

Addressing Obesity in Hispanic Families Through a Family Centered Approach: An Educational
Intervention for Providers
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Abstract

Current obesity statistics exceed national goals with Hispanics disproportionately affected. Evidence suggests a family centered methodology focusing on culture can positively improve weight loss, client satisfaction and participation. This project will evaluate use of culturally tailored resources for primary care providers to educate Hispanics on weight loss. Eight providers in a small practice in the Southwestern US were recruited to complete a pre- and post-EBPAS tool after an educational session. A BMI form tracked provider use of the fotonovela intervention against preferred methods. Feedback on time spent educating and overall perception were collected. Four providers completed the pre-EBPAS, three completed the post-, one participated in the intervention, and six contributed project feedback. Descriptive statistics revealed an aggregate provider decrease of five-points post-educational session for attitude toward adopting EBP. The BMI documentation form demonstrated a 53% (n = 8) use of the fotonovela. However, there were five undocumented fotonovelas taken/given out post-intervention. Key themes noted by providers included poor timing of the project, satisfaction with workflow and resources, and overall discontent for the fotonovela. Future implications include re-evaluating the project in a practice not undergoing significant changes with specific focus on timing of the intervention.

Keywords: obesity, Hispanic, culture, primary care, family centered, health education, fotonovela

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Obesity is a complex issue to address due to the many contributing factors that affect an individual's weight. Genetics and behavioral aspects such as dietary patterns, physical activity, and culture play a large role (Centers for Disease Control and Prevention [CDC], 2016a). Health consequences in comparison to individuals with normal weight include shorter quantity of life and low quality of life related to cardiovascular disease, type-II diabetes, mental illness, physical pain and cancer (CDC, 2016a; Sung-Chan, Sung, Zhao, & Brownson, 2013; Thé, Suchindran, North, Popkin, & Gordon-Larsen, 2010). Family centered interventions have been recognized as superior models to weight management in families due to the unique blending of parental education and application of behavioral approaches to encourage lasting change for the entire family (Sung-Chan et al., 2012). This paper intends to illustrate the problem of obesity in Hispanic families, including the effects that culture plays in weight loss and an innovative strategy to address obesity in this population.

Problem Statement

Obesity in the United States (US) is a growing epidemic. Obesity in adults up to age 65 is described as a body mass index (BMI) of 30 kg/m² or greater, with pediatric obesity occurring with a weight greater than the 95th percentile on CDC growth charts (CDC, 2015c; CDC, 2016c). While BMI does not directly measure body fat, it serves as a means of understanding the relationship between weight and health risks (Ogden, Carroll, Fryar, & Flegal, 2015). Nationally, approximately 36.5% of the adult US population and 17% of the pediatric population are considered obese, with a disproportionately larger percentage among Hispanics (CDC, 2015b; CDC, 2016b; Crespo & Arbesman, 2003; Ogden et al., 2015; Thé et al., 2010). Hispanics

represent the second largest group of obese individuals in the US (CDC, 2015a). In 2015 alone, 73.9% of Hispanics in Arizona were classified as overweight, with 35.9% (95% CI [32.0, 39.8]) of those individuals classified as obese (CDC, 2015a). The prevalence of obesity for Arizonan Hispanic women is 45.7%, compared to 35.5% for their white counterparts. From 1999 through 2014, these obesity statistics have continued to rise (Ogden et al., 2015).

Obesity is not just a problem for women. Research shows that obese parents typically raise obese children, with adolescents having a significantly higher probability of becoming severely obese (BMI greater than or equal to 40 kg/m²) in adulthood than their normal weight peers (Thé et al., 2010). There are many national initiatives focusing on a reduction in these obesity statistics. The Healthy People 2020 target is 30.5% or less of the population considered obese (Arizona Health Matters, 2012). With Hispanic women surpassing this benchmark, and 21.9% of their children qualifying as obese, these initiatives are falling short at addressing obesity in Arizona (CDC, 2016b).

Due to this population's high risk of adverse health outcomes and the plethora of modifiable risk factors, interventions with a focus on finding a leverage point need to be implemented (Terán, Belkic & Johnson, 2002). Psychosocial factors such as eating habits, level of activity, family values and acculturation play a key role in weight gain in Hispanics (Terán et al., 2002). Obesity is a multifaceted problem that requires a unique solution for lasting change. The impact of weight loss could have a profound effect on reducing chronic illness and contributing to quality of life in this target population.

When it comes to weight loss, client outcomes, participation in care, and compliance all stem from the provider understanding the client's culture and responding appropriately to these cultural values (Carteret, n.d.). Culturally, the family matriarch dictates these family values

(Carteret, n.d.; Sorkin et al., 2014). When caring for a Hispanic client, the provider is in effect caring for the whole family. Because the Hispanic culture values family, a family centered intervention that focuses on mothers and their children needs to be implemented to address the health needs of the whole family. Family centered care focuses on the relationship between healthcare providers, patients and their families. This partnership allows for mutual decision making regarding planning, delivery and evaluation of healthcare, while appreciating the emotional, social and developmental needs of the family. Family centered care fosters empowerment in addressing the needs of the family as a whole while promoting wellness in a culturally relevant manner (Davidson, Lawson, & Coatsworth, 2012). Although Hispanic mothers may not be particularly motivated to make necessary changes to lose weight for themselves, if the family is encouraged to participate and cultural family values are included, it is probable that the client will be able to better achieve her weight loss goals and promote health prevention for her children, thus improving her overall health and the health of her family (Austin, Smith, Gianini, & Campos-Melady, 2013).

Purpose and Rationale

Treating obesity has been a challenge for the providers in a rural health clinic where 79% of the clients are Hispanic. The purpose of this paper is twofold. First, it will summarize available literature related to the treatment of obesity in Hispanic families and then discuss an intervention for providers that will guide efforts to focus on implementation of a family centered weight loss approach for their Hispanic clients.

Background and Significance

The idea of a family approach to weight loss is not novel. In a 1992 study, researchers set out to determine if a family intervention addressing weight loss in Hispanics had more of an

impact since evidence suggests that family centered lifestyle interventions are more culturally appropriate (Cousins et al., 1992; Sorkin et al., 2014). Results demonstrated a marginal change in weight loss with the family intervention group due to the Hispanic fathers' refusal to participate in the group meetings. The men were cited as stating that health and nutrition are issues that concern the mothers (Cousins et al., 1992; Sorkin et al., 2014). While weight loss was low in the intervention group, the benefit of improving physiological measures such as fasting blood glucose and blood pressure could have a potentially large impact on overall health long term (Cousins et al., 1992).

Many weight loss studies focus on support and behavior changes in dyads with spouses, but culturally, this has been recognized to be problematic as aforementioned (Sorkin et al., 2014). In another study that focused on a family intervention, mothers with diabetes and their overweight or obese adult daughters were paired together to encourage greater weight loss (Sorkin et al., 2014). This cross-generational study demonstrated that support from social networks that share similar health risk factors have the potential to promote significant changes in lifestyle behaviors (Sorkin et al., 2014). The authors discovered that one family member's healthy lifestyle changes had the potential to catalyze similar effects in other family members (Sorkin et al., 2014).

Most of the literature for family centered weight loss interventions are targeted at children, which remains the gold standard for addressing pediatric obesity (Bender, Clark, & Gahagan, 2014; Davidson et al., 2012; Kaplan, Arnold, Irby, Boles, & Skelton, 2014). Many of these interventions focus on the mother and child relationship. The notion is that with healthy behavior modification of one family member, others will follow suit (Kaplan et al., 2014). As is often the case with children, mothers are traditionally the individual who purchases and prepares

meals, making her a prime motivator and agent of change. While many pediatric obesity programs focus on the family, a meta-analytic review found that they were not family centered. Instead, the focus was placed on the individual in a group family setting, which limits the ability to assess family theory dynamics and how culture plays a role in health (Davidson et al., 2012).

Family centered interventions are adaptive and allow for varying cultural needs and values (Davidson et al., 2012). Culture plays a large role in diet, activity, perceptions of weight and weight loss behaviors (Agne, Daubert, Munoz, Scarinci, & Cherrington, 2012; Lindberg & Stevens, 2011). In a qualitative study, focus groups of Hispanic women emphasized the importance of family and cultural foods to their quality of life. Common themes identified included children as motivators for weight loss, social isolation as a barrier to weight loss, and importance of tradition to health (Agne et al., 2012). The importance of family is emphasized in another study which found that Hispanic women cite commitment to family needs and family obligations as barriers that may impede personal weight loss efforts (Austin, Smith, Gianini, & Campos-Melady, 2013). The involvement of the Hispanic family in weight loss promotes not only adherence to weight loss programs, but improved outcomes (Agne et al., 2012; Austin et al., 2013; Bender et al., 2014). The importance of family in the Hispanic culture cannot be negated (Lindberg & Stevens, 2011). In addition, culture plays a role in what is viewed as healthy. While Hispanic women are not motivated by thinness, the importance of disease prevention and family health are viewed as essential (Agne et al., 2012; Lindberg & Stevens, 2011). Additionally, plump children are regarded as healthy (Agne et al., 2012). Culturally sensitive education and family centered interventions are necessary to promote health and wellness among Hispanic families.

There are sufficient studies to demonstrate that positive health behaviors in Hispanic women role model healthy habits for their children (Cousins et al., 1992; Klohe-Lehman et al., 2007; Sorkin et al., 2014). While the Cousins et al. (1992) study is older, it has shown promising results for family weight loss interventions if the limitations of the study (i.e, participation of the father) could be modified. Family centered interventions have also confirmed effectiveness for pediatric weight loss (Davidson et al., 2012; Kaplan et al., 2014; Klohe-Lehman et al., 2007). It is fair to conclude that by applying the same principles of a family centered intervention to Hispanic women and their children the outcomes would be similar.

In a low-income rural primary care clinic in the Tucson area, interventions to address weight loss appear futile. Despite the time taken to deliver individualized diet and exercise counseling, little progress is made toward normalizing BMIs and weight percentiles. A large proportion of the clients seen in the clinic are low-income middle-aged Hispanic women with BMIs greater than 30 kg/m². Providers are disheartened by the seemingly unchanged outcomes and clients are frustrated when it comes to weight loss education and interventions, but the issue lies deeper than cutting calories and increasing exercise. The Hispanic mother is the point of contact in the current clinic setting, and can function as the catalyst for change in the health of the entire family. Primary care providers are in a unique role to address health by focusing both on treatment of obesity in adults, and prevention for their children. This inquiry has led to the following clinically relevant PICO question: In a community health clinic, how does implementing an educational program for providers on family centered weight loss in Hispanic families affect patient education when compared to the current standard of care?

Search Strategy

In order to understand the complex issue of obesity in Hispanic families, an extensive search of the literature was conducted. Initially, four databases were searched until articles began to reemerge. These databases included Web of Science, PubMed, Sage Premier, and PsychINFO for all available years to obtain seminal studies and encourage a wide knowledgebase on the topic. Inclusion criteria were studies that targeted overweight or obesity, family centered treatment, Hispanic population and original research. Exclusion criteria for each database included non-research articles, participants less than one year of age, and study focus other than overweight or obesity. A total of 10 articles were selected for inclusion for this literature review.

Web of Science

A search of Web of Science (Appendix A) using the terms *Hispanic mothers* and *obesity* was conducted for all years. Initial yields produced 272 articles. The search was refined using the years 2011-2017 resulting in 176 articles. This was further refined with the addition of the term *family intervention*, resulting in 32 articles. Of these, one was selected for further review.

PubMed

The search strategy in PubMed (Appendix B) included two sets of search terms. The first strategy utilized Boolean connectors and the terms *Hispanic mother* AND *obesity* AND *family* AND *weight loss*. This search resulted in 13 yields. The search strategy was adjusted to encourage a broader range of articles. This second search in PubMed utilized the terms *Hispanic woman* OR *Hispanic women* AND *weight loss* AND *family*. This search resulted in 39 yields. Four were selected for further review. One of these articles was also retrieved in the preliminary search of PubMed.

Sage Premier

Sage Premier (Appendix C) was searched using the search terms *family based* AND *weight loss* AND *obesity* AND *Hispanic* with Boolean connectors. The search was limited to research articles between the years 2011-2017. A total of 453 articles were retrieved. Of these, two were selected for further review.

PsychINFO

A search of PsychINFO (Appendix D) was conducted using Boolean connectors and the terms *obesity* AND *family intervention*. The initial yield produced 1,082 articles. The search was refined to include English only peer reviewed articles that included participants in the following categories: childhood, preschool age, school age, adolescence, and adulthood. This search resulted in 55 articles, of which two were selected.

Critical Appraisal and Synthesis

The studies included in this literature review were analyzed using Melnyk & Fineout-Overholt's (2015) rapid critical appraisal checklists and placed in an evaluation table (Appendix E). Due to the multifaceted elements addressed in the clinical practice inquiry, the PICO question is best answered using a variety of study designs. Levels of evidence were evaluated using grades I-VI (Melnyk & Fineout-Overholt, 2015). Of the 10 studies, one was a randomized controlled trial (level II) and one was a systematic review (level I). The remaining study designs included lower levels of evidence (five level IVs and three level VIs). The studies conducted by Agne et al. (2012) and Lindberg & Stevens (2011) were well adept to address the cultural and social components of the PICO, while Austin et al. (2013); Kramer, Cepak, Venditti, Semler, & Kriska (2013); Li et al. (2015); Parra-Medina, Liang, Yin, Esparza, & Lopez (2015); and Siwik, Kutob, Ritenbaugh, Aickin, & Gordon (2012) addressed the feasibility of a family centered

model. Bender et al. (2014) uniquely designed a study to evaluate both the effects of culture and a family centered model on weight loss.

Although many of the evidence levels for these studies are considered lower levels, validity and reliability of measurement tools were high and many findings demonstrated statistical significance. Common measurement tools included questionnaires for demographics or health status, and anthropomorphic measures of BMI and weight (Appendix F). Validity for these tools were underreported. However, one study demonstrated questionnaire validity with Cronbach's alpha pre- and post-intervention. Scores ranged from 0.84-0.93 (Sorkin et al., 2014). BMI for Hispanic women when compared to body fat percentage is deemed valid with a Cronbach's alpha of 0.94, and is 100% sensitive and 93.33% specific (Ocker & Melrose, 2008). Validity for weight measured by scales were not reported. No bias was noted among studies. Despite some missing information, the studies included had sufficient methodological rigor to inform practice.

The conceptual frameworks utilized in the studies focused mainly on the Health Belief Model, Family Systems Theory, and Social Cognitive Learning Theory, revealing homogeneity, which can be seen in the synthesis table (Appendix F). Design methods, however, demonstrate heterogeneity. Three studies used focus groups or descriptive statistics to obtain qualitative data related to perceptions of obesity and factors that affect weight loss. Other study designs included quasi-experimental, sequential mixed methods, prospective pilot study, correlational, systematic review and a randomized controlled trial. Despite the differing methods, these studies all addressed a component of family centered or group based intervention effectiveness on weight outcomes. This diversity lends well to the various perspectives of the PICO.

All studies either exclusively or predominantly focus on the Hispanic population. Most study participants are women who are considered obese, with an ample number being overweight. A common theme among studies includes low socioeconomic status and low health-related education levels. Measurements demonstrate some homogeneity with a focus on a variety of questionnaires, BMI, food or physical activity logs, and weight. Two studies also included waist circumference. While one study did not report waist circumference values, the other study demonstrated a decreased measurement in adult participants; children demonstrated no change. Qualitative variables validate common themes of both barriers (health-related education and social isolation) and values (traditional foods, family involvement and health status). The quantitative variables of BMI, study attendance, calorie goal, physical activity goal, study related satisfaction, and waist circumference demonstrate some heterogeneity in scope, but homogeneity in focusing on overall weight loss, cultural factors affecting weight and satisfaction with family centered approaches to weight loss. Physical activity demonstrated neutral impact on weight, while two studies reported increased satisfaction and attendance. Four studies relate a family centered program to improved BMI, while also positively correlating with program attendance, program satisfaction and weight loss. Qualitative data suggests that by addressing both barriers and incorporating values into weight loss interventions, weight loss education would be more comprehensive and suitable for Hispanic families. Overall, the selected studies reveal both qualitative and quantitative factors that positively impact weight loss in Hispanic families.

Conclusions

The selected study demographics mirror the anecdotal demographics from the current clinic setting. Current obesity treatment in the clinical setting lacks a family focus. Evidence suggests that family centered care increases attendance in weight loss programs, improves

overall satisfaction, and increases the amount of weight lost. The Hispanic population values family and culturally tailored programs that include traditional foods and understanding of cultural norms. It is recognized that the Hispanic population is largely disadvantaged when it comes to health-related education level and socioeconomic status. It can be concluded that these factors affect BMI and must be considered when designing a weight loss program in this population. Given this evidence, it would be appropriate to include a family focus to weight loss interventions in the clinic setting. Programs should include elements of healthy traditional food options and physical activity that are culturally tailored to families, affordable and presented in an understandable manner.

Contribution of Theoretical Model to Utility of the Evidence

Given the emerging theme of cultural impact on weight, a theoretical model that addresses cultural competence is essential to guide implementation of an evidence based practice (EBP) intervention. The Purnell Model of Cultural Competence (Appendix G) is an organizational framework that addresses the themes of family, nutrition, activity, family roles, barriers and beliefs (Purnell, 2005). These themes were central in the review of the literature among this population. The model addresses 12 cultural domains in a figure that depicts interaction between the associated concepts. These cultural domains will be applied in the implementation of an educational intervention for providers to impact a clinical practice change that addresses obesity in Hispanic families utilizing culturally appropriate methods that address weight from the perspective of the person, the family, the community and society (Purnell, 2005).

Evidence Based Practice Model to Guide Project Development

The Stetler Model (Appendix H) was developed for individual practitioners to design safe and effective practice improvements based on step-by-step processes for research utilization, application and evaluation (Stetler, 2001). The model is based off of six assumptions: a formal organization may or may not be involved; research utilization may be instrumental, conceptual and/or symbolic; other forms of evidence such as non-research related information may be utilized in decision making; internal and external factors can influence the use of evidence; data and evaluation provide probabilistic information; and poor understanding of research utilization and EBP can limit the usefulness of the project (Stetler, 2001, p. 274). Unique to this model is the allowance for theoretical and experiential data supplementation to the research. There are five phases that guide the process: preparation; validation; evaluation and decision making; translation and application; and evaluation (Stetler, 2001).

Identification and confirmation of the clinical problem has been discussed with key practice stakeholders and measurable outcomes have been linked to national initiatives, namely Healthy People 2020. The best available evidence has been reviewed and evaluated for quality and clinical application. Key findings have been synthesized and documented for translation to the clinically relevant practice question. Given the lower level of evidence, the information renders a change at the practitioner level. In phase IV, an EBP plan was developed with the contribution and participation of key practice stakeholders. Stakeholder interest and project effectiveness determined that the practice change would be best received at the practice level. Project related materials were developed and evaluation tools obtained for use. Phase V concludes the process with an evaluation of the project as well as collecting evidence to support routine use in clinical practice or inform the need to revise the project to promote positive outcomes.

Project Methods

Permission to conduct the EBP improvement project was granted by the Arizona State University Institutional Review Board for one year beginning August 8, 2017 (Appendix I). All eight providers at the clinic were recruited for participation in the project. Provider attendance at the educational session, participation in the intervention, and completion of the surveys were considered consent to participate.

Setting and Organizational Culture

The practice improvement project took place in a rural community health clinic that cares for low-income families in South Tucson. Until mid 2017, the facility has been privately owned and had little funding for EBP changes. The site sees many clients daily that live with one or more chronic illnesses, leading to complex care regimens and allows for ample opportunity to implement an EBP intervention. The clinic population served is made up of 78.9% of Hispanic clients, with 73.2% of all clients receiving state or federal assisted medical insurance coverage.

Optum acquired the clinic site in 2017 with the goal of providing the healthcare providers and clients at the clinic resources to encourage healthier lifestyles and partnerships across the healthcare system (Optum, 2018). Optum prides themselves in utilizing technology, data and human capital in creating a positive healthcare experience for their clients (Optum, 2018). To date, the change in the organization has had little impact on the structure or mission of the rural community health clinic.

Fotonovela

A creative alliance was formed with HolaDoctor and a license for use of the selected fotonovela was granted during the project period (Appendix J). HolaDoctor is a Spanish language health and wellness digital network that connects the Hispanic community with

information related to health insurance, access to care, healthy living, health screening and chronic illness management (HolaDoctor, 2018). Fotonovelas are short story telling booklets that share health related information in an understandable, relatable and engaging manner (Hernandez & Organista, 2013; Hinojsa, Hinojsa, Nelson & Delgado, 2010). They are culturally adapted to the Hispanic culture and have been shown to improve Healthcare Effectiveness Data and Information Set measures and health literacy in Latinas (Hernandez & Organista, 2013; Hinojsa, Hinojsa, Nelson & Delgado, 2010).

The selected fotonovela, *You Only Live Once*, was developed with the web designer at HolaDoctor to include additional resources for patient education and documentation. Inside the cover is a BMI sheet for the patient to document their current BMI, goal weight, reason for wanting to lose weight and a support person to assist in reaching the goal. The back cover includes local free and low cost resources for physical activity, nutrition services, activity tracking and medical management. These resources were translated to Spanish to be included in the Spanish fotonovela.

Participants

To be eligible to participate in the practice improvement project, participants needed to be 18 years of age or older, a licensed provider in the state of Arizona, and at least a part time employee of the chosen rural health clinic. Due to the small sample size, provider demographics were not collected to ensure privacy and blinded data collection. Provider educational demographics include three Nurse Practitioners, one Physician Assistant, two Medical Doctors and two Doctors of Osteopathy.

Procedure

The practice improvement project occurred over a four-week period, beginning November 3, 2017 and ending December 1, 2017. Prior to the start of the project, providers were asked to fill out a pre-Evidence Based Practice Attitude Scale (EBPAS) to determine their overall attitude toward applying EBP in the clinic setting (Appendix K). All documentation was identifiable only with a provider created identification number, known only to the provider. All project related documents were left in a secure, central area in the practice for data collection.

On November 3, 2017, a 30-minute educational session was conducted for providers and medical assistants (Appendix L). The educational session included information on current regional and national obesity statistics, a summary of the literature search guiding the project, and a description of family centered weight loss education for Hispanic patients (Appendix M). Providers and their medical assistants were introduced to the fotonovela, and encouraged to use this tool with their overweight or obese Hispanic clients. Both English (Appendix N) and Spanish (Appendix O) versions were made available in each clinic room. Medical assistants were encouraged to assist providers in documentation of client weight loss education using the BMI Documentation Form and instructed on making de-identified copies for data collection using a physical barrier (Appendix P). Following the educational session, providers were asked to complete a second EBPAS form to measure provider attitudes toward implementing EBP interventions after full understanding of the project and current literature. The post-EBPAS was requested within one week following the educational session.

At the end of the four-week project period, all remaining fotonovelas were collected and inventoried. Providers were asked to complete an anonymous Provider Feedback Form to assess the use of the fotonovela in their practice and their overall feelings about the project and process

(Appendix Q). All documents and project related materials were collected on the final day of the project period.

Budget

The proposed project budget included staff incentives, photocopying of tools, presentation supplies and handouts, and travel to the clinical site for a total estimated cost of \$685 (Appendix R). Total project costs came in under budget for a total of \$515. Clinic staff declined a formal meal during the planned Lunch and Learn, which accounted for coming in under budget. Instead, staff incentives accounted for \$95 of total project costs. Other costs included the photocopying of the fotonovela for \$300, \$85 in presentation supplies and handouts, and \$35 for travel to the site. The clinic site chose to absorb the minimal cost related to copies of the BMI Documentation Form, as this modified form was a current standard of practice in the clinic. No funding was received to implement this project.

Outcome Measures

The EBPAS is a 15-item survey with a Likert scale ranging from zero, or *Not at All*, to five, or *To A Very Great Extent* (Aarons, 2004). Four domains are assessed in this tool: appeal ($\alpha=.74$), requirements ($\alpha=.93$), openness ($\alpha=.81$) and divergence ($\alpha=.66$). Face validity was determined by researchers and mental health providers. Construct validity was confirmed with a third study. The total reliability of the tool is $\alpha=.79$ (Aarons, et al., 2010).

The BMI Documentation Form was used for data collection to measure the frequency of use of weight loss interventions. The clinic site was previously using a version of this form apart from the check box options for weight loss interventions and the addition of the fotonovela. The documentation form included the client's exact BMI and BMI category based on age as outlined by the CDC (CDC, 2015c, 2016c). Interventions were listed with check boxes and included

common educational methods that were currently used by providers as well as the intervention of interest, the fotonovela. Providers could document as many interventions as were appropriate for the client visit.

The Provider Feedback Form assessed provider understanding, time commitment, effectiveness and overall acceptance of the project in an eight-item tool. Provider understanding, time commitment and effectiveness were assessed using a five point Likert scale ranging from one, *Strongly Agree*, to five, *Strongly Disagree*. The remaining three questions were open-ended to assess provider acceptance of the project and allow for qualitative feedback. Providers were given the opportunity to state what they would change about the project to lend insight into their rationale for scoring.

Data Collection and Analysis

Outcome data of interest collected included attitudes related to implementing EBP into current workflow, patterns of use for family centered educational materials, and overall satisfaction with the project. Provider understanding and willingness to implement EBP findings into practice were measured comparing the EBPAS scores pre- and post-educational intervention. The post-intervention evaluation was collected using the Provider Feedback Tool four weeks following the educational intervention was put in place to measure the level of change in provider willingness to use the materials during the project period.

A total of 80 English and 20 Spanish fotonovelas were printed and each exam room was stocked with copies of each for use by providers during the intervention period. Copies of the BMI documentation form were placed in each room as well, to assist providers in documenting each patient's BMI and the interventions used during the visit, as appropriate. The sum of each intervention was calculated, with interest paid to the fotonovela. The remaining fotonovelas at

the end of the project period were collected and inventoried to compare to the number that were documented by providers.

The Provider Feedback Form was collected on the final day of the project. The form used five Likert scale questions and three open ended questions to allow for adequate project feedback. Descriptive statistics were used to evaluate the effectiveness of the pre- and post-EBPAS scores, measure the frequency of interventions from the BMI Documentation Form, and analyze the feedback from the Provider Feedback Form.

Project Results

A total of six of the eight providers participated in at least one aspect of the project, for a total of 75% provider participation. As aforementioned, demographics were not collected on providers to ensure that providers were unidentifiable from the data. However, each provider met inclusion criteria to be eligible to participate in the project.

EBPAS

The difference in scores from the pre-EBPAS tool (N = 4) and the post-EBPAS tool (N = 3) demonstrate an aggregate five-point decrease in provider attitude toward adopting EBP post-educational session (Appendix S). A closer look at the paired subscales indicate that there was a decrease in overall divergence pre- to post-, despite the unchanged median (Mdn = 2, 95% CI [-2.50, 7.83] LL 1, UL 5 and Mdn = 2, 95% CI [-.48, 4.48], LL 1, UL 3, respectively) (Appendix T). The appeal subscale demonstrated a median drop of one point, however distributions remained unchanged pre- to post- (Mdn = 15, 95% CI [2.17, 23.83], LL 8, UL 16, and Mdn = 14, 95% CI [2.34, 23.01], LL 8, UL 16, respectively) (Appendix U). The requirement subscale had a slightly larger decrease in the median, however the distribution was similar, with slightly reduced variability (Mdn = 10, 95% CI [-3.41, 20.07], LL 3, UL 12, and Mdn = 8, 95% CI [-

1.06, 16.39], LL 4, UL 12, respectively) (Appendix V). The openness subscale demonstrated no change with a slightly larger distribution in the post-assessment (Mdn = 13, 95% CI [3.68, 19.65], LL 8, UL 14, and Mdn = 13, 95% CI [1.32, 22.01], LL 7, UL 15, respectively) (Appendix W).

BMI Documentation Form

One provider participated in documenting weight related client intervention documentation using the BMI Documentation Forms (N = 15) (Appendix X). Of the collected forms, the mean documented BMI categories were as follows: pediatric, overweight (n = 1); adult, obese (n = 13); and elderly, overweight (n = 1). The majority of clients received education on MyPlate (M = .73), followed by education on not skipping meals/eating three meals a day (M = .60), and the fotonovela (M = .53). There were eight documented fotonovelas; however, when inventoried, there were nine English and four Spanish fotonovelas that appeared to be handed out to clients (N = 13).

Provider Feedback Form

The Provider Feedback Form (N = 6) identified four key themes (Appendix Y). The first theme that evolved was that providers enjoyed the BMI Documentation Sheets. Providers stated that these forms maximized workflow when documenting client interventions and BMI for reimbursement purposes. The second theme that was strongly emphasized was that providers identified that the project implementation timing was poor. One provider stated, “It was bad timing with the new EHR [electronic health record]” (Provider one). Another theme that emerged was related to time spent implementing the project. When queried if the use of the fotonovela increased time spent education clients, 50% of participants (N = 3) stated that it did not increase time, and 50% stated that it did. However, one provider noted, “It provided useful

information in a practical way that patients could understand” (Provider four). Finally, 50% of the providers noted that they did not like the fotonovela. One provider stated, “They are embarrassing” and commented that “One patient said ‘no thanks’ and handed it back” (Provider one).

Discussion

In analyzing the pre-post EBPAS tool, provider one and three each had a one point increase; provider two had a seven-point decrease. It can be assumed that provider two was less likely to apply the intervention due to the decrease in appeal of the project. Providers also indicated they were less likely to implement a tool if it were a requirement and if they felt the tool was not as clinically relevant as their own experience. Two of the four providers felt that EBP was not clinically useful and less important than clinical experience after the educational session and introduction of the fotonovela. The providers were slightly less likely to implement EBP after the educational session based on a decrease in overall appeal of the tools. The requirements subscale demonstrated a slight decrease in post-educational intervention scores and variability, however, the scores clinically remained the same. Overall, the difference in scores indicated that providers were more likely to participate in the project prior to the educational session. This may have been due to the timing of the project or discontent for the fotonovela.

Provider feedback offered insight into the acceptance and reception of the project. Despite significant attempts to obtain 100% participation on the Provider Feedback Form, 25% of providers did not participate in this portion or any portion of the project. Half of the providers who completed the Provider Feedback Form indicated that the fotonovela did increase the time spent educating clients, however, only one provider documented use of the tool. It can be assumed that at least two other providers have a perceived notion that the fotonovela increased

time spent on education, or participated in the intervention but did not document education on the BMI Documentation Form. With this missing data, it could also be assumed that clients may have been interested in the fotonovelas and obtained copies for themselves. Despite poor use of the interventional tool, providers enjoyed the BMI Documentation Form for their own use, despite their participation in the practice improvement project.

Project Limitations

Due to the small sample size, obtaining clinically significant data was not feasible. Consequently, even if all the providers had participated in the project as designed, drawing significant conclusions would have been difficult. The timing of the project coincided with a large EHR roll out. Prior to that, the site had previously been using paper charting. This transition caused significant stress for all clinic staff. The short duration of the project also played a role in the amount of data that was obtained. A longer project period might have resulted in more data and more significant results. In addition, only one provider completed the entire project, making it difficult to draw conclusion about the project as a whole.

Implications for Future Practice

Given the limitations of the study, repeating the project in a larger practice not undergoing significant changes may result in a larger data set. It was evident that timing was key, and having provider buy-in was necessary for project success. It is expected that repeat implementation of this project in a different clinical setting could have a potentially large impact on both the practice and clients. It would be anticipated that providers would see a steady increase in weight loss at each client visit with gradual improvement of physiologic indicators of health over time. Clients would be expected to report increased satisfaction with weight loss education, increased perception of control over health outcomes, healthier habits and overall

weight loss. In addition to physical changes, long-term implications include a decrease in the number of clients seen in the clinic that are categorized as obese and improved overall health indicators such as a decrease in glycosylated hemoglobin, blood pressure, pain and depressive symptoms. While these outcomes were not measured in this brief timeframe, it is expected that providers would continue to see positive changes after the end of this project period.

Conclusion

Primary care providers can positively impact weight loss efforts in Hispanic clients through addressing cultural values and limiting barriers. The evidence suggests that family centered programs increase participation, satisfaction and overall weight loss. Common barriers noted for this population include low health-related education levels and low income, which potentially lead to poor treatment adherence. There are key groups of stakeholders who will influence and be affected by an EBP change: primary care providers, their Hispanic clients, clinic management, and medical assistants. In order for a practice improvement project to be effective, providers and medical assistants must be active in providing culturally tailored education, clients must be willing to participate, and clinic management must be supportive of the proposed changes.

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Appendix A

Database Search Strategy

Web of Science

The screenshot displays the Web of Science search results interface. At the top, the 'WEB OF SCIENCE' logo and 'THOMSON REUTERS' branding are visible. The search bar indicates the search criteria: 'hispanic mothers * obesity' refined by 'TOPIC: (family intervention)'. The results are sorted by 'Publication Date -- newest to oldest' and show 32 results on page 1 of 4.

Results: 32
 (from Web of Science Core Collection)

You searched for: TOPIC: (hispanic mothers * obesity)
Refined by: TOPIC: (family intervention)
 Timespan: All years. Indexes: SCI-EXPANDED, SSCI, A&HCI, ESCI.
 ...Less
 Create Alert

Refine Results

Search within results for...

Web of Science Categories

- PEDIATRICS (11)
- PUBLIC ENVIRONMENTAL OCCUPATIONAL HEALTH (4)

Results List:

Item	Title	Author(s)	Journal	Volume	Issue	Pages	Published	Actions	Citations
1.	Depressive Symptoms and Perceptions of Child Difficulty Are Associated with Less Responsive Feeding Behaviors in an Observational Study of Low-Income Mothers	By: Elias, Cindy V.; Power, Thomas G.; Beck, Ashley E.; et al.	CHILDHOOD OBESITY	12	6	418-425	Published: DEC 2016	Get It! @ASU View Abstract	Times Cited: 0 (from Web of Science Core Collection)
2.	Early Feeding Practices and Weight Status at One Year of Age: A Comparison of Hispanic Immigrant Mother-Infant Dyads with Participants of the Infant Feeding Practices Study II	By: Gaffney, Kathleen F.; Brito, Albert V.; Kitsantas, Panagiota; et al.	CHILDHOOD OBESITY	12	5	384-391	Published: OCT 2016	Get It! @ASU View Abstract	Times Cited: 0 (from Web of Science Core Collection)
3.	Primary Care Interventions to Reduce Childhood Obesity in Latino Families	By: Gonzalez, Giulliana	JOURNAL OF PEDIATRIC HEALTH CARE	30	5	471-479	Published: SEP-OCT 2016	Get It! @ASU Full Text from Publisher View Abstract	Times Cited: 0 (from Web of Science Core Collection)

Appendix B

Database Search Strategy

PubMed

The screenshot shows the PubMed search interface. At the top, the search bar contains the query: `(((Hispanic woman) OR Hispanic women) AND weight loss) AND family`. The search results are displayed in a list format, showing three items on page 1 of 2.

Search results
 Items: 1 to 20 of 39

- [The use of electronic medical records for recruitment in clinical trials: findings from the Lifestyle Intervention for Treatment of Diabetes trial.](#)
 Effeo VS, Katula JA, Kirk JK, Pedley CF, Bollhalter LY, Brown WM, Savoca MR, Jones ST, Baek J, Bertoni AG; LIFT Diabetes Research Team..
 Trials. 2016 Oct 13;17(1):496.
 PMID: 27733193 **Free PMC Article**
[Similar articles](#)
- [Barriers to Recruitment and Adherence in a Randomized Controlled Diet and Exercise Weight Loss Intervention Among Minority Breast Cancer Survivors.](#)
 Aycinena AG, Valdovinos C, Crew KD, Tsai WY, Mata JM, Sandoval R, Hershman D, Greenlee H.
 J Immigr Minor Health. 2017 Feb;19(1):120-129. doi: 10.1007/s10903-015-0310-1.
 PMID: 26801931
[Similar articles](#)
- [Weight Outcomes of Latino Adults and Children Participating in the Y Living Program, a Family-Focused Lifestyle Intervention, San Antonio, 2012-2013.](#)
 Parra-Medina D, Liang Y, Yin Z, Esparza L, Lopez L.
 Prev Chronic Dis. 2015 Dec 10;12:E219. doi: 10.5888/pcd12.150219.
 PMID: 26652219 **Free PMC Article**
[Similar articles](#)

Search details
`(((("hispanic americans"[MeSH Terms] OR ("hispanic"[All Fields] AND "americans"[All Fields]) OR "hispanic americans"[All Fields]) OR "hispanic"[All Fields]) AND`

Recent Activity

- (((Hispanic woman) OR Hispanic women) AND weight loss) AND family (39) PubMed
- (((Hispanic women) OR Hispanic woman) AND weight loss) AND family... (15) PubMed
- (((Hispanic women) OR Hispanic woman) AND weight loss) AND family... (9) PubMed
- (((Hispanic mothers) AND obesity) AND

Appendix C

Database Search Strategy

Sage Premier

The screenshot shows the Sage Premier search results interface. At the top, the Sage Journals logo is on the left, and navigation links for 'Browse', 'Resources', and 'My Tools' are in the center. A search bar contains the text 'family based' and a magnifying glass icon. To the right of the search bar are links for 'Sign in: My Account' and 'ASU Library'. Below the search bar, the text 'Advanced' is visible. The main section is titled 'Search Results' and shows 'Results: 1 – 20 of 453 for [All family based] AND [All weight loss] AND [All obesity] AND [All hispanic] within Research-Article x 2011 - 2017 x Reset All'. A red 'Save Search' button is located to the right of the filters. The results are displayed in a list format. The first result is a 'Research-Article' titled 'Children's Perceptions of Obesity and Health' by Joseph A. Skelton, MD, MS, Megan Bennett Irby, MS, M. Angelica Guzman, BA, and Bettina M. Beech, DrPH. The article is from 'ICAN: Infant, Child, & Adolescent Nutrition, vol. 4, 5: pp. 289-296., First Published September 18, 2012.' To the right of the article list, there are filters for 'PUBLICATION DATE' (a range from 2011 to 2017) and 'SUBJECT' (Health Sciences: 304, Social Sciences & Humanities: 179, Nursing: 166, Public Health: 156, Psychology & Counseling: 83). A 'MORE (49)' link is at the bottom of the subject filters. On the far right, there is a vertical 'FEEDBACK' button. At the bottom of the article list, there are three icons: a document, a magnifying glass, and a key.

Appendix D

Database Search Strategy

PsychINFO

The screenshot shows the ProQuest PsychINFO search interface. At the top, the ProQuest logo is on the left, and navigation icons (refresh, folder, user, help) are on the right. Below the logo, the breadcrumb trail reads "All databases > Social Sciences databases > PsycINFO | Change databases". The main header "PsycINFO" is displayed, with links for "Basic Search", "Advanced Search", and "About". On the right side of the header, the American Psychological Association logo is visible. The search bar contains the query "obesity" AND "family intervention". Below the search bar, there are filter options: "Peer reviewed" (unchecked) and "Additional limits - Date: From 2011 to 2017; Language: English; Age group: Adolescence (13-17 Yrs)..." (checked). Action links include "Modify search", "Recent searches", and "Save search/alert". A suggestion box below the search bar says "Did you mean: 'obesity' AND 'family intervention'". The results section shows "55 results" with a "Search within" dropdown. Action icons for "Cite", "Email", "Print", and "Save" are present. On the left, there are filters for "Relevance" (Sort), "Narrow results", and "Peer reviewed". On the right, there are options for "Select 1-20" (0 Selected items), "Brief view", and "Detailed view". The first result is a journal article titled "Early childhood family intervention and long-term obesity prevention among high-risk minority youth" by Brotman, Laurie Miller, Dawson-McClure, Spring, Huang, Keng-Yen, Theise, Rachelle, Kamboukos, Dimitra, et al. published in *Pediatrics* 129.3 (Mar 1, 2012): e621-e628. The snippet of the article text is partially visible.

Appendix E

Table 1

Evaluation Table

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Quality/LOE; Decision/Application for practice
Agne et al. (2012) The Cultural Context of Obesity: Exploring Perceptions of Obesity and Weight Loss Among Latina Immigrants Country: USA Funding: RWJF Physician Faculty Scholars program and NIH Bias: none noted	HBM	Method: focus groups conducted until saturation Purpose: to examine perceptions of obesity and weight management among Latina immigrant women in Alabama.	n: 25 Demographics: MA: 38 (22-65) Education: >9 th grade 92%; high school 16%; not reported 12% USA \bar{X} years: 7 BMI: 25-29.9 (48%), >30 (52%) Setting: community based Exclusion: not listed Inclusion: foreign born Latinas, >/=19yo, BMI>25, non-pregnant, non-diabetic Attrition: 0	IV: moderator's guide (HBM construct) DV1: perceptions regarding obesity DV2: contributors to weight gain DV3: prior weight loss attempts DV4: motivators/program needs	Bilingual/bicultural moderator/note-taker, added nonverbal behavior; audiotapes with translated transcripts verbatim Demographic questionnaires Short Acculturation Scale for Hispanics (reliability 0.92; validity 0.52-0.76) Likert scale of acculturation	Descriptive statistics: qualitative analyses were coded using inductive/deductive analysis; developed codebook until thematic saturation	DV1: health risks, aesthetics, symptoms DV2: social isolation, marriage, pregnancy, changes in diet and PA, depression, stress DV3: crash diets, supplements, diet pills, and exercise DV4: include traditional foods, family, and PA; C as motivators	LOE: VI Strengths: strong design; culturally tailored; sample 100% Mexican F with ↑ BMI; qualitative allowing for themes to emerge to saturation Weaknesses: low level of evidence Conclusions: good for use in practice to understand cultural perception and barriers; generalizable to Mexican women 22-65 yo

Key: **A:** adult; **APA:** American Psychological Association; **BI:** behavioral intervention; **BMI:** body mass index; **c:** control; **C:** child(ren); **CA:** cancer; **CBT:** Cognitive Behavioral Theory; **DM:** Diabetes Mellitus; **DV:** dependent variable; **F:** female; **FND:** foundation; **FST:** Family Systems Theory; **FQHC:** Federally Qualified Health Center; **HBM:** Health Belief Model; **HM:** Hispanic mother(s); **HPM:** Health Promotion Model; **HTN:** hypertension; **i:** intervention; **IV:** independent variable; **LOE:** level of evidence; **MA:** mean age; **N:** number of studies; **n:** number of participants; **NIH:** National Institutes of Health; **p:** alpha value; **PA:** physical activity; **PS:** pilot study; **PV:** predictor variable; **RCT:** Randomized Controlled Trial; **RWJF:** Robert Wood Johnson Foundation; **SCLT:** Social Cognitive Learning Theory; **SD:** standard deviation; **SR:** Systematic Review; **SS:** Spanish Speaking; **SSB:** sugar sweetened beverages; **SMM:** sequential mixed methods; **SW:** Southwester; **T1:** pre-test; **T2:** post-test; **U:** university; **USA:** United States of America; **WIC:** Women, Infants and Children; \bar{x} : mean; **YO:** year(s) old

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Quality/LOE; Decision/Application for practice
Austin (2013) Attitudinal Familism Predicts Weight Management Adherence in Mexican-American Women Country: USA Funding: APA Minority Fellowship Dissertation Grant; U of New Mexico Graduate Research and Development Grant; U of New Mexico RWJF Center for Health Policy Dissertation Fellowship Bias: none noted	Inferred to be FST	Design: Quasi-experimental Purpose: whether attitudinal familism predicted poorer adherence to a behavioral weight management program in Mexican-American women	n: 100 F Demographics: MA: 45.07 X̄ years education: 15.05 C total: 1.97 C in home: 0.96 X̄ BMI: 33.04 Waist to hip ratio: 0.86 X̄ family income: \$44,000 Setting: community pregnant/planning in 6 months; moving >50 miles from the study area; lack of English proficiency Inclusion: 18–65 yo; BMI >/= 25 and </= 40; Mexican heritage Attrition: 39% expected, due to culturally inappropriate study design	IV: attitudinal familism: attending to the needs of the family above the needs of the self DV1: sessions attended DV2: meeting calorie goal DV3: meeting step goal DV4: Attitudinal Familism Scale	Physical Activity Readiness Questionnaire (PAR-Q) Attitudinal Familism Scale (Cronbach’s α =0.88) BMI (validity in Hispanic women = 0.94) Food or calorie log	Socio-demographic characteristics: descriptive statistics Linear regression analysis: to determine relationship between step or calorie goals, weight loss, and completion of program Pearson’s r: correlation between sessions attended and demographics Cohen’s effect size: r=0.10 (small, but not trivial), r=.30 (medium), r=0.50 (large)	DV1: treatment completers = 48.78%; treatment non-completers = 51.22%; X̄ 7.37 of 15 sessions (SD=4.50); sessions and age r(98)=0.37, p<0.001; sessions children at home r(98)=-.025, p<0.05 DV2: Calorie goal logs: X̄= 12.30 days (of 70), SD =21.21; Step goal logs: X̄=12.54, SD 20.80 days DV3: met calorie goal: 64.52%; met step goal 80.93% DV4: Attitudinal Familism Scale X̄= 119.10 (52-165)	LOE: IV Strengths: Diverse sample of Mexican-American women. Weaknesses: English speakers only; no assessment of long term weight loss; no comparison group; poor post-treatment assessment rate (74.4% who started treatment, 61% who completed intake) but this is similar to other studies for this population; high attrition, but expected due to study design. Conclusions: weight loss interventions that do not address familism demonstrate barriers to completion despite some weight loss; frequency of attendance predicts weight loss magnitude.

Key: **A:** adult; **APA:** American Psychological Association; **BI:** behavioral intervention; **BMI:** body mass index; **c:** control; **C:** child(ren); **CA:** cancer; **CBT:** Cognitive Behavioral Theory; **DM:** Diabetes Mellitus; **DV:** dependent variable; **F:** female; **FND:** foundation; **FST:** Family Systems Theory; **FQHC:** Federally Qualified Health Center; **HBM:** Health Belief Model; **HM:** Hispanic mother(s); **HPM:** Health Promotion Model; **HTN:** hypertension; **i:** intervention; **IV:** independent variable; **LOE:** level of evidence; **MA:** mean age; **N:** number of studies; **n:** number of participants; **NIH:** National Institutes of Health; **p:** alpha value; **PA:** physical activity; **PS:** pilot study; **PV:** predictor variable; **RCT:** Randomized Controlled Trial; **RWJF:** Robert Wood Johnson Foundation; **SCLT:** Social Cognitive Learning Theory; **SD:** standard deviation; **SR:** Systematic Review; **SS:** Spanish Speaking; **SSB:** sugar sweetened beverages; **SMM:** sequential mixed methods; **SW:** Southwester; **T1:** pre-test; **T2:** post-test; **U:** university; **USA:** United States of America; **WIC:** Women, Infants and Children; \bar{x} : mean; **YO:** year(s) old

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Quality/LOE; Decision/Application for practice
Bender et al. (2014) Community Engagement Approach: Intervention for Hispanic Mother-Child Dyads Country: USA Funding: U of California, San Diego Comprehensive Research Center in Health Disparities (Grant No. 5 P60 MD 0002200), National Center on Minority Health and Health Disparities, NIH Bias: none noted	HBM, SCLT	Design: PS; SMM (qualitative to quantitative); Ethnographic (focus groups, interviews, stakeholder input) Purpose: to test the feasibility of a culturally appropriate obesity intervention (Vida Saludable for low income HM with pre-school C	n: 43 dyads Demographics: Ethnicity: 100% Hispanic HM MA: 27.0 C MA: 3.6 C gender: 52% F SS: 97% Live at/below poverty level: 88% HM reside in USA: 7 or fewer years (76%) HM uninsured: 97% C insured: 100% C in school: none Setting: urban health center Exclusion: C on special diets, C unable to swallow liquid, HM/C unable to walk together Inclusion: low income HM with 3-5yo C Attrition: 23% due to work schedules	Quantitative : IV: weight loss DV1: SSB DV2: PA Qualitative: DV3: Culturally relevant health promotion intervention for ethnic population using five cultural adaptation strategies: peripheral, evidential, constituent involvement, socio-cultural and linguistic.	Health Behavior Questionnaire (HBQ) Program Evaluation Survey (PES) (researchers and stakeholders provided content validity for both tools; several validated instruments were found to be culturally and linguistically unsuitable for this study)	Bender Cultural Adaptation Scoring System	Quantitative: DV1: not reported DV2: not reported Qualitative: DV3: Vida Saludable Cultural Adaptation Score (13.34/15) and Rank (89%)	LOE: IV Strengths: High retention rate (77%), high level of satisfaction, request for similar programs with additional community activity; statistically significant findings. Weaknesses: Quantitative data not reported; tools not validated among large populations. Conclusions: Culturally adapted weight loss programs demonstrate high retention and satisfaction when five cultural adapted strategies are implemented for the Hispanic population.

Key: **A:** adult; **APA:** American Psychological Association; **BI:** behavioral intervention; **BMI:** body mass index; **c:** control; **C:** child(ren); **CA:** cancer; **CBT:** Cognitive Behavioral Theory; **DM:** Diabetes Mellitus; **DV:** dependent variable; **F:** female; **FND:** foundation; **FST:** Family Systems Theory; **FQHC:** Federally Qualified Health Center; **HBM:** Health Belief Model; **HM:** Hispanic mother(s); **HPM:** Health Promotion Model; **HTN:** hypertension; **i:** intervention; **IV:** independent variable; **LOE:** level of evidence; **MA:** mean age; **N:** number of studies; **n:** number of participants; **NIH:** National Institutes of Health; **p:** alpha value; **PA:** physical activity; **PS:** pilot study; **PV:** predictor variable; **RCT:** Randomized Controlled Trial; **RWJF:** Robert Wood Johnson Foundation; **SCLT:** Social Cognitive Learning Theory; **SD:** standard deviation; **SR:** Systematic Review; **SS:** Spanish Speaking; **SSB:** sugar sweetened beverages; **SMM:** sequential mixed methods; **SW:** Southwester; **T1:** pre-test; **T2:** post-test; **U:** university; **USA:** United States of America; **WIC:** Women, Infants and Children; \bar{x} : mean; **YO:** year(s) old

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Quality/LOE; Decision/Application for practice
Kramer et al. (2013) Evaluation of the Group Lifestyle Balance Programme for Diabetes Prevention in a Hispanic Women, Infants and Children (WIC) Programme Population in the USA Country: USA Funding: Department of Epidemiology, Graduate School of Public Health, U of Pittsburg Bias: none noted	Inferred to be HBM	Design: non-randomized, prospective pilot study Purpose: to develop a program that enabled participants to maintain a 7% weight loss and progressively increase PA to 150 minutes/week of moderate intense PA	n: 27 Demographics: MA: 32.7 Mexican: 74% Education: \leq 8 th grade 51.9%; some high school 14.8%; high school 22.2%; some college 11.1% BMI: 25-29.9: 37%; \geq 30:63% Gestational DM: 29.6% Parent/Sibling with DM: 26% Setting: 2 urban WIC sites Exclusion: attend $<$ 75%; pregnant/given birth in last 6 weeks; no medical clearance Inclusion: SS, Dallas WIC relative; 18 yo/ $>$; BMI \geq 26; read Spanish; non-DM Attrition: 37%, transportation	IV: effectiveness of Spanish translation of Group Lifestyle Balance Program DV1: BMI DV2: DM risk factors DV3: weekly self-monitoring habits DV4: session attendance DV5: weight loss DV6: met PA goal of 150min/week DV7: satisfaction with program	Scale; stadiometer; BMI (validity in Hispanic women = 0.94) Demographic data with a brief self-completed questionnaire CDC Prediabetes Screening Test Questionnaire to assess understanding of and satisfaction with program, confidence about sustainability of program and barriers to long-term maintenance of PA and healthy eating habits	Paired Student's t-tests Chi square tests Pearson's or Spearman's <i>r</i> PASW Statistics 18 by SPSS P=.05 Confidence interval = 95%	DV1: 3 or $>$ sessions \bar{X} = -0.94 (2.9% change), $p < 0.001$; 50% sessions \bar{X} = -1.2 (4%), $p = 0.001$ DV2: \bar{X} = 6.1 (1-11) DV3: weighing self once/week (14.8%), recording food intake at least once/week (7.4%), recoding PA once/week (26%) DV4: attended 3 or $>$ sessions (67%); average rate of attendance 7.1/12; attended at least 50% (44%) DV5: 3 or $>$ sessions \bar{X} = -4.5 pounds (2.7% change), $p < 0.001$; 50% sessions \bar{X} = -6.8 pounds (3.9%), $p = 0.001$ DV6: 41.2% DV7: satisfaction with leader and environment, better understanding of pre-DM risk factors: 100%; program length appropriate (82.4%), too short (6%)	LOE: IV Strengths: Demographics representative of other such studies; Weaknesses: Does not address cultural adaptation of program; High attrition; Survey on understanding and satisfaction not validated. Conclusions: Cultural adaptation appears to affect retention but not attendance; Spanish materials and program feedback very positive; lack of attendance related to finding a new job, children's health or transportation.

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Li et al. (2015) Development and Feasibility of a Culturally Sensitive Cooking and PA Program Designed for Obese Hispanic Families Country: USA Funding: Luci Baines Johnson, Racing for CA, Archer, Gerber, Farrah Fawcett FDN, Children Art Project, Santa's Elves Fundraiser, David Herr & Family, MD Anderson CA Center, Duncan Family	Inferred to be Socioecological Model	Design: descriptive Purpose: to determine whether a 10 week cooking and PA pilot intervention could be delivered in a health care setting	n: 4 families Demographics: Hispanic: 100% C age: 6-12 HM age: 28-42 Income <\$60,000: 100% Setting: SW USA primary care Exclusion: medical issues related to obesity (DM, HTN); medications affecting weight; history of psychological disorders Inclusion: 6-11 yo with BMI >/= 85 percentile, but <99 th percentile with willing parent participant Attrition: 0	IV: program feasibility DV1: food frequency questionnaire (C) DV2: fruit and vegetable parenting practice questionnaire (parents) DV3: BMI (C) DV4: waist circumference (C)	BMI (validity in Hispanic women = 0.94) Waist circumference Children food frequency questionnaire Adult fruit and vegetable parenting practice questionnaire Food logs	Nutrition Data System for Research software (version 2013)	DV1: 77 % meet calorie needs, 17% exceed (fat) 0% met fiber goal, \bar{X} = 15.4 g/day (25-35 g/day) DV2: C and parent change in fruit and vegetable intake (0%) DV3: no change DV4: not reported	LOE: VI Strengths: Parental report of social support and greater self-efficacy; information on healthier eating with convenient strategies not in literature. Weaknesses: Difficulty in collecting diet recall materials from participants; small study sample; difficult recruitment; no control group; not all data reported. Conclusions: Limited applicability. Demonstrates feasibility of such study, but needs larger recruitment. Demonstrates areas not to focus for weight loss intervention due to no weight change with studied variables.

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Institute, National CA Institute Bias: none noted								
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Lindberg et al. (2011) Immigration and Weight Gain: Mexican-American Women's Perspectives Country: USA Funding: Grant U01 HL068676-03S1 from the National Heart, Lung, and Blood Institute Bias: none noted	Phenomenology	Method: focus groups Purpose: to examine the experiences, concerns, and beliefs regarding diet, weight and weight loss in Mexican-American immigrant women	n: 25 Demographics: MA: 36yo Mexican born: 100% Emigrate: rural 76%, urban: 24% \bar{X} length of residence in USA: 7.5years \bar{X} schooling: 8 years Work: domestic service 72%, retail 28% Setting: Mexican community in Portland, Oregon Exclusion: not stated Inclusion: Mexican-American women >18yo, provide written consent Attrition: 0	IV: development of culturally sensitive weight loss interventions DV1: adapting to American Society DV2: experiences with weight-loss attempts and need for nutritional information DV3: importance of family	Group sessions facilitated by bilingual Mexican clinical psychologists in Spanish Notes Audiotapes	Transcripts analyzed to find recurring themes using Morgan's principles of qualitative research: words, context, internal consistency, specificity of responses, tone and nonverbal communication assessed	DV1: weight gain common when moving to USA; puzzled by weight gain; more processed foods; more variety of foods; eating "the American 'way'"; difference in body type; role of food in culture DV2: frustration with inability to lose weight/maintain; modified diet and non-traditional methods; spotty methods of dieting; nutrition information confusing; not being understood DV3: role of family in food choices; changes have effects on rest of family	LOE: VI Strengths: first-hand experience/beliefs demonstrated through study design; wide ranges of demographics of Hispanic F Weaknesses: May not be generalized to all Mexican-Americans or other Hispanic subgroups. Conclusions: Provide guidance to inform weight-loss and dietary-change interventions for Hispanic F.

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Parra-Medina et al. (2015) Weight Outcomes of Latino Adults and Children Participating in the Y living Program, a Family-Focused Lifestyle Intervention, San Antonio 2012-2013 Country: USA Funding: the CA Prevention and Research Institute of Texas Bias: potential selection bias due to voluntary participation	SCLT	Design: Quasi-experimental Purpose: to prevent excess weight gain by increasing adoption of health-promoting PA and dietary behaviors	n: 106 C, 242 A Demographics: Gender: AF 80.6%, A male 19.4%, CF 49.1%, C male 50.9%; Latino: A 70.6%, C 77.3%; Weight: A BMI <25: 8.4%, BMI 25-30: 18%, BMI >= 30: 73.6%; C BMI <85 th percentile: 35%, BMI 85-95 th percentile: 16.5%, BMI >= 95 th percentile: 48.5% Setting: urban city >65% obese residents Exclusion: not listed Inclusion: commitment to 12-week program in English, entire family 2/week group activity, PA at least 3/week, >= 7 yo Attrition: A 25.6%, C 32.1%	IV: impact of 12-week Y Living Program DV1: BMI DV2: Waist circumference DV3: body fat percentage DV4: Weight	Pretest-posttest of: Waist circumference with MyoTape Body Tape measure Height with stadiometer Bioelectrical impedance analysis machine for body fat percentage, body weight, and BMI (validity in Hispanic women = 0.94) BMI percentile with CDC BMI-for-age growth chart	Descriptive statistics for demographics Wilcoxon signed rank test Fisher exact test Mann-Whitney U Strata SE version 13 Paired, p= .05 Confidence interval = 95%	DV1: A = 34.9 (29.6-41.3), change -.02 (-1.0-0.3), p<.001; C = 94.2% (65.0-98.8), change 0.4 (-0.03-3.5), p= .001 DV2: A= 41.0 inches (36.5-46.5), change -1.0 (-2.5-0), p <.001; C = 30.8 inches (26.1-36.4), change 0 (-1.0-1.0), p= .69 DV3: A= 42.7% (35.8-48.0), change -0.6 (-1.8-0.7), p <.001; C= 31.0% (20.6-38.7), change 0.6 (-1.1-2.7), p= .03 DV4: A=200.2 (163.6-237.3), change -1.6 (-5.5-1-2), p <.001; C= 125.8 (90.0-157.8), change 2.6 (0-5), p <.001	LOE: IV Strengths: Diverse family structure; participants made up mainly of mothers and their children. Weaknesses: No control group; higher drop out among young adults and families with children; potential selection bias due to voluntary enrollment in a free program for low-income community residents. Conclusions: Weight loss measures improved in adults, and increased in children as expected. Program demonstrated utility in a largely Hispanic population. Family based intervention effective for many participants; materials may not have been suited for all families.

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<p>Siwik et al. (2012) Families United/ Familias Unidas: Development and Implementation of a Family-Based Group Office Visit Model for the Primary Prevention of Type 2 Diabetes Country: USA Funding: American Diabetes Association grant (1-CR-09-33) Bias: none noted</p>	<p>CBT</p>	<p>Design: correlational Purpose: describe the development and implementation of a new diabetes prevention intervention that combines the benefits of family support with the group office model</p>	<p>n: 45 Demographics: Participants: MA 45; F 74%; White 56.9%, Hispanic 37.9% Support person: MA: 45; F 79.3%; white 58.6%, Hispanic 37.9% Setting: group outpatient Exclusion: pregnancy, inability to attend regularly or participate in group activities Inclusion: A 18-70 yo with any DM risk factor; no DM; a support person aged 14-70 yo Attrition: 11%</p>	<p>PV: effectiveness of a group outpatient DM prevention model DV1: participation DV2: retention DV3: attendance DV4: billing and sustainability</p>	<p>Pedometer and pedometer log Scale</p>	<p>Descriptive statistics for demographics and DVs</p>	<p>DV1: 53% learned about from family/friend, 15% healthcare professional, 14% letter, 10% brochure/poster in clinic, 5% brochure/poster in library/gym, 0% newspaper; DV2: n=14 (7 pairs); significantly younger than those who attended at least 1 session (37.0 +/- 7.9yrs vs. 47.9 +/- 12.2 years, p= .001); more likely to have lower education (p= 0.46), be on Medicaid (p= .002); 35% completed were Hispanic/Latino, 64.2% were Mexican American DV3: 72% (8.3-100%) DV4: 2.6 patients/hour</p>	<p>LOE: IV Strengths: All Hispanic participants completed the program demonstrating a program fit; aim to enroll more Hispanic participants met. Weaknesses: Recruitment of more than one support person not successful; C not included which may have aided in participation; Less than 1/5 were on Medicaid; Those who did not complete had highest risk factors. Conclusions: Model effective for Hispanic population; targeting those with obesity or family history of DM effective recruitment; time spent in clinic similar to family medicine; Group visits a sustainable model for DM prevention.</p>

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Sorkin et al. (2014) Dyadic Collaboration in Shared Health Behavior Change: The Effects of a Randomized Trial to Test and Lifestyle Intervention for High-Risk Latinas Country: USA Funding: National Center for Research Resources and the National Center for Advancing Translational Sciences, NIH through Grants UL1 TR000153, R34DK08350	Actor-Partner Interdependence Models	Design: RCT Purpose: to conduct a pilot test of a theory-driven, culturally responsive, behavioral lifestyle intervention designed to promote weight loss and improve dietary behavior among high-risk Mexican American women	n: 178 Intervention: 53 HM, 53 C Control: 36 HM, 36 C Demographics: <\$30,000/year: 94% HM: MA 52.7; < high school education 83% Daughters: MA 27.8; < high school 25%; lived with HM 75% Setting: community Exclusion: pregnancy, contraindications to weight loss, incompetent to sign consent Inclusion: Latina age >= 18yo, MH residence <= 25 miles of daughter, HM with DM, daughters with BMI >= 25 Attrition: 3.9%	IV: feasibility of Unidas program DV1: social support DV2: social control – persuasion DV3: social control - pressure DV4: undermining DV5: weight DV6: average grams DV7: grams saturated fat DV8: fruit, cup equivalent DV9: vegetable, cup equivalent	Self-report questionnaire: demographics, health status, social support (Cronbach’s alpha: T1 0.91, T2 0.93), persuasion (Cronbach’s alpha T1 0.93, T2 0.92) pressure (Cronbach’s alpha T1 0.89, T2 0.85); dietary intake Sabotage subscale of the Family and Friends Support for Heart Healthy Eating Habits scale for Undermining (Cronbach’s alpha T1 0.88, T2 0.87) Block “Alive” Screener (validated for	Paired sample t tests chi-square analyses ANOVA p<.05 Confidence Interval = 95%	IV on DV5: -1.61, p= .003 IV on DV6: -7.67, p<.001 IV on DV7: -1.30, p= .004 IV on DV8: -.12, p= .09 IV on DV9: 0.10, p= .12 DV1: HM i: T1 3.8 (SD 1.7), T2 4.8 (SD1.5); HM c T1 3.7 (SD 1.9), T2 3.9 (SD 1.4); C i: T13.7 (SD 1.4), T2 4.8 (SD 1.2); c T1 3.5 (SD 1.7), T2 3.4 (SD 1.6) DV2: HM i: T1 4.0 (SD 1.9), T2 4.9 (SD 1.5); HM c T1 3.7 (SD 1.5), T2 3.8 (SD 1.8); C i: T1 3.7 (SD 1.5), T2 4.8 (SD 1.1); c T1 3.4 (SD 1.6), T2 3.6 (SD 1.6) DV3: HM i: T1 2.9 (SD 1.6), T2 2.8 (SD1.6); HM c T1 2.4 (SD 1.6), T2 3.3 (SD 1.5); C i: T1 3.0 (SD 1.7), T2 3.0 (SD 1.7); c T1 2.7 (SD 1.6), T2 2.9 (SD 1.6) DV4: HM i: T1 1.6 (SD 1.4), T2 0.8 (SD1.0); HM c T1 0.9 (SD 1.2), T2 0.7 (SD 0.7); C i: T1 1.5 (SD 1.1), T2 1.0 (SD 1.1); c T1 1.9 (SD 1.3), T2 1.7 (SD 1.2) DV5: HM i: T1 176.2 (SD 37.6), T2 172.6 (SD 36.4); HM c T1 179.4 (SD 38.8), T2 180.7 (SD 41.1); C i: T1	LOE: II Strengths: Effective program for low income individuals with unique needs and barriers; dyadic approach demonstrated to have significantly lower weight, lower glycemic load and saturated fat when compared to c. Weaknesses: Low response rate to study participation; No significant findings related to diet-related support, control and undermining by participants; Follow up not more extensive due to nature of study focus; Unable to determine effectiveness of dyadic approach versus individual approach. Conclusions: Lifestyle changes of one family member may influence other family members.

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<p>0, and K01DK07893 9. Bias: none noted</p>					<p>Hispanic populations) SECA 882 portable scale for weight</p>		<p>186.0 (SD 32.7), T2 181.4 (SD 30.7); c T1 188.2 (SD 41.5), T2 186.6 (SD 42.5) DV6: HM i: T1 46.3 (SD 27.4), T2 32.3 (SD 19.1); HM c T1 42.2 (SD 20.9), T2 50.4 (SD 13.6); C i: T1 52.0 (SD 40.3), T2 36.2 (SD 23.3); c T1 73.8 (SD 43.3), T2 52.9 (SD 28.0) DV7: HM i: T1 9.6 (SD 5.4), T2 7.2 (SD 4.0); HM c T1 9.2 (SD 4.4), T2 10.6 (SD 5.7); C i: T1 12.0 (SD 5.9), T2 8.6 (SD 5.5); c T1 16.7 (SD 10.2), T2 12.6 (SD 7.3) DV8: HM i: T1 1.3 (SD 1.2), T2 0.9 (SD 0.6); HM c T1 1.3 (SD 1.0), T2 1.6 (SD 1.0); C i: T1 1.1 (SD 1.0), T2 1.2 (SD 1.0); C c T1 1.4 (SD 1.1), T2 1.2 (SD 0.9) DV9: HM i: T1 1.1 (SD 0.8), T2 1.4 (SD 1.0); HM c T1 1.2 (SD 1.0), T2 1.5 (SD 0.8); C i: T1 0.8 (SD 0.5), T2 1.3 (SD 1.0); c T1 1.0 (SD 0.8), T2 0.7 (SD 0.5)</p>	
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Citation	Theory/ Conceptual Framework	Design/ Method	Sample/Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Quality/LOE; Decision/Application for practice
Sung-Chan et al. (2013) Family-Based models for childhood-obesity intervention: A Systematic Review of Randomized Controlled Trials Country: China (N=1) USA (N=14) Funding: Hong Kong Research Grant Council and the Fulbright Research Grant (2011-12) Bias: none noted	Behavior Modification Theory, Behavioral Change Theory, SCLT, FST	Design: SR Purpose: to examine the advancement in the family-based approach to childhood obesity through studying the methodological rigor of family based interventions	N: 15 Demographics: MA: 10.1yo N, no control: 14 N with BI: 53% N with BI and education: 33% N with family therapy: 7% N with BI and family therapy: 7% Average rigor score: 8 (6-12) Setting: not specified Exclusion: not listed Inclusion: 1975-2012 articles in Cumulative Index to Nursing and Allied Health Literature, Family & Society Studies Worldwide, PsycINFO, PubMed, Social Work Abstracts, and SocINDEX; RCTs from family-based lifestyle interventions or weight loss and weight control in	IV1: methodological rigor IV2: effectiveness of treatment DV1: BI to family-based lifestyle intervention (N=8) DV2: BI to family-based lifestyle intervention and parent education (N= 5) DV3: family therapy (N= 1) DV4: family therapy and behavioral psycho-education (N= 1)	Adapted Methodological Quality Rating Scales (0-14 points)	Inferred to be correlational	IV1 on DV1: \bar{X} = 7.5; FST \bar{X} = 9.5 (N= 2), treatment effect = 2.5; behavior theory \bar{X} = 7.7 (N=13), treatment effect = 3.2 IV1 on DV2: \bar{X} = 8 IV1 on DV3: \bar{X} = 11 IV1 on DV4: \bar{X} = 8; all studies demonstrate substantial change at end of study (score=3), and 4 demonstrate significant changes at follow up (score= 4) IV2 on DV1: \bar{X} = 3.5 IV2 on DV2: \bar{X} = 2.6 IV2 on DV3: score= 4 IV2 on DV4: score= 1	LOE: I Strengths: BI and family based model demonstrate consistently positive results related to effectiveness when compared to methodological rigor. Weaknesses: Studies did not address culture, family resilience, or family dynamics. Gender not evaluated in all studies. Conclusions: Family based model effective for weight loss in children; Family plays important role in weight loss; Behavioral approach to a family based intervention consistently achieve better outcomes.

Key: **A:** adult; **APA:** American Psychological Association; **BI:** behavioral intervention; **BMI:** body mass index; **c:** control; **C:** child(ren); **CA:** cancer; **CBT:** Cognitive Behavioral Theory; **DM:** Diabetes Mellitus; **DV:** dependent variable; **F:** female; **FND:** foundation; **FST:** Family Systems Theory; **FQHC:** Federally Qualified Health Center; **HBM:** Health Belief Model; **HM:** Hispanic mother(s); **HPM:** Health Promotion Model; **HTN:** hypertension; **i:** intervention; **IV:** independent variable; **LOE:** level of evidence; **MA:** mean age; **N:** number of studies; **n:** number of participants; **NIH:** National Institutes of Health; **p:** alpha value; **PA:** physical activity; **PS:** pilot study; **PV:** predictor variable; **RCT:** Randomized Controlled Trial; **RWJF:** Robert Wood Johnson Foundation; **SCLT:** Social Cognitive Learning Theory; **SD:** standard deviation; **SR:** Systematic Review; **SS:** Spanish Speaking; **SSB:** sugar sweetened beverages; **SMM:** sequential mixed methods; **SW:** Southwester; **T1:** pre-test; **T2:** post-test; **U:** university; **USA:** United States of America; **WIC:** Women, Infants and Children; \bar{x} : mean; **YO:** year(s) old

			children and adolescents ages 2-19yo Attrition: not applicable					
--	--	--	--	--	--	--	--	--

Key: **A**: adult; **APA**: American Psychological Association; **BI**: behavioral intervention; **BMI**: body mass index; **c**: control; **C**: child(ren); **CA**: cancer; **CBT**: Cognitive Behavioral Theory; **DM**: Diabetes Mellitus; **DV**: dependent variable; **F**: female; **FND**: foundation; **FST**: Family Systems Theory; **FQHC**: Federally Qualified Health Center; **HBM**: Health Belief Model; **HM**: Hispanic mother(s); **HPM**: Health Promotion Model; **HTN**: hypertension; **i**: intervention; **IV**: independent variable; **LOE**: level of evidence; **MA**: mean age; **N**: number of studies; **n**: number of participants; **NIH**: National Institutes of Health; **p**: alpha value; **PA**: physical activity; **PS**: pilot study; **PV**: predictor variable; **RCT**: Randomized Controlled Trial; **RWJF**: Robert Wood Johnson Foundation; **SCLT**: Social Cognitive Learning Theory; **SD**: standard deviation; **SR**: Systematic Review; **SS**: Spanish Speaking; **SSB**: sugar sweetened beverages; **SMM**: sequential mixed methods; **SW**: Southwester; **T1**: pre-test; **T2**: post-test; **U**: university; **USA**: United States of America; **WIC**: Women, Infants and Children; \bar{x} : mean; **YO**: year(s) old

Table 2

Synthesis Table

Study Characteristics										
Author	Agne	Austin	Bender	Kramer	Li	Lindberg	Parra-Medina	Siwik	Sorkin	Sung-Chan
Year	2012	2013	2014	2013	2015	2011	2015	2012	2014	2013
Design	FG	QE	PS, SMM	NR, PPS	D	FG	QE	COR	RCT	SR
Level of Evidence	VI	IV	IV	IV	VI	VI	IV	IV	II	I
Sample Demographics										
N										15
n	25	100	A 43, C 43	27	4 F	25	A 242, C 106	45	Ai 53, c 36; Ci 53, c 36	C 982
Maternal Age, mean	38	45.07	27	32.7	28-42yrs	36		45	52.7	
C Age, mean			3.6		6-12yrs				27.8	10.1
% Hispanic	100	100	100	74	100	100	A 70.6, C 77.3	P 37.9, SP 37.9		
% Female	100		A 100, C 22				A 80.6, C 49.1	P 74, SP 79.3		
% Male			C 24%				A 19.4, C 50.9			
Overweight	48	20		37			A 18, C 16.5			
Obese	52	80		63			A 73.6, C 48.5			
Low SES			88		100				94	
% College graduate/some college		48		11.1						
% HS grad./some HS/GED/trade	16 grad. 92 some	52		22.2 grad. 14.8 some						
% <8 th grade			76	51.9		100			A 83, C 25	

Key: *: statistically significant finding; **A**: adult; **BI**: behavioral intervention; **BMI**: body mass index; **C**: child(ren); **c**: control; **COR**: correlational; **D**: descriptive; **F**: families; **FG** focus group; **FT**: family therapy; **GED**: general education diploma; **GL**: glycemic load; **grad**: graduate; **HS**: high school; **i**: intervention; **N**: number of studies; **n**: number of participants; **NR**: non-randomized; **P**: participant; **PA**: physical activity; **PS**: pilot study; **PPS**: prospective pilot study; **QE**: quasi-experimental; **RCT**: randomized controlled trial; **SMM**: sequential mixed methods; **SP**: support person; **SR**: systematic review; **SES**: socioeconomic status; **yrs**: years

ADDRESSING OBESITY

Measurements										
Audiotapes/notes	X					X				
Questionnaires	X		X	X	X				X	
PA scales		X								
BMI		X		X	X		X			
Food/PA log		X			X			X		
Waist circumference					X		X			
Weight				X		X	X		X	
Qualitative Variables of Interest										
Barriers:										
Health-related education	X					X				
Social isolation, depression, stress	X					X				
Values:										
Traditional Foods	X					X				
Family Involvement	X					X				
Health>appearance	X					X				
Quantitative Variables of Interest										
Effect of family or group on following:										
BMI				↓*	neutral		↓*		↓*	↓ BI neutral FT
Attendance		↑*	↑	neutral				↑		
Calorie goal		neutral			↓				↓*GL ↓*fat ↑vegetable ↓fruit	
PA goal		neutral		neutral						
Satisfaction			↑	↑						
Waist circumference					Not reported		A↓* C neutral			
Weight loss				↓*			↓*			

Key: *: statistically significant finding; **A**: adult; **BI**: behavioral intervention; **BMI**: body mass index; **C**: child(ren); **c**: control; **COR**: correlational; **D**: descriptive; **F**: families; **FG** focus group; **FT**: family therapy; **GED**: general education diploma; **GL**: glycemic load; **grad**: graduate; **HS**: high school; **i**: intervention; **N**: number of studies; **n**: number of participants; **NR**: non-randomized; **P**: participant; **PA**: physical activity; **PS**: pilot study; **PPS**: prospective pilot study; **QE**: quasi-experimental; **RCT**: randomized controlled trial; **SMM**: sequential mixed methods; **SP**: support person; **SR**: systematic review; **SES**: socioeconomic status; **yrs**: years

Appendix G

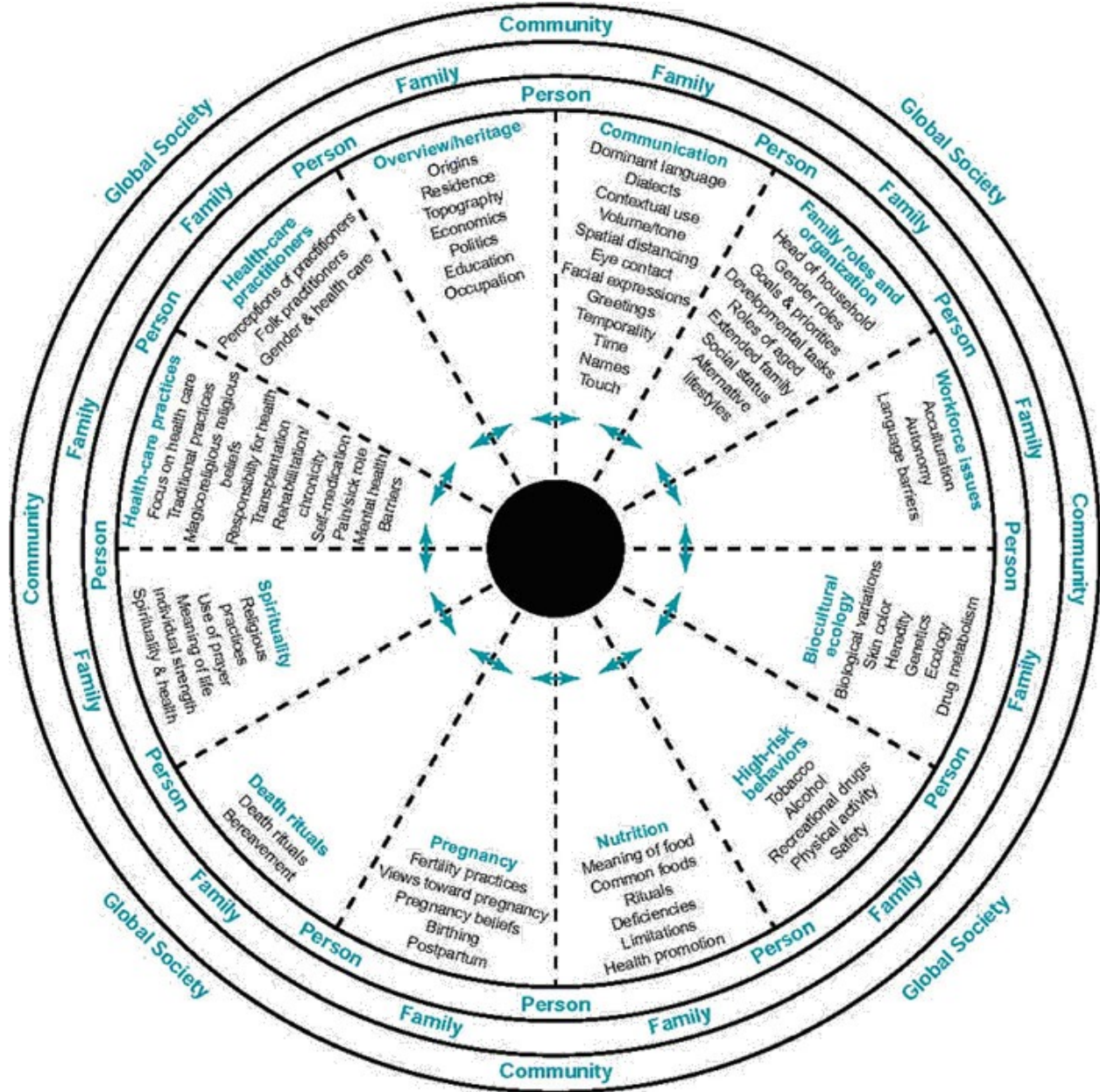


Figure 1. The Purnell Model for Cultural Competence comprised of the 12 culture domains (National Association for School Nurses. 2013). The outer rim represents global society; the second rim represents community; the third rim represents family; the inner rim represents person; the interior depicts 12 domains; and the center is empty, representing what is not yet know about culture. Adapted from “Purnell Model for Cultural Competence” by Larry Purnell, 2005, *The Journal of Multicultural Nursing & Health*, 11:2, p. 11

Appendix H

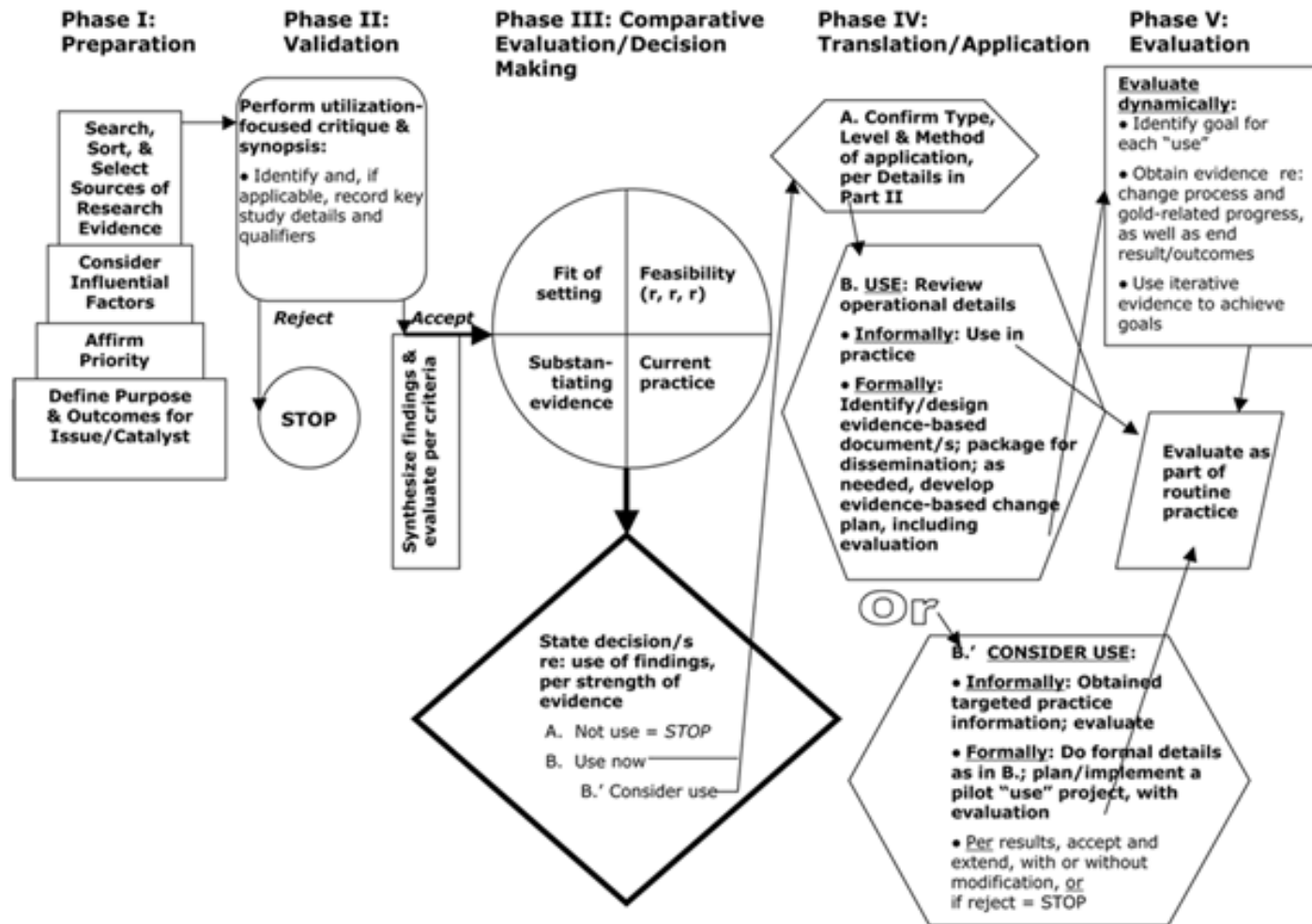


Figure 2. The Stetler Model. Adapted from “Updating the Stetler Model of Research Utilization to Facilitate Evidence-Based Practice,” by Cheryl B. Stetler, 2001, *Nursing Outlook*, 49(6), p. 27

Appendix I

Arizona State University Institutional Review Board Approval



APPROVAL: EXPEDITED REVIEW

Sarah Bay
CONHI - DNP

-

Sarah.Ambrose@asu.edu

Dear Sarah Bay:

On 8/8/2017 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Addressing Obesity in Hispanic Families Through a Family Centered Approach: An Educational Intervention for Providers
Investigator:	Sarah Bay
IRB ID:	STUDY00006618
Category of review:	(5) Data, documents, records, or specimens, (7)(a) Behavioral research
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none"> • Acknowledgment of Privacy Practices , Category: Other (to reflect anything not captured above); • Fotonovela Letter of Support, Category: Other (to reflect anything not captured above); • Provider Education Session Outline, Category: Other (to reflect anything not captured above); • Munson_HRP-503a, Category: IRB Protocol; • Fotonovela, Category: Participant materials (specific directions for them); • Cover Letter, Category: Recruitment Materials; • Midvale HIPAA Document, Category: Other (to reflect anything not captured above); • EBPAS Letter of Permission , Category: Other (to reflect anything not captured above); • EBPAS tool, Category: Measures (Survey questions/Interview questions /interview guides/focus

	<p>group questions);</p> <ul style="list-style-type: none"> • BMI Form, Category: Screening forms; • CITI Training Certificate , Category: Other (to reflect anything not captured above); • Provider Feedback Form, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Cover Letter, Category: Consent Form; • DNP Project Proposal Worksheet, Category: Other (to reflect anything not captured above); • Privacy Practices Form, Category: Other (to reflect anything not captured above); • Clinical Site Letter of Support, Category: Other (to reflect anything not captured above);
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The IRB approved the protocol from 8/8/2017 to 8/7/2018 inclusive. Three weeks before 8/7/2018 you are to submit a completed Continuing Review application and required attachments to request continuing approval or closure.

If continuing review approval is not granted before the expiration date of 8/7/2018 approval of this protocol expires on that date. When consent is appropriate, you must use final, watermarked versions available under the “Documents” tab in ERA-IRB.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc: Megan Munson
Megan Munson Johannah
Uriri-Glover Sarah Bay
Daniel Crawford

Appendix J

License For Use of Fotonovela



T 305-239-8881 |

holadoctor.net | holadoctor.com

2665 S Bayshore Dr, Suite 415, Coconut Grove, FL 33133

August 1, 2017

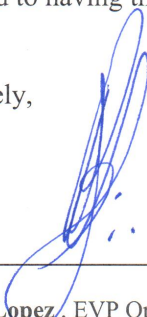
To whom it may concern,

On behalf of HolaDoctor, Inc. I'm very pleased to offer support to the evidence informed practice project entitled "Addressing Obesity in Hispanic Families Through a Family Centered Approach: An Educational Intervention for Providers", as proposed by Megan Munson, Arizona State University student.

In doing so, Holadoctor will allow Megan Munson offline usage rights to our Fotonovelas "Solo Se Vive Una Vez" as support material to her evidence informed practice project.

For our company it will be a pleasure to assist her in her project and we are looking forward to having the opportunity to review her results when available.

Sincerely,



Bruno Lopez, EVP Operations
blopez@holadoctor.net | M: 305.975.7604 | T: 305.239.8809

HolaDoctor, Inc.
holadoctor.com | holadoctor.net
2665 S Bayshore Dr, Coconut Grove, Suite 415 FL 33133



Appendix K

Evidence Based Practice Attitudes Scale

Evidence-Based Practice Attitude Scale ID: _____

EBPAS® Gregory A. Aarons, Ph.D.

Reference:

Aarons, G. A. (2004). Mental health provider attitudes toward adoption of evidence-based practice: The Evidence-Based Practice Attitude Scale. *Mental Health Services Research, 6*(2), 61-74.

The following questions ask about your feelings about using new types of therapy, interventions, or treatments. Manualized therapy refers to any intervention that has specific guidelines and/or components that are outlined in a manual and/or that are to be followed in a structured/predetermined way.

Fill in the circle indicating the extent to which you agree with each item using the following scale:

0	1	2	3	4
Not at All	To a Slight Extent	To a Moderate Extent	To a Great Extent	To a Very Great Extent

	0	1	2	3	4
1. I like to use new types of therapy/interventions to help my clients.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I am willing to try new types of therapy/interventions even if I have to follow a treatment manual.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I know better than academic researchers how to care for my clients.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I am willing to use new and different types of therapy/interventions developed by researchers.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Research based treatments/interventions are not clinically useful.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Clinical experience is more important than using manualized therapy/treatment.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I would not use manualized therapy/interventions.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I would try a new therapy/intervention even if it were very different from what I am used to doing.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For questions 9-15: If you received training in a therapy or intervention that was new to you, how likely would you be to adopt it if:					
9. it was intuitively appealing?.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. it "made sense" to you?.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. it was required by your supervisor?.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. it was required by your agency?.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. it was required by your state?.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. it was being used by colleagues who were happy with it?.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. you felt you had enough training to use it correctly?.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Official use only:

Data entry: _____

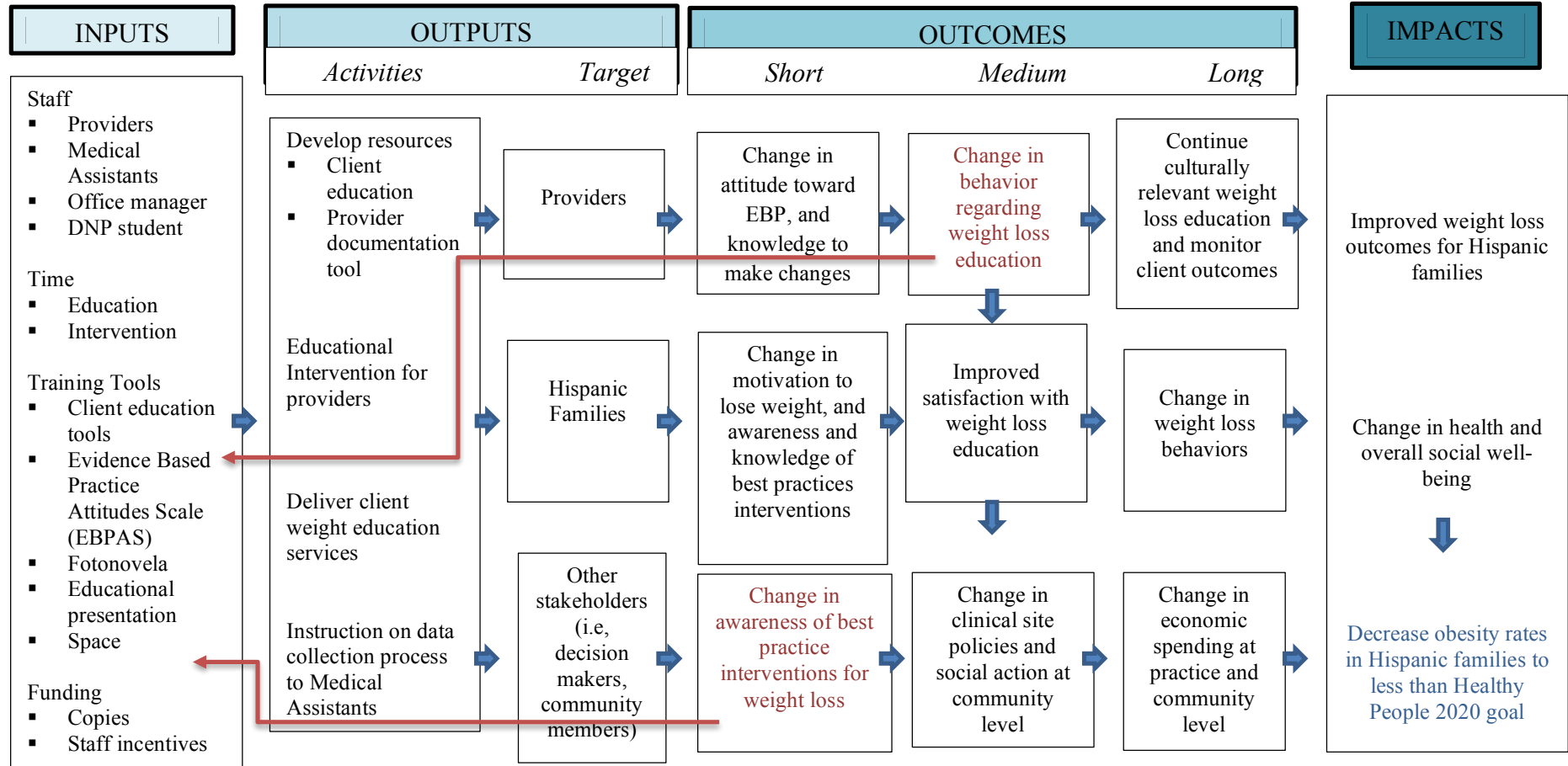
Data validation: _____

Data analysis: _____

Appendix L

Logic Model for a Provider Educational Module

Goal: To provide culturally relevant weight loss education to Hispanic families in a small rural health care clinic in Tucson, Arizona.



Assumptions:

1. Providers want their patients to meet their weight loss goals.
2. Data collection needed for this project is the same process as the current standard of care.
3. The evidence suggests that family centered weight loss interventions are culturally relevant and best practice (Davidson, Lawson, & Coatsworth, 2012; Sung-Chan, Sung, Zhao, & Brownson, 2012).

Key: Red text areas to monitor if not meeting targets; Red arrows depict areas to improve; Dark blue text is goal.



Purpose and Background

- Purpose of DNP project:
 - to integrate, synthesize, design and translate theory based nursing and interdisciplinary knowledge to develop a culturally sensitive clinical applied project and disseminate results.
 - to address obesity in an innovative way to encourage better health outcomes among Hispanics.
- Internal evidence, from Typhon patient case logs:
 - 78.5% of patients Hispanic
 - Top 6 ICD-10 codes entered:
 - E66.01 Obesity
 - E66.02 Excessive alcohol consumption
 - E66.03 Excessive eating
 - E66.04 Excessive drinking
 - E66.05 Excessive eating and drinking
 - E66.09 Obesity, unspecified
 - Consequences of Obesity
 - Diabetes Mellitus
 - Elevated blood glucose level
 - Gastroesophageal reflux disease
 - Major depressive disorder
 - Nutrition/exercise counseling provided to 87% of patients seen at Méjvale

Patient Education - Fotonovela

- Tell dramatic stories using photographs and simple dialogue with characters who overcome common health situations.
- Empower Hispanics by providing them with the knowledge, skills, and motivation to make informed decisions about disease prevention and help-seeking behaviors in a culturally relevant manner (Sandoval et al., 2013).

Project Implementation

- Fotonovela – You Only Live Once
 - Family centered, culturally adapted
 - English and Spanish versions available
 - Domains covered: nutrition, exercise, smoking cessation and weight loss
 - License for use donated by Kolaator.net and copies donated by DNP student
- BMI tracking forms:
 - Updated to include the Fotonovela and interventions commonly used
 - Used for data collection
 - De-identified; no patient or provider information
- Timeline
 - 4 weeks: November 3 – December 1, 2017
 - Brief provider feedback form at the end of intervention period, approx. 5 minutes
 - Data collection and presentation: Spring 2018, TBA



Next Steps

- Roles:
 - Providers:
 - Share Fotonovela with overweight or obese Hispanic patients of any age
 - Document what resources used in weight counseling on modified BMI form
 - Medical Assistants:
 - Share Fotonovela with overweight or obese Hispanic patients of any age
 - Keep rooms stocked with Fotonovela in English and Spanish
 - Keep providers stocked with Modified BMI forms used for data collection (use unique ID number on each form)
 - Office Staff:
 - Copy BMI forms using physical barrier to de-identify data
 - DNP Student:
 - Bring covered BMI
 - Be on site each Friday to collect forms and answer questions
- Please don't forget to fill out your post-education EBPAS and place in the yellow folder by Anita's office!

Appendix N

Fotonovela – English

4 STEPS TO GOOD HEALTH

LIFE STORIES

PRESENTS

WE CAN'T GO ON LIKE THIS!

YOU ONLY LIVE ONCE

IN THIS ISSUE!

IN GRANDMA'S KITCHEN THE FOOD IS DELICIOUS. BUT IS IT HEALTHY?

HE WORRIES ABOUT HIS GRANDSON'S HEALTH, BUT WHAT ABOUT HIS BAD HABIT? FIND OUT!

Donated by
Holadoctor & Megan Munson,
MSN-Ed, RN DNP Candidate

LIFE STORIES

PRESENTS

YOU ONLY LIVE ONCE

ACTORS



GRANDPA

Juan Cristóbal Castillo is an actor, director, composer, and playwright. He has worked in the film *Post tenebras lux* by Carlos Reygadas, which won Best Director in Cannes.



GRANDMA

Adriana Laffan, actress, has worked in 25 soap operas, including the greatly successful *El amor manda*, 30 plays, and six films.



DAUGHTER

Paulina Sabugal is a graduate of the Escuela Nacional de Arte Teatral of the Instituto Nacional de Bellas Artes in Mexico. She has acted in many theatrical productions.



FRIEND

Ana Maria Meza Escalante is an actress who studied in Mexico and Vancouver. She is currently participating in plays at *Casa azul* which are sponsored by Argos, one of the most important soap opera production companies in Mexico.



GRANDSON

Diego Fernandez Rodriguez in his acting debut.

PRODUCTION

EXECUTIVE PRODUCER

Angelica Lopez Antúnez has been a producer for over 25 years. She was nominated for the Pantalla de Cristal award—the Oscar of Mexico—for Best Casting Director for the film *El principio de la espiral*.

SCRIPTWRITERS

Gloria López Villaseñor held the position of Strategic Planner and Creative Director at JWThomson for 20 years. She's won numerous advertising awards in London and New York and was a finalist at Cannes.

Héctor Estrada, Senior Writer, has worked in multinational agencies for many renowned North American brands.

DIRECTOR OF PHOTOGRAPHY

Guadalupe Szymanski graduated from the Instituto de Estudios Fotográficos de Cataluña in Spain. She was a photographer for the Grupo Expansión in México.

CASTING DIRECTOR

Teresa Coria Bedolla has selected actors for more than 500 projects in both the United States and Mexico.

MAKE-UP ARTIST

Raquel Chavira has participated in both film and advertising projects. She worked in movies such as *Apocalypto* directed by Mel Gibson, *Frida* starring Salma Hayek, and *The far side of the world* starring Russell Crowe.

FOTONOVELA DESIGN

Andrés Felipe Prieto is the Vice President of Design & Usability for HolaDoctor.

LIFE STORIES PRESENTS

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PATY AND HER FRIEND LUZ GO ON THEIR USUAL MORNING RUN.



WHAT A WORKOUT!

I CAN'T THANK YOU ENOUGH FOR CONVINCING ME TO GO RUNNING WITH YOU. I FEEL SO MUCH BETTER, AND I'VE ALREADY LOST WEIGHT!



I KNOW, I CAN TELL! AND I'M SURE EVERYONE ELSE CAN, TOO, SO GET READY TO FEND OFF THE BOYS...



UGH, I CAN ONLY HOPE!



YOU'LL SEE! BUT YOU HAVE TO STICK TO WORKING OUT AND HEALTHY EATING.

OF COURSE—I FEEL GREAT!

I WISH MY MOM UNDERSTOOD HOW IMPORTANT THIS IS TO LEADING A BETTER LIFE. I KEEP TRYING TO GET HER TO CHANGE HER HABITS...

SOONER OR LATER SHE'LL REALIZE IT, TRUST ME.

I'LL SEE YOU TOMORROW.

PHYSICAL ACTIVITY IS ESSENTIAL TO MAINTAINING A HEALTHY LIFESTYLE. IT HELPS YOU LOSE WEIGHT AND DEVELOP STRONG BONES, MUSCLES, AND JOINTS, AS WELL AS IMPROVING YOUR SELF-ESTEEM AND COGNITIVE SKILLS.

CHANGING YOUR HABITS? ALWAYS A POSSIBILITY!

Stress, a sedentary lifestyle, and an inadequate diet are the main factors contributing to heart disease, diabetes, high blood pressure, and obesity.

START LIVING WELL
Hereditary predisposition to certain illnesses is something we can battle, but we have to start by changing our way of life.

CUT SUGAR & SALT CONSUMPTION
This will help you lose weight. Say goodbye to your saltshaker for good, and rinse canned goods in order to eliminate or limit sodium content.

TAKE A WALK
Going for a walk with your family will help you lose weight and strengthen family bonds.

PRACTICE YOUR PASSIONS
Every day, dedicate some time to do what you love. If you feel like you're too busy, start by limiting time spent in front of your computer screen.

MODERATION
Start by drinking a little less alcohol, and cut down portion sizes gradually.

And above all...
HUG IT OUT!
Hug your friends and family members, and ask them to hug you—it's by far one of the most therapeutic activities yet.

FUENTE: www.holadactor.com

IN THE EVENING AT PATY'S HOUSE, HER MOTHER AURORA PREPARES DINNER.



SAUSAGE, BACON, POTATOES...



AND I EVEN MADE THAT PIE MY GRANDSON IS CRAZY ABOUT!

MOM...DO YOU HAVE ANY IDEA HOW MANY CALORIES AND HOW MUCH FAT IS IN ALL THIS?

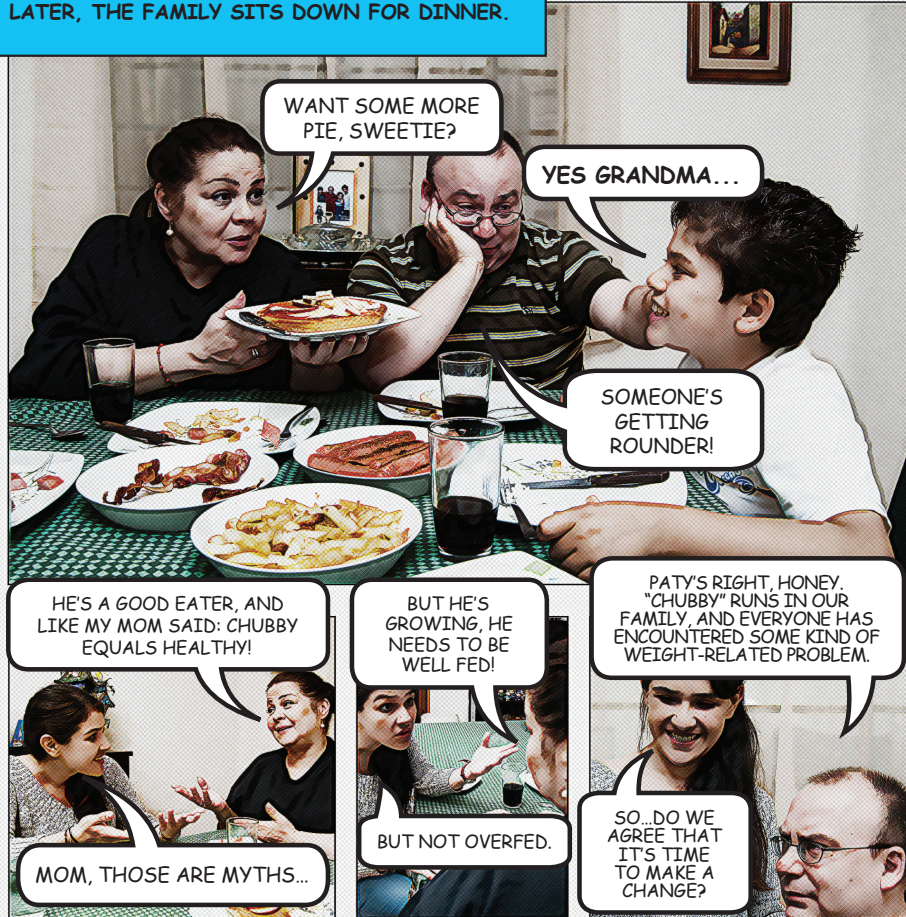


IF YOU DON'T WANT ANY, THERE'S VEGGIES AND FRUITS IN THE FRIDGE FOR YOU.





LATER, THE FAMILY SITS DOWN FOR DINNER.



CHILDHOOD OBESITY CAN BE THE CAUSE OF TYPE 2 DIABETES, HIGH BLOOD PRESSURE AND HIGH CHOLESTEROL. CONTROL YOUR AND YOUR FAMILY'S WEIGHT WITH A BALANCED DIET AND REGULAR PHYSICAL ACTIVITY.

LATER, SAMUEL AND PEPE WATCH A MOVIE TOGETHER.

GRANDPA, WHY DO YOU SMOKE?

BECAUSE I LIKE IT.

BUT...ISN'T IT BAD FOR YOU?

I SUPPOSE IT IS...

SO, WHY DO YOU DO IT THEN?

WELL MY BOY, I JUST CAN'T QUIT.

BUT...MY MOM SAYS THAT THE SMOKE COULD MAKE YOU SICK, AND I REALLY DON'T WANT ANYTHING TO HAPPEN TO YOU...PLEASE DON'T SMOKE, GRANDPA...

THERE'S A LOT OF WAYS TO STOP SMOKING. IF YOU'VE ALREADY DECIDED TO QUIT, REACH OUT TO YOUR DOCTOR OR MEDICAL PROVIDER TO DISCUSS TREATMENT AND MEDICATION OPTIONS THAT WILL HELP YOU SUCCEED.

SIX MONTHS LATER...



WE HAVE A LOT TO CELEBRATE TODAY.

I'VE ALREADY LOST 20 POUNDS, AND I LEARNED TO EAT HEALTHILY. I EVEN ENJOY SALADS! AND I REALLY ENJOY MY DAILY WALKS.



TODAY, IT HAS BEEN FIVE MONTHS SINCE I QUIT SMOKING. AND I FEEL 10 YEARS YOUNGER.

AND I AM SO PROUD OF BOTH OF YOU...



GRANDPA! BET YOU CAN'T CATCH UP WITH ME!



TO LEAD A HEALTHY LIFE: EXERCISE. IMPROVE YOUR EATING HABITS. CONTROL YOUR WEIGHT AND QUIT SMOKING.

THE END.

RESOURCES

WEBSITES

MYPLATE:

<https://www.choosemyplate.gov/MyPlate>

SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP):

<https://www.fns.usda.gov/snap>

UNDERSTANDING NUTRITION FACTS LABEL:

<https://www.fda.gov/food/ingredientspackaginglabeling>

SUPER TRACKER: MY FOODS. MY FITNESS. MY HEALTH:

<https://www.supertracker.usda.gov>

CALIFORNIA DEPARTMENT OF PUBLIC HEALTH - RECIPES:

<https://archive.cdph.ca.gov/HealthInfo/healthyliving/nutrition/recipes>

FREE APPLICATIONS FOR IPHONE AND ANDROID

MYFITNESSPAL:

Whether you want to lose weight, tone up, get healthy, change your habits, or start a new diet, you'll love MyFitnessPal.

RUNKEEPER:

Everyone. Ever run. Join the community that helps people get out the door and stick with running forever! Track exercise, set goals, sweat, and see progress along the way.

PACER:

Download the free app that will help you get active, lose weight, live longer, and feel better.

LOCAL RESOURCES

BOUNTIFUL BASKETS FOOD COOP:

www.bountifulbaskets.org

MARKET ON THE MOVE:

<http://the3000club.org/wordpress/marketonthemove/>

COMMUNITY FOOD BANK:

<https://www.communityfoodbank.org>

DIET OF HOPE: Referral needed for HMO, Tricare and AHCCCS. **Ask your provider!**

www.dietofhope.org | Phone: 520.696.3438

Appendix O

Fotonovela - Spanish

4 PASOS PARA UNA BUENA SALUD

HISTORIAS DE VIDA

PRESENTA

¡NO
PODEMOS,
SEGUIR ASÍ!

SOLO SE VIVE
UNA VEZ

¡EN ESTA EDICIÓN!



EN LA COCINA DE LA
ABUELA SE COCINA
MUY RICO. ¡RICO EN
GRASA Y CALORÍAS!



EL ABUELO SE
PREOCUPA POR LA
SALUD DE SU NIETO.
¿PERO Y QUÉ PASA
CON LA SALUD DE ÉL?

Donated by
**Holadoctor &
Megan Munson,**
MSN-Ed, RN DNP Candidate

HISTORIAS DE VIDA

PRESENTA

SOLO SE VIVE UNA VEZ

ACTORES



ABUELO

Juan Cristóbal Castillo es actor, director, compositor y dramaturgo. En cine trabajó en *Post tenebras lux* de Carlos Reygadas, película que ganó mejor dirección en Cannes.



ABUELA

Adriana Laffan, actriz, trabajó en 25 telenovelas, tales como la exitosa *El amor manda*, 30 obras de teatro y 6 películas.



HIJA

Paulina Sabugal, graduada de la Escuela Nacional de Arte Teatral del Instituto Nacional de Bellas Artes, ha trabajado como actriz en varias obras de teatro.



AMIGA

Ana María Meza Escalante, actriz formada en México y Vancouver, actualmente se presenta en obras montadas en Casa Azul bajo el auspicio de Argos, una de las mayores productoras de telenovelas en México.



NIETO

Diego Fernández Rodríguez, debut.

PRODUCCIÓN

PRODUCTORA EJECUTIVA

Angélica López Antúnez, productora durante más de 25 años. Nominada para recibir un Pantalla de Cristal – equivalente al Óscar de México – como mejor directora de casting por la película *El principio de la espiral*.

GUIONISTAS

Gloria López Villaseñor, directora Estratégica y Creativa por 20 años en JW Thompson. Ganadora en festivales publicitarios de Londres, Nueva York y finalista en Cannes.

Héctor Estrada, redactor senior, ha trabajado en agencias multinacionales para muchas de las más grandes marcas norteamericanas.

DIRECTORA DE FOTOGRAFÍA

Guadalupe Szymanski, graduada del Instituto de Estudios Fotográficos de Cataluña, España, y fotógrafa de Grupo Expansión de México.

DIRECTORA DE CASTING

Teresa Coria Bedolla ha trabajado en la selección de actores para más de 500 proyectos, tanto en Estados Unidos como en México.

MAQUILLISTA

Raquel Chavira trabajó en proyectos de cine y publicidad, como la película *Apocalypto* de Mel Gibson y *Frida* con Salma Hayek, al igual que en *The far side of the world* con Russell Crowe.

DISEÑO DE FOTONOVELA

Andrés Felipe Prieto es Vicepresidente de Diseño y Usabilidad para HolaDoctor.

LIFE STORIES PRESENTA

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COMO TODAS LAS MAÑANAS, PATY Y SU AMIGA LUZ SE EJERCITAN...



UFF..ESTUVO BUENO EL EJERCICIO...



SÍ AMIGA, NO SABES CUÁNTO TE AGRADEZCO QUE ME HAYAS CONVENCIDO DE VENIR A CORRER CONTIGO, ME SIENTO MUY BIEN Y YA BAJÉ DE PESO...



SE TE NOTA, ASÍ QUE PREPÁRATE PORQUE LOS GALANÉS TE VAN A SOBRAR...



DIOS TE OIGA, AMIGA...



YA VERÁS, PERO NO DEJES DE HACER EJERCICIO Y DE COMER SANAMENTE ¿EH?

CLARO QUE NO, ME GUSTA SENTIRME Y VERME ASÍ..

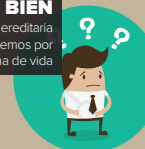


EL CAMBIO DE HÁBITOS SIEMPRE ES POSIBLE

El estrés, el sedentarismo, la mala alimentación son los mayores contribuyentes al desarrollo de enfermedades como las cardiopatías, la diabetes, la presión alta y la obesidad

COMIENZA A VIVIR BIEN

Si queremos neutralizar la carga hereditaria de nuestras enfermedades, empecemos por cambiar nuestra forma de vida



PRACTICA TUS PASIONES

Tómate un tiempo cada día para hacer lo que te gusta y si crees que estás muy ocupado comienza por alejarte de la computadora



CORTA EL AZÚCAR Y LA SAL

Esto te ayudará a bajar de peso. Dile adiós al salero, lava los alimentos enlatados para sacarles el sodio



CAMINA

Salir a caminar con tu familia ayuda a bajar de peso y mejora las relaciones con la familia

MODERACIÓN

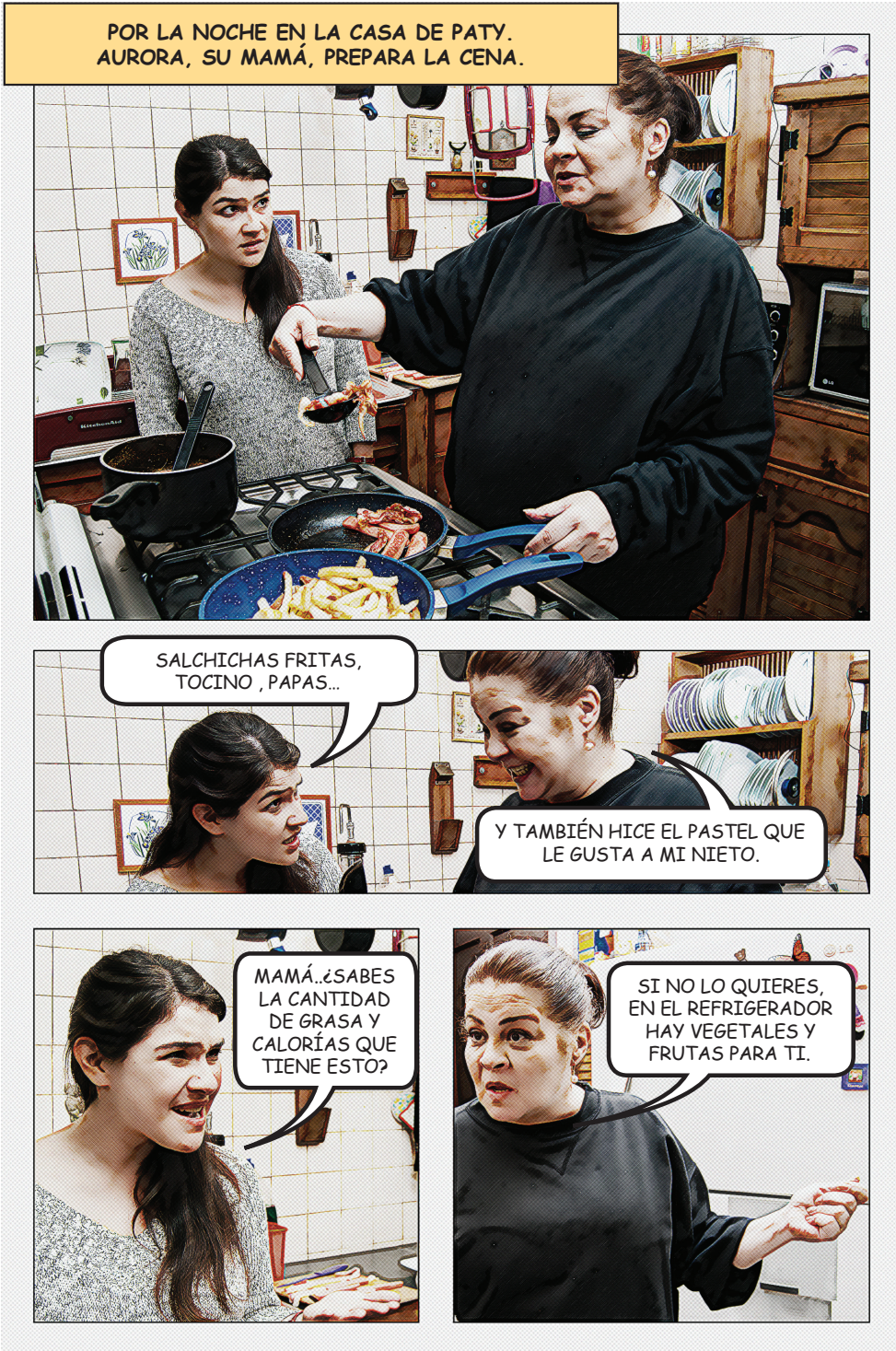
Comienza a beber cada día menos y reduce las porciones de a poco

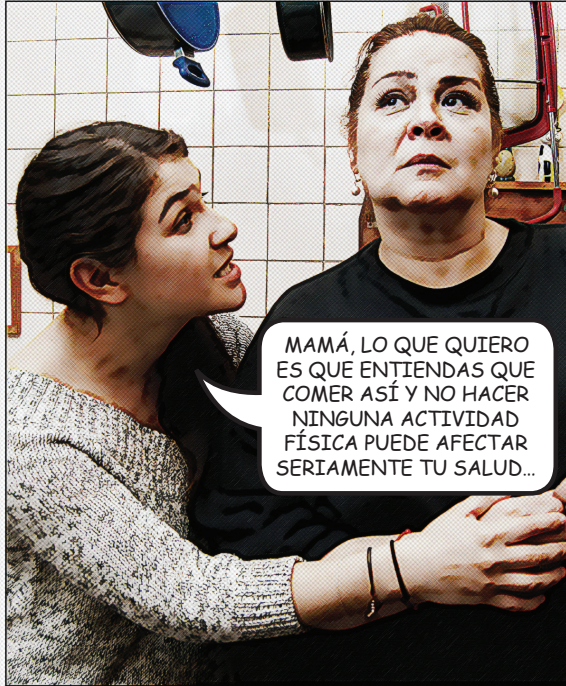


Y sobre todo
¡ABRAZA!
Y pide que te abracen en familia y entre amigos. Es una de las mejores terapias para el alma que haya existido.



FUENTE:
www.holadoctor.com





MAMÁ, LO QUE QUIERO ES QUE ENTIENDAS QUE COMER ASÍ Y NO HACER NINGUNA ACTIVIDAD FÍSICA PUEDE AFECTAR SERIAMENTE TU SALUD...



YO ESTOY BIEN...



NO LO ESTÁS, SE TE SUBE LA PRESIÓN SÉGUIDO, DAS DOS PASOS Y TE CANSAS, ASÍ QUE SI QUIERES DISFRUTAR A TU NIETO DEBES COMER SANAMENTE Y BAJAR DE PESO.



LA ALIMENTACIÓN ES CLAVE PARA TENER UNA VIDA SALUDABLE Y EVITAR EL SOBREPESO Y LA OBESIDAD. INCLUYE EN TU DIETA VEGETALES, FRUTAS, GRANOS INTEGRALES Y PRODUCTOS LÁCTEOS BAJOS EN GRASA. NO FRIAS LOS ALIMENTOS, CONSUMELOS A LA PARRILLA O AL HORNO. LIMITA EL CONSUMO DE ALIMENTOS ALTOS EN COLESTEROL, SODIO Y AZÚCAR AGREGADA.

MÁS TARDE LA FAMILIA SE REUNE A CENAR.

¿QUIERES MÁS PASTEL, MI HIJO?

SI ABUE...

TE ESTÁS PONIENDO CACHETÓN...

ESTÁ BIEN ALIMENTADO, COMO DECÍA MI MAMÁ: NIÑO GORDITO, NIÑO SANITO...

ESO SON MITOS MAMÁ...

PERO ESTÁ CRECIENDO, HAY QUE ALIMENTARLO...

ALIMENTARLO NO ES ENGORDARLO MAMÁ...

ENTONCES.. ¿NO CREEN QUE YA ES HORA DE CAMBIAR NUESTROS HABITOS?

PATY TIENE RAZÓN VIEJA, EN NUESTRA FAMILIA HAY MUCHO GORDITO Y TODOS HAN TENIDO PROBLEMAS DE SALUD POR EL PESO.

LA OBESIDAD INFANTIL PUEDE OCASIONAR AFECCIONES COMO LA DIABETES TIPO 2, ALTO NIVEL DE COLESTEROL EN LA SANGRE E HIPERTENSIÓN ARTERIAL. CONTROLA TU PESO Y EL DE TU FAMILIA CON UNA DIETA BALANCEADA Y ACTIVIDAD FÍSICA DIARIA.

MÁS TARDE, SAMUEL Y PEPE VEN UNA PELÍCULA.

¿POR QUÉ FUMAS ABUELITO?

PORQUE ME GUSTA

PERO ES MALO..¿NO?

BUENO..SI..

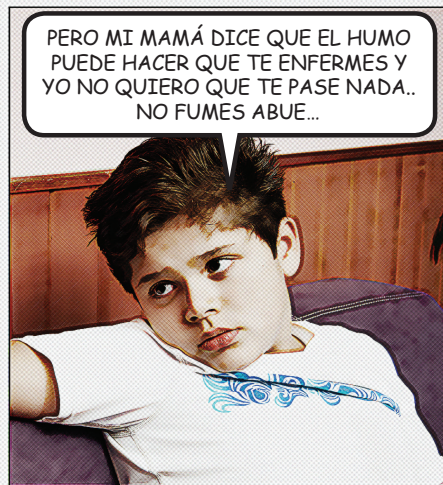
ENTONCES...¿POR QUÉ LO HACES?

AY HIJO, ES QUE NO PUEDO DEJARLO..

PERO MI MAMÁ DICE QUE EL HUMO PUEDE HACER QUE TE ENFERMES Y YO NO QUIERO QUE TE PASE NADA.. NO FUMES ABUE...

HAY MUCHOS MÉTODOS PARA DEJAR DE FUMAR. SI YA DECIDISTE HACERLO, HABLA CON TU MÉDICO O PROVEEDOR DE ATENCIÓN MÉDICA PARA QUE TE ASESORE SOBRE LOS TRATAMIENTOS Y MEDICAMENTOS QUE TE AYUDARÁN A LOGRARLO.

MÁS TARDE, SAMUEL Y PEPE VEN UNA PELÍCULA.



HAY MUCHOS MÉTODOS PARA DEJAR DE FUMAR. SI YA DECIDISTE HACERLO, HABLA CON TU MÉDICO O PROVEEDOR DE ATENCIÓN MÉDICA PARA QUE TE ASESORE SOBRE LOS TRATAMIENTOS Y MEDICAMENTOS QUE TE AYUDARÁN A LOGRARLO.

RECURSOS

DIRECCIONES WEB

MIPLATO:

<https://www.choosemyplate.gov/multilanguage-spanish>

MIDIETA:

<http://midieta.com>

PROGRAMA DE SNAP:

<https://www.fns.usda.gov/es/snap/programa-de-snap>

LA ETIQUETA DE INFORMACIÓN NUTRICIONAL:

<https://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm268173.htm>

DEPARTAMENTO DE SALÚD PUBLICA DE CALIFORNIA - RECETAS:

<https://archive.cdph.ca.gov/HealthInfo/healthyliving/nutrition/recipes>

APLICACIONES GRATUITAS PARA IPHONE Y ANDROID

MYFITNESSPAL:

Si desea perder peso, tonificar, mantenerse sano, cambiar sus hábitos o comenzar una nueva dieta, le encantará MyFitnessPal.

RUNKEEPER:

Todo el mundo. Siempre corre. Únete a la comunidad que ayuda a las personas a salir por la puerta y seguir con la ejecución para siempre! Seguimiento de ejercicio, establecer metas, sudor, y ver el progreso en el camino.

PACER:

Descargue la aplicación gratuita que le ayudará a mantenerse activo, perder peso, vivir más tiempo y sentirse mejor.

MIDIETA: Menú semanal personalizado para bajar de peso, con recetas simples y deliciosas, y monitoreo diario de tu peso!

RECURSOS LOCALES

BOUNTIFUL BASKETS FOOD COOP:

www.bountifulbaskets.org

MARKET ON THE MOVE:

<http://the3000club.org/wordpress/marketonthemove/>

COMMUNITY FOOD BANK:

<https://www.communityfoodbank.org>

DIET OF HOPE: Referencia para HMO, Tricare y AHCCCS. **iPregúntele a su proveedor!**

www.dietofhope.org | Teléfono: 520.696.3438

Appendix P

BMI Documentation Form

ID: _____

BMI Screening and Follow Up Plan

BMI: _____

BMI (ages 0-20)

- <5th percentile
- 5th - <85th percentile
- 85th - <95th percentile
- >= 95th percentile

- Underweight
- Normal weight
- Overweight
- Obese

BMI (ages 21-64)

- <18.4
- 18.5-24.9
- 25-29.9
- 30-39.9
- 40+

- Underweight
- Normal weight
- Overweight
- Obese
- Morbidly obese

BMI (ages 65+)

- <22.9
- 23-29.9
- 30-39.9
- 40+

- Underweight
- Normal weight
- Overweight
- Morbidly obese

Treatment Plan:

- MyPlate
- Increase aerobic activity
- No skipping meals/Eat 3 meals per day
- Calorie counts: _____
- MyFitnessPal
- Avoid/eliminate sugary drinks
- Increase fiber
- Increase protein
- Increase fruits/vegetables
- Decrease fat intake/low cholesterol diet
- Decrease sweets/desserts
- DASH diet
- Low-carb/Diabetic diet
- Fotonovela – You Only Live Once
- Other (describe):

Official use only:

Data entry: _____ Data validation: _____ Data analysis: _____

Appendix Q

Provider Feedback Form

ID: _____

Provider Feedback Form

Disclaimer: Please consider providing feedback related to the project titled, “Addressing Obesity in Hispanic Families Through a Family Centered Approach: An Educational Intervention for Providers”, as completed by Megan Munson, Arizona State University student. Your feedback on this project is optional. You may skip any questions you do not want to answer. Comments will be confidential and will remain anonymous. Thank you for your participation.

Directions: Please rate your level of agreement with the following statements by marking the corresponding box.

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1. I understood the purpose of the project.					
2. The resources provided were helpful.					
3. Using the Fotonovela did not increase the amount of time I spent educating clients.					
4. My clients responded positively to the Fotonovela.					
5. I would consider using a Fotonovela in the future for client education on other topics.					

Please provide feedback on the following questions:

1. What did you like about the project?
2. What did you not like about the project?
3. What would you change?

Additional comments:

Official use only:

Data entry: _____ Data validation: _____ Data analysis: _____

Appendix R

Projected Implementation Costs

Projected Costs	
Lunch and Learn meal for providers and staff	\$200-300
Copying supplies (paper, coping costs)	\$200-300
Cost for copies of BMI sheet at facility for data collection	\$50
Cost of using selected copyrighted tools	Free
Travel to site for meetings, implementation, evaluation	\$35
Student time for preparing presentations and creating forms; ordering and obtaining copies; presenting project	Approximately 10 hours
Student time for obtaining culturally relevant resources in English and Spanish (when available)	Approximately 5 hours
Provider, MA and Office staff time	1 hour during lunch and minimal for implementation
	Approximate total: \$685

Appendix S

Global Attitude Toward Adopting Evidence Based Practice

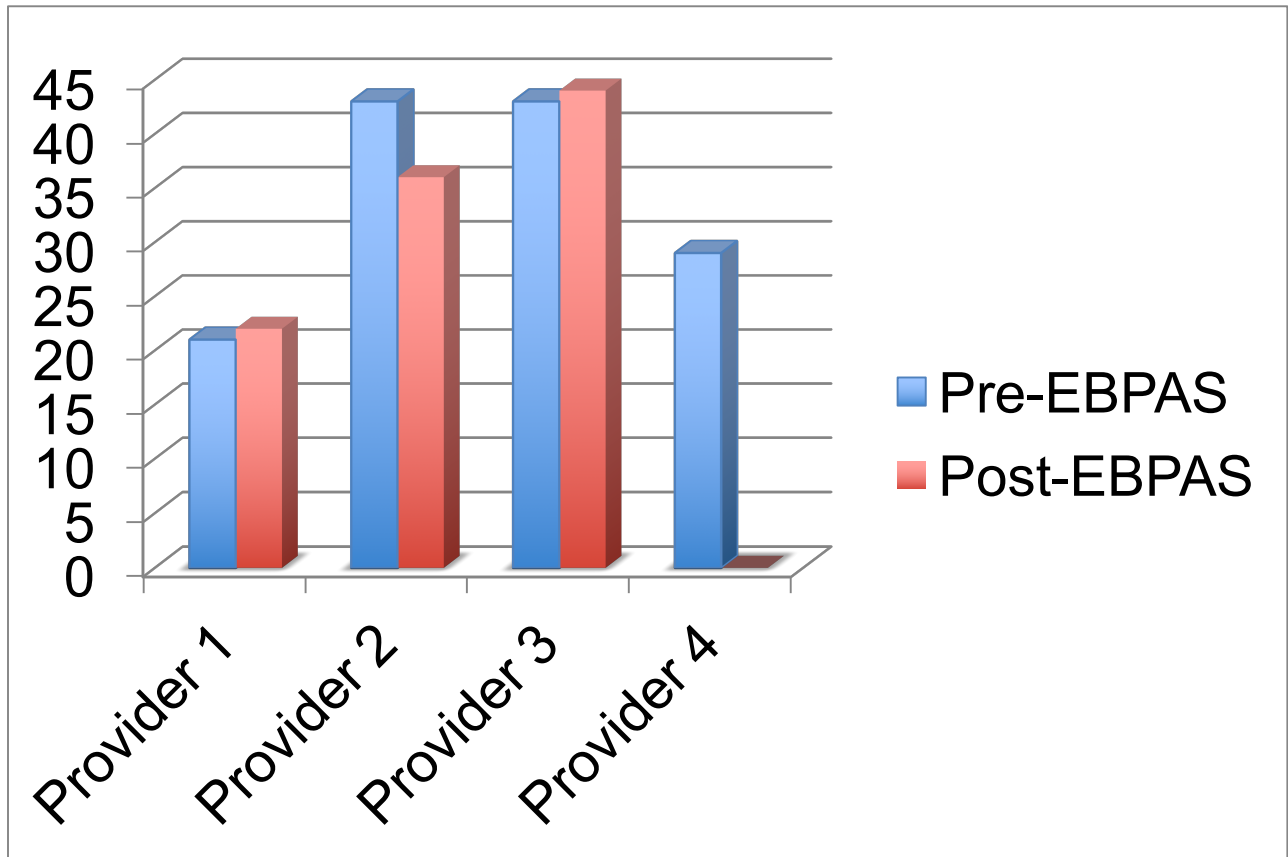


Figure 1. Overall provider attitude toward adopting evidence based practice comparing pre- to post- scores.

Appendix T

Pre- to Post-EBPAS Divergence Scores

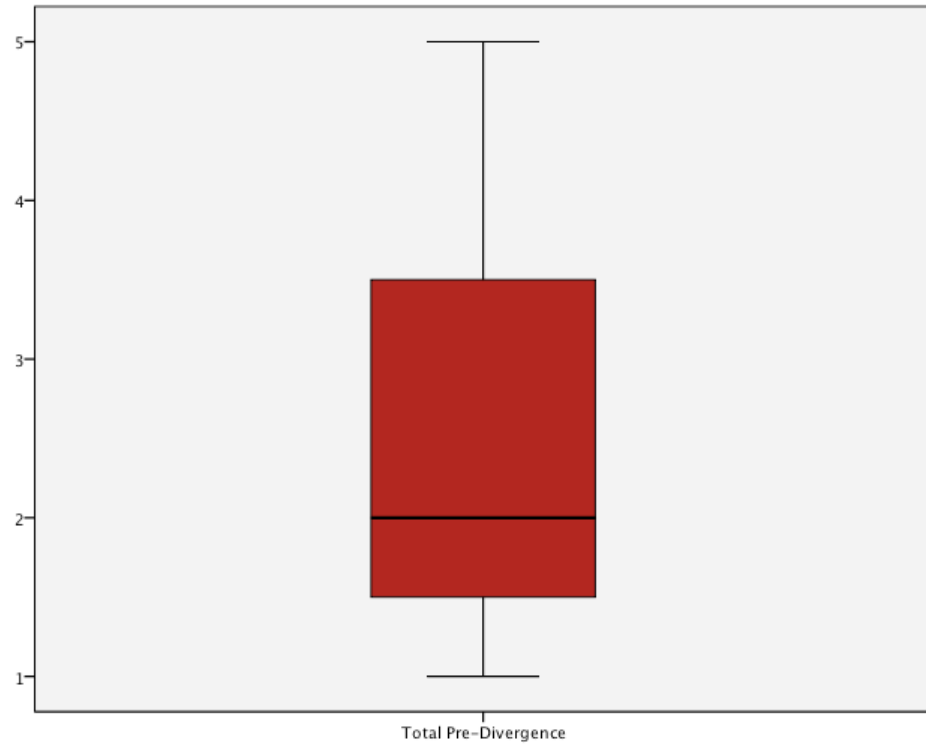


Figure 1. Total pre-divergence scores.

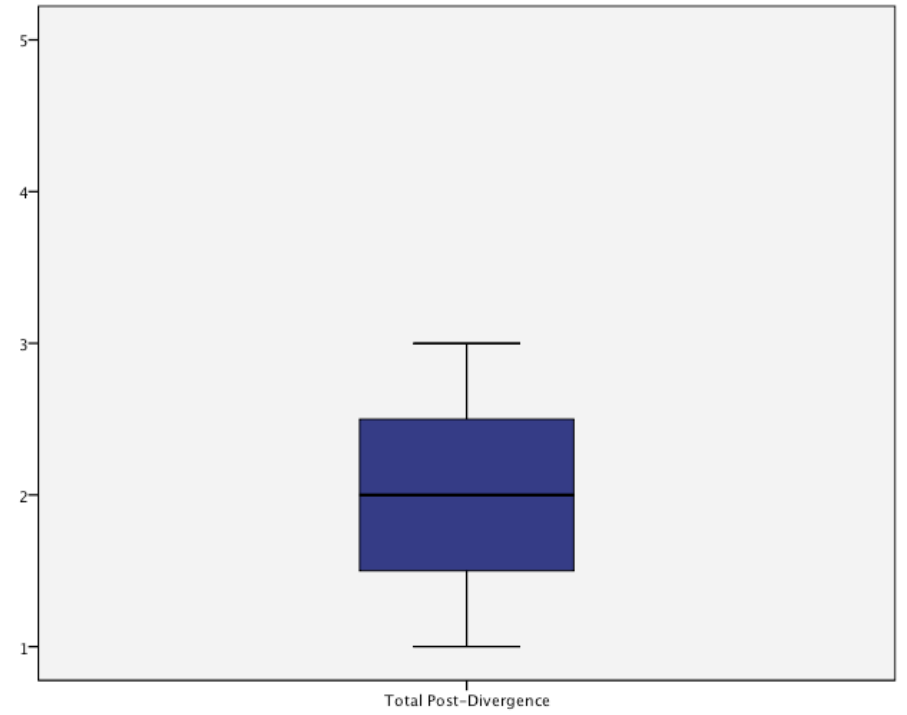


Figure 2. Total post-divergence scores.

Appendix U

Pre- to Post-EBPAS Appeal Scores

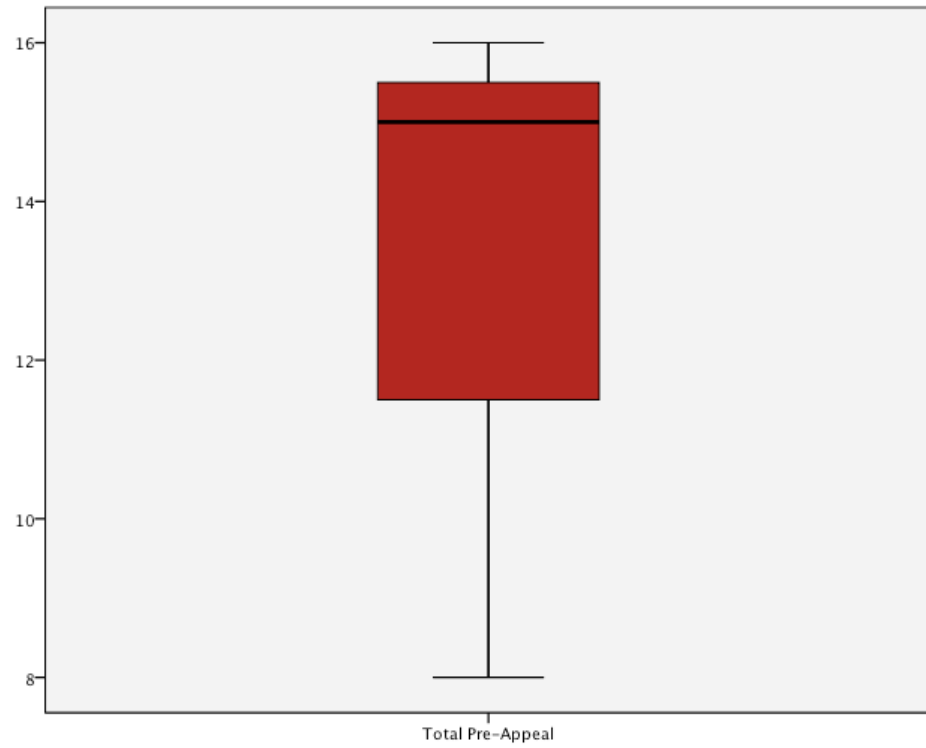


Figure 1. Total pre-appeal scores.

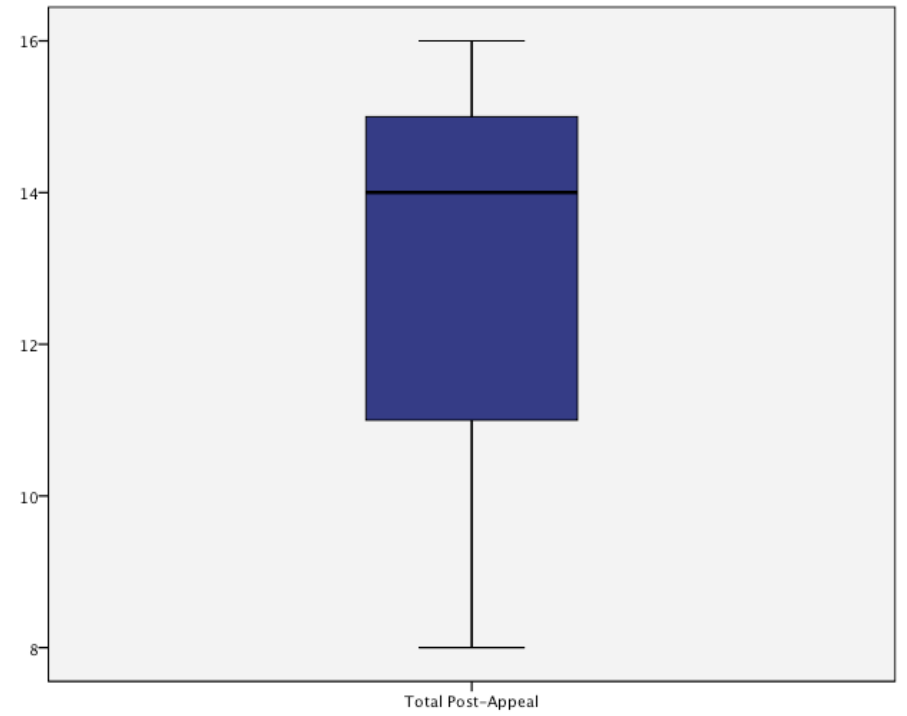


Figure 2. Total post-appeal scores.

Appendix V

Pre- to Post-EBPAS Requirement Scores

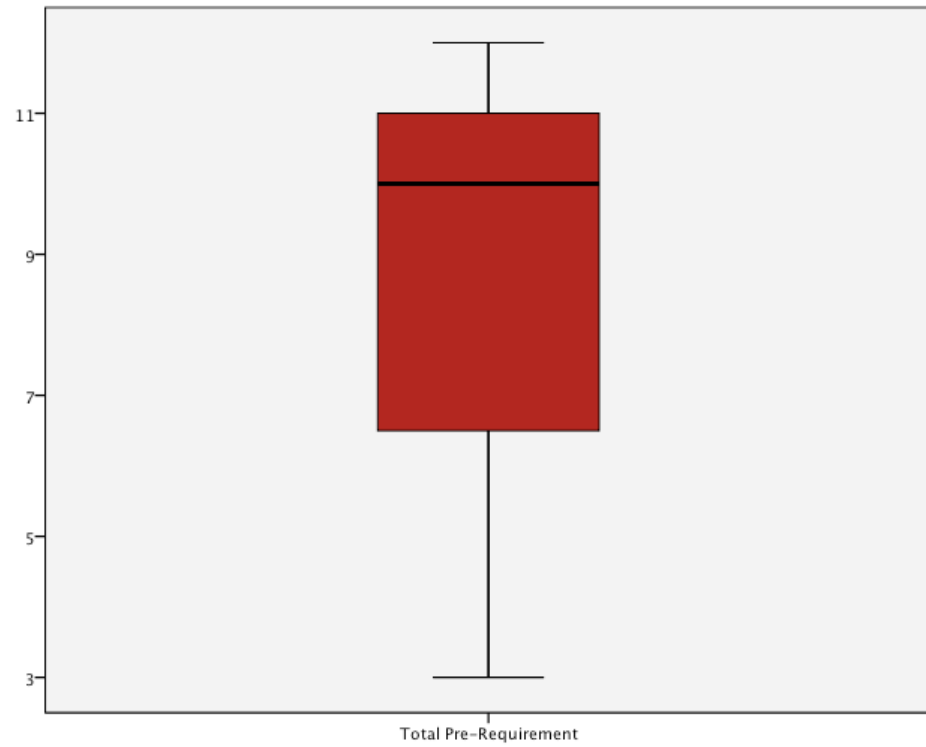


Figure 1. Total pre-requirement scores.

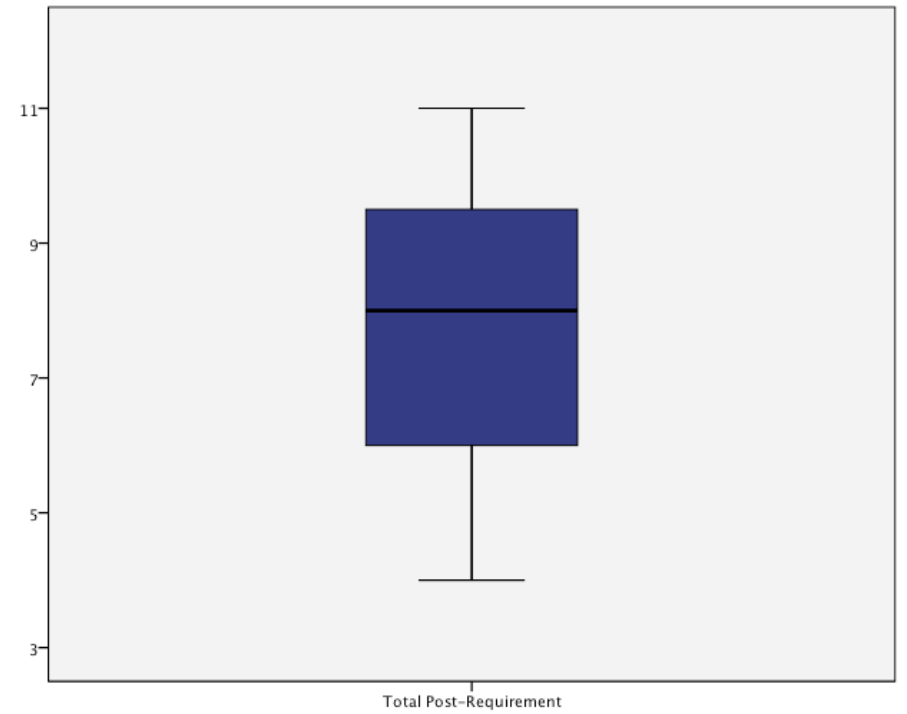


Figure 2. Total post-requirement scores.

Appendix W

Pre- to Post-EBPAS Openness Scores

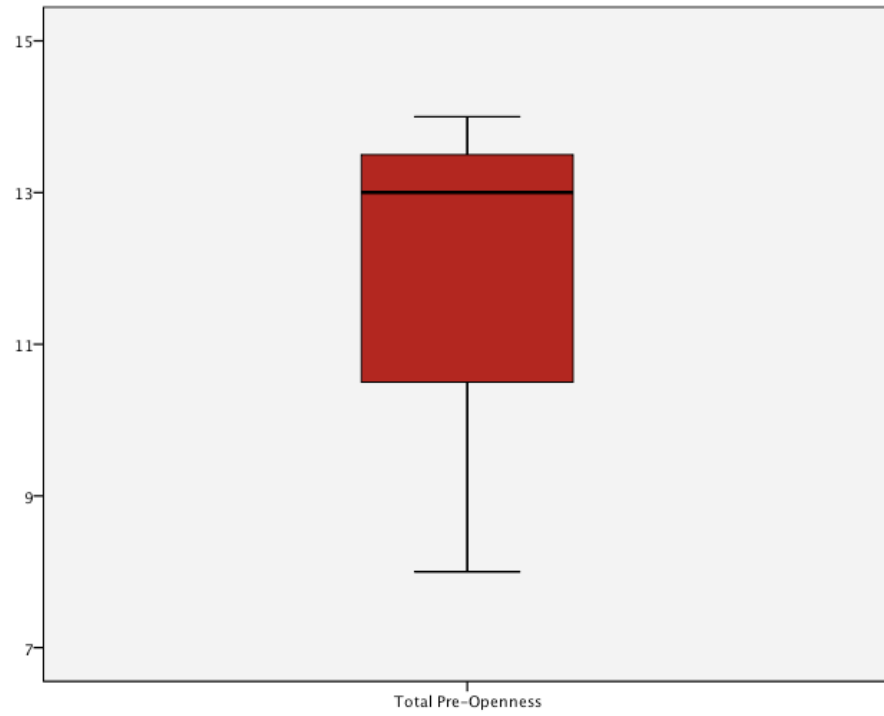


Figure 1. Total pre-openness scores.

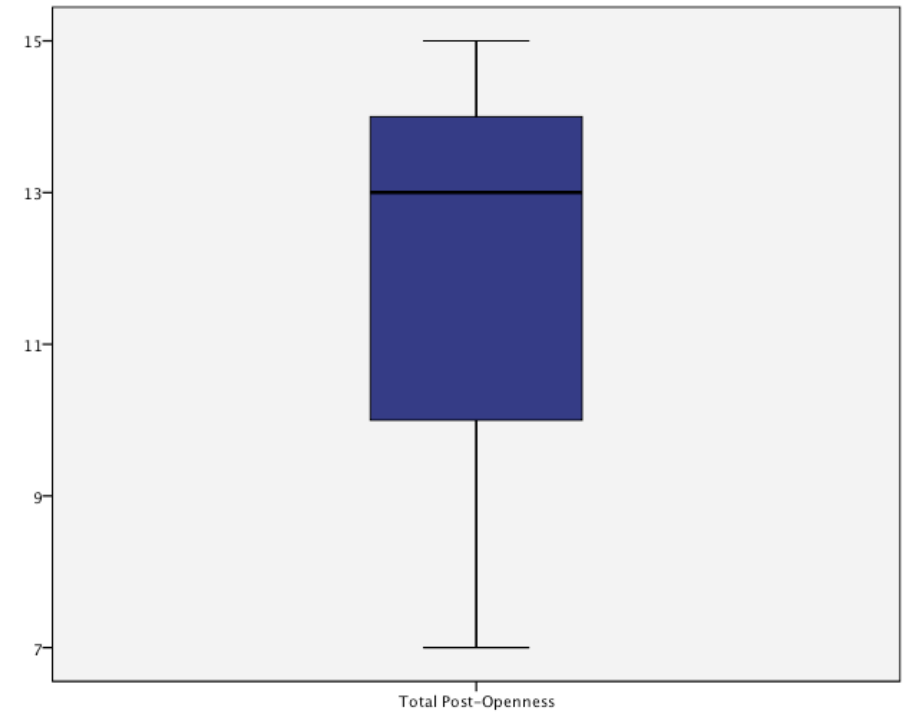


Figure 2. Total post-openness scores.

Appendix X

BMI Documentation Form Frequencies

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
BMI	15	26.78	46.78	36.0580	6.29804
Pediatric_BMI	1	2.00	2.00	2.0000	.
Adult_BMI	13	2.00	4.00	3.0769	.75955
Elderly_BMI	1	2.00	2.00	2.0000	.
MyPlate	15	.00	1.00	.7333	.45774
Increased_aerobic_activity	15	.00	1.00	.4000	.50709
Skipping_meals_eat_3_meals_per_day	15	.00	1.00	.6000	.50709
Calorie_counts	15	.00	.00	.0000	.00000
MyFitnessPal	15	.00	1.00	.2000	.41404
Avoid_sugar_drinks	15	.00	1.00	.4000	.50709
Increase_fiber	15	.00	1.00	.0667	.25820
Increase_protein	15	.00	1.00	.1333	.35187
Increase_fruits_vegetables	15	.00	1.00	.3333	.48795
Decrease_fat	15	.00	1.00	.2667	.45774
Decrease_sweets_deserts	15	.00	1.00	.2000	.41404
DASH_diet	15	.00	.00	.0000	.00000
Low_carb_diabetic_diet	15	.00	1.00	.0667	.25820
Fotnovela	15	.00	1.00	.5333	.51640
Null_normal_weight	0				
Valid N (listwise)	0				

Appendix Y

Provider Feedback Form Quantitative Data

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Q1_purpose	6	1.00	2.00	1.3333	.51640
Q2_resources	6	1.00	2.00	1.5000	.54772
Q3_time	6	1.00	4.00	2.8333	1.47196
Q4_positively	6	3.00	4.00	3.3333	.51640
Q5_use_in_future	6	1.00	5.00	2.6667	1.50555
Valid N (listwise)	6				