<td>Yes</td>
<td>$1800</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IT time for build ($60/hr, 10 hours), Project leader time ($120/hr)</td>
</tr>
</tbody>
</table>

## Appendix Y

**Preliminary Project Budget**

<table>
<thead>
<tr>
<th>Input</th>
<th>Type of Cost (fixed or variable)</th>
<th>Units of Measure</th>
<th>Dollar Value</th>
<th>Amount</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Labor</strong></td>
<td>Fixed</td>
<td>Salary and benefits hourly rates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Team leader</td>
<td>1. Team Leader: RVU average 3.9/hr, $29/RVU = $120/hr</td>
<td>1. Team leader: 5 hrs a week during implementation, 12 weeks; 100 hours in pre and post development and evaluation</td>
<td>1. Team leader = 160 hrs x $120 = $19,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Clinical staff</td>
<td>2. Clinical staff $20/hr</td>
<td>2. Clinical staff: 5 hours each for 5 staff members</td>
<td>2. Clinical staff = 5 x 5 = 25 x $20 = $500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Clinic manager</td>
<td>3. Clinic manager $50/hr</td>
<td>3. Clinic manager 2 hrs</td>
<td>3. Clinic manager = 2 x $50 = $100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Information technology</td>
<td>5. IT $60/hr</td>
<td>5. IT: 15 hrs</td>
<td>5. IT = 15 x $60 = $900</td>
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<tr>
<td><strong>Equipment</strong></td>
<td><strong>Printer</strong></td>
<td>Rental/use cost of equipment at Pasco Primary care</td>
<td>$150/month estimate</td>
<td>5 months</td>
<td>$750</td>
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<tr>
<td></td>
<td><strong>Computer</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td><strong>EMR</strong></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td><strong>Word Office software</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td>Total = $750</td>
</tr>
<tr>
<td>Input</td>
<td>Type of Cost (fixed or variable)</td>
<td>Units of Measure</td>
<td>Dollar Value</td>
<td>Amount</td>
<td>Total</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------------------------------</td>
<td>--------------------------------------</td>
<td>--------------------------------------------------</td>
<td>------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td><strong>Supplies</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Ream of paper</td>
<td></td>
<td>Cost of supplies</td>
<td>$10 a ream of paper</td>
<td>2 reams of paper</td>
<td>2 x 10 = $20</td>
</tr>
<tr>
<td>Printer ink</td>
<td></td>
<td></td>
<td>$50 Color and black-and-white printer ink</td>
<td>2 ink cartridges</td>
<td>2 x 50 = $100</td>
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<tr>
<td>Postcards</td>
<td></td>
<td></td>
<td>$10 pack of postcards, 30 cards</td>
<td>90 postcards</td>
<td>3 x 10 = $30</td>
</tr>
<tr>
<td>Pens</td>
<td></td>
<td></td>
<td>$10, 10-pack of pens</td>
<td>30 pens</td>
<td>3 x 10 = $30</td>
</tr>
<tr>
<td>Printed interventions</td>
<td></td>
<td></td>
<td></td>
<td>30 printed interventions, 1 page each</td>
<td>Included in reams of paper</td>
</tr>
<tr>
<td>Tracking logs</td>
<td></td>
<td></td>
<td></td>
<td>30 tracking logs</td>
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<tr>
<td>Consents</td>
<td></td>
<td></td>
<td></td>
<td>30 consents</td>
<td></td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Total = $180</td>
<td></td>
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<tr>
<td><strong>Travel</strong></td>
<td></td>
<td>Cost of driving</td>
<td>$.56/mile</td>
<td>280 miles = Tri-Cities to BSU</td>
<td>2 trips round trip = $624.00</td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>Total $ 624.00</td>
</tr>
<tr>
<td><strong>Participant Incentives</strong></td>
<td></td>
<td>Dollar amount per card</td>
<td>$25 per card</td>
<td>30 cards to be given at completion of project</td>
<td>$750</td>
</tr>
<tr>
<td>Walmart card</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Activity toys</td>
<td></td>
<td></td>
<td>$10 per book</td>
<td>Toys/books to kids</td>
<td>$390</td>
</tr>
<tr>
<td>In-kind United Way books</td>
<td></td>
<td>Cost of toys and books</td>
<td>$1 per toy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Total $1140</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total $26,394</td>
<td></td>
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</tbody>
</table>
## Scholarly Project Expense Report

<table>
<thead>
<tr>
<th>Source of Expense</th>
<th>Expense Description</th>
<th>Dollar Value</th>
<th>Type of Cost (fixed or variable)</th>
<th>Description of Cost</th>
<th>Estimated Volume</th>
<th>Expense Per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advisory Board</strong></td>
<td><strong>Cost ($)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative Supplies</td>
<td>Printer cartridges, phone charges, paper, copying, pens, for consents, calendar logs, educational supplies</td>
<td>$180</td>
<td>Fixed</td>
<td>Supplies</td>
<td>2 ink cartridges</td>
<td>$50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 reams of paper</td>
<td></td>
<td>$10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30 pens</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative Support</td>
<td>EMR, software to create consent, computers</td>
<td>$900</td>
<td>Fixed</td>
<td>Support</td>
<td>12 months</td>
<td>$150/month rental</td>
</tr>
<tr>
<td>Rental of meeting room, $100 per meeting, 6 times</td>
<td>Conference room at Pasco Primary care and other Kadlec meeting rooms</td>
<td>$600</td>
<td>Fixed</td>
<td>Room rental rate</td>
<td>6 months</td>
<td>$100</td>
</tr>
<tr>
<td><strong>Total Requested</strong></td>
<td></td>
<td><strong>$1680</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Education Initial Training</strong></td>
<td><strong>Cost ($)</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries</td>
<td>Team leader</td>
<td>$120/hr for 10 hours initial</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical staff</td>
<td>$20/hr for 5 hours</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Clinic manager</td>
<td>$50/hr for 2 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physicians</td>
<td>$200/hr for 5 hours</td>
<td></td>
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<tr>
<td>Information technology</td>
<td>$60/hr for 2 hours</td>
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<td>Cost of training for the project implementation</td>
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<td></td>
<td>Meetings with stakeholders and involved staff</td>
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<td>1@10hrs</td>
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<td>$120/hr</td>
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<td></td>
<td>IT to develop population list</td>
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<td>5@5hrs</td>
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<td></td>
<td>1@2hrs</td>
<td></td>
<td>$50/hr</td>
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<td>3@5hrs</td>
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<td>$200/hr</td>
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<td>1@2 hrs</td>
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<td>Description of Cost</td>
<td>Estimated Volume</td>
<td>Expense Per Unit</td>
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<td>Travel Expenses</td>
<td>Travel Expenses to and from clinic – 10 miles for team leader for training session</td>
<td>$22.40</td>
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<td>Cost of travel to and from the clinic 2 times for training and follow-up</td>
<td>40 miles</td>
<td>$.56/mile</td>
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<td>Materials/Supplies</td>
<td>Educational Materials, development of brochures and printing costs, training materials</td>
<td>$600</td>
<td>Variable</td>
<td>Cost to provide education materials</td>
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<td>Project leaders time of 5 hours</td>
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<td>Evaluation/ Assessment</td>
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<td>Cost to evaluate program x 100 hours</td>
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<td>Analysis of pre and post surveys, BMI evaluations, personnel time for preparation,</td>
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<td>follow-up and survey data entry/analyses</td>
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<td>Fringe @ 40%</td>
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<td>$4800</td>
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<td>Fringe</td>
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<td>$48/hr</td>
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<td>Operations salaries x hours</td>
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<td>$120/hr</td>
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<tr>
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<td>Project operations salaries = $120/hour x 40% fringe times 200 hours</td>
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<td></td>
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<tr>
<td>Fringe @ 40%</td>
<td></td>
<td>$9600</td>
<td>Fixed</td>
<td>Fringe 40%</td>
<td>1</td>
<td>$48/hr</td>
</tr>
<tr>
<td>Source of Expense</td>
<td>Expense Description</td>
<td>Dollar Value</td>
<td>Type of Cost (fixed or variable)</td>
<td>Description of Cost</td>
<td>Estimated Volume</td>
<td>Expense Per Unit</td>
</tr>
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<td>-------------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Personnel at $20 per hour</td>
<td>10 hours of providing education, obtaining and BMI’s</td>
<td>$1000</td>
<td>Fixed</td>
<td>Simulation lab personnel salary</td>
<td>5</td>
<td>$20/hr</td>
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<tr>
<td>Fringe @40%</td>
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<td>$480</td>
<td>Fixed</td>
<td>Fringe 40%</td>
<td>5</td>
<td>$8/hr</td>
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<tr>
<td>Information Systems</td>
<td>10 hours at 60/hr plus fringe</td>
<td>$840</td>
<td>Fixed</td>
<td>Developing a EMR pop-up on education post analysis</td>
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<td>$84/hr</td>
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<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>$33,880</strong></td>
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</tbody>
</table>

**Marketing & Advertising**

| Marketing & Advertising           | Marketing costs                                                                      | $930         | Variable                         | Pamphlets, participant incentives, postcards                                       | 30               | $30 Walmart card $.50/card pamphlet |
| Stakeholders’ involvement to include clinic manager and clinical staff | $50/hr plus fringe for 2 hours                                                        | $196         | Fixed                            | Promotion of project                                                               | 70/hr            | $28/hr           |
|                                   | $20/hr plus fringe for 2 hours                                                        |              |                                  |                                                                                     |                  |                  |
|                                   | **Total**                                                                            | **$1126**    |                                  |                                                                                     |                  |                  |

**Grand Total** $59,029.40
Appendix AA

Grant Proposal

KADLEC FOUNDATION

GRANT REQUEST

Examples of grant requests for Kadlec Foundation funding include, but are not limited to, equipment, research, education beyond operating budgets, and new technology. (Please verify equipment costs with Materials Management before submitting application). Requests greater than $5,000 require a formal presentation to the Kadlec Foundation Finance Committee.

Date:
12/14/15

APPLICANT: Lynette Marshall
Contact Person: Lynette Marshall

Amount Requested: $900

Purpose: The purpose to the funds would be to provide $30 gift card to participants of my doctorate project. The participant goal is 30. The population is obese preschoolers of Hispanic heritage and their mothers. The gift card will be awarded at the end of the project August 31, 2016.

Description: The Project: Educating Mothers of Obese Hispanic Preschoolers to Create Lifelong Healthy Lifestyle Choices. The Project is in Coordination with Boise State University. The implementation phase will begin June 1, 2016 pending IRB approval through BSU. The project is specifically looking at interventions that are evidence based to promote healthy lifestyle choices. 30 Children will be selected that meet the criteria of being obese and for 3 months they will do 4 interventions. These include: no more than 2 hours of screen time daily, sleeping 11 hours each night, 1 hour of activity daily and no more than 4 fast food outings in 1 month. A pre and post BMI will be measured and the mothers will be educated on these interventions and their importance.

BENEFITS TO PATIENTS OR THE BROADER HEALTH OF THE COMMUNITY:

The benefits are multifocal; starting these healthy lifestyle choices at this early age will only benefit these children throughout their lives. The goal with involvement of the mothers was to broaden their education to improve their own health as well as the entire family to stop the ongoing problem of obesity on our community.

Results will be shared with fellow providers to improve the anticipatory guidance process at well child visits and patient education.
*Signatures and printed names are required for processing.

Department Director Signature Approval: [Signature]
Print Name: [Print Name]

Executive Team Representative Signature Approval: [Signature]
Print Name: [Print Name]

Foundation Approval: [Signature] Yes [Signature] No
Appendix BB

Grant Approval Letter

From: Clark, Whitney C  
Sent: Friday, January 25, 2019 1:14 PM  
To: Marshall, Lusatto V  
Subject: RE: grant request

Hi Lynette,

I am pleased to inform you that your grant request was approved by our Finance and Executive Committees yesterday.

Since our transition to Providence, the grant request process has changed. In order for the Foundation to provide the approved funds, your department must purchase the items and then I will send proof of your purchase and the department number the items were originally charged to so I can request the transfer of money to reimburse your department. Please note that I cannot initiate reimbursement without these items.

Also, I did see that you were looking for some items with the Kadlec logo and I would suggest reaching out to Emily Valland in Community Relations for that.

Please let me know if you have any questions.

Congratulations!  

Thanks,

Whitney Clark  
Administrative Assistant  
KADLEC FOUNDATION  
(509) 942-3061  
(509) 942-1668  
Whitney.clark@kadlec.org
## Appendix CC

### Scholarly Project 3–5-Year Budget Plan

<table>
<thead>
<tr>
<th>Revenues</th>
<th>Budget Year 1</th>
<th>Budget Year 2</th>
<th>Budget Year 3</th>
<th>Budget Year 4</th>
<th>Budget Year 5</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kadlec Foundation Grant ($900)</td>
<td>$1290</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Grant for Walmart gift cards for the original 30 participants — mother–preschooler pairs</td>
</tr>
<tr>
<td>United Way donations (in-kind, books, $300)</td>
<td>$59,006</td>
<td>$59,006</td>
<td>$2520</td>
<td>$2280</td>
<td>$2180</td>
<td>Includes salary of project leader, information systems, clinic staff, providers, clinic manager; use of building, EMR, and office and marketing supplies. After initial 2 years of project, only IT support and project leader salaries will be required for sustainability</td>
</tr>
</tbody>
</table>

**Total** $59,906 $59,006 $2520 $2280 $2180

<table>
<thead>
<tr>
<th>Expenses</th>
<th>Budget Year 1</th>
<th>Budget Year 2</th>
<th>Budget Year 3</th>
<th>Budget Year 4</th>
<th>Budget Year 5</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advisory Board (every year)</td>
<td>$1680</td>
<td>$1680</td>
<td>$1200</td>
<td>$1100</td>
<td>$1100</td>
<td>Advisory board meetings/conference room usage, EMR software, computer maintenance, misc. supplies</td>
</tr>
<tr>
<td>Education Initial Training</td>
<td>$5520</td>
<td>$5520</td>
<td>$480</td>
<td>$480</td>
<td>$480</td>
<td>Initial startup cost during the first 2 years includes salaries for providers, clinic staff, project leader, clinic manager and IT. For years 3-5, 2 hours/project leader, 2 hours IT support per year to support and update EMR educational pop-up</td>
</tr>
<tr>
<td>Revenues</td>
<td>Budget Year 1</td>
<td>Budget Year 2</td>
<td>Budget Year 3</td>
<td>Budget Year 4</td>
<td>Budget Year 5</td>
<td>Rationale</td>
</tr>
<tr>
<td>---------------------------------------</td>
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<td>---------------</td>
<td>---------------</td>
<td>---------------</td>
<td>---------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Evaluation Assessment Salaries</td>
<td>$16,800</td>
<td>$16,800</td>
<td>$480</td>
<td>$360</td>
<td>$240</td>
<td>100 hours of project leader time for the 1st and 2nd year. Years 3-5 continued assessment of the educational EMR pop-up by the project leader: 4 hours year 3 3 hours year 4 2 hours year 5</td>
</tr>
<tr>
<td>Management &amp; Operations Salary</td>
<td>$33,880</td>
<td>$33,880</td>
<td>$360</td>
<td>$360</td>
<td>$360</td>
<td>Year 1 and 2; project startup operations to include clinical staff salary, project leader salary and IT. Years 3–5: 2 hours per year for project leader 2 hours per year for IT</td>
</tr>
<tr>
<td>Marketing &amp; Advertising (1st &amp; 2nd year)</td>
<td>$2026</td>
<td>$1126</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Initial marketing cost year 1 to include gift cards and year 2 to include stakeholders’ salaries (providers, clinic manager, and project leader) and flyers for promotion. No marketing cost years 3–5 due to the EMR set up for educational pop-up</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$59,906</strong></td>
<td><strong>$59,906</strong></td>
<td><strong>$2520</strong></td>
<td><strong>$2280</strong></td>
<td><strong>$2180</strong></td>
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</tr>
<tr>
<td><strong>Operating Income</strong></td>
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<td>0</td>
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Appendix DD

Statement of Operations

<table>
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<tr>
<th>Statement of Operations</th>
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<tbody>
<tr>
<td>2016</td>
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<table>
<thead>
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<th>Revenues</th>
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</thead>
<tbody>
<tr>
<td>Grant, United Way donations</td>
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</tr>
<tr>
<td>In-kind donations Kadlec Clinic: Salaries, facility, supplies, EMR</td>
<td>$59,006</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$60,206</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
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<tbody>
<tr>
<td>Advisory Board</td>
<td>$1680</td>
</tr>
<tr>
<td>Education Initial Training</td>
<td>$5520</td>
</tr>
<tr>
<td>Evaluation Assessment Salaries</td>
<td>$16,800</td>
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<tr>
<td>Management &amp; Operations Salary</td>
<td>$33,880</td>
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<tr>
<td>Marketing &amp; Advertising</td>
<td>$2026</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$60,206</strong></td>
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| Operating Income        | $0            |

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<th>Statement of Operations</th>
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<tr>
<td>In-kind donations Kadlec Clinic: Salaries, facility, supplies, EMR</td>
<td>$59,006</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$59,006</strong></td>
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<tr>
<th>Expenses</th>
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</thead>
<tbody>
<tr>
<td>Advisory Board</td>
<td>$1680</td>
</tr>
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<td>Education Initial Training</td>
<td>$5520</td>
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<tr>
<td>Evaluation Assessment Salaries</td>
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<td>Management &amp; Operations Salary</td>
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<td>Marketing &amp; Advertising</td>
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<td><strong>Total</strong></td>
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| Operating Income        | $0            |
### Statement of Operations

**2018**

#### Revenues

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<td>Salaries, facility, supplies, EMR</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$2520</strong></td>
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#### Expenses

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<td>Evaluation Assessment Salaries</td>
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<td>Management &amp; Operations Salary</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$2520</strong></td>
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#### Operating Income

- **$0**