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Familias Unidas for Health and Wellness: Adapting an evidence-based substance use and sexual risk behavior intervention for obesity prevention in Hispanic adolescents

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Abstract

We describe the adaptation of Familias Unidas, an evidence-based substance use and sexual risk behavior intervention, for obesity prevention in Hispanic adolescents. Intervention developers and experts in pediatric obesity, exercise physiology, dietetics, and the local parks system provided input for changes. Hispanic families also provided input through a series of 21 focus groups conducted before, during, and after an initial pilot test of the adapted intervention. After transcribing audiotaped sessions, we used a general inductive approach and *Dedoose* qualitative software to derive themes. Results indicated the need for improved health-related family functioning, enhanced nutrition education and skill building, increased family engagement in physical activity, and stronger links between family and environmental supports. Parents who participated in the pilot test expressed high enthusiasm for hands-on nutrition training and reported improvements in family functioning. Adolescents liked outdoor physical activities but wanted parents to be more engaged in joint physical activity sessions. The adapted intervention maintains fidelity to Familias Unidas' core theoretical elements and overall structure, but also includes content focused on physical activity and nutrition, adolescent participation in physical activity sessions led by park coaches, and joint parent-adolescent participation in physical activity and nutrition skill-building activities.

Keywords

Family functioning; Obesity; Intervention; Prevention; Hispanic

Introduction

Forty-two percent of Hispanic youth, compared to 30% of non-Hispanic Whites, are overweight or obese (body mass index [BMI] > 85th percentile for age and sex; Ogden et al.,

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2016; Skinner, Perrin, & Skelton, 2016). Although engaging in physical activity and consuming a healthy diet reduces the risk for obesity, only 26% of Hispanic adolescents meet recommendations that they should be physically active for 60 minutes per day (Kann et al., 2014), and their dietary intakes consist of high levels of saturated fat and added sugar, and low levels of fruits and vegetables (Wilson, Adolph, & Butte, 2009). Improving physical activity and dietary behaviors, and thereby preventing obesity among Hispanic youth, is thus a significant public health priority.

Previously efficacious preventive interventions for other health risk behaviors (e.g., substance use) in Hispanic adolescents have identified family functioning variables as key mechanisms of change (Prado et al., 2007; Sandler, Ingram, Wolchik, Tein, & Winslow, 2015). Family functioning describes the health of a family system and is defined by the quality and degree of family cohesion, parental involvement, positive parenting, and family communication (Cordova, Huang, Lally, Estrada, & Prado, 2014). Greater family functioning (e.g., lower family conflict; more positive parenting practices, communication, and problem solving) has been positively associated with child and adolescent physical activity and fruit and vegetable intake in both cross-sectional (Atkin et al., 2015; Berge, Wall, Larson, Loth, & Neumark-Sztainer, 2013) and longitudinal studies (Lohaus, Vierhaus, & Ball, 2009; Montaño, Smith, Dishion, Shaw, & Wilson, 2015) and negatively associated with adolescent weight status and related biomarkers (e.g., cholesterol, HbA1c, glucose; Halliday, Palma, Mellor, Green, & Renzaho, 2014; Smith, Montaño, Maynard, & Miloh, 2017).

Family-based interventions that directly target family functioning generally work to improve family relationship dynamics, increase parental involvement and parents' use of positive parenting skills (e.g., parental monitoring, reinforcement), and increase clear and open family communication patterns. Previous research suggests these interventions exert their influence on youth obesity and related health behaviors both directly (e.g., Brotman et al., 2012; St. George, Wilson, Schneider, & Alia, 2013) or indirectly through improving parenting practices specific to diet and physical activity (e.g., providing healthy meals, reinforcing physical activity; Sleddens, Gerards, Thijs, Vries, & Kremers, 2011; Smith, Montano, Dishion, Shaw, & Wilson, 2015) and through fostering an environment more capable of supporting healthy lifestyles (e.g., lower stress; Rhee, 2008). Although family-based interventions may be particularly relevant for Hispanics due to "familismo," or a strong commitment to the family system (Toro-Morn, 2015), there is surprisingly little research examining the effects of family-based obesity prevention programs in this population (Branscum & Sharma, 2011; Leung, Cavalcanti, El Dada, Brown, Mateo, & Yeh, 2017).

In a review of obesity prevention interventions in Hispanic children and early adolescents published between 2000–2010, authors identified only nine intervention studies across this 10-year period (Branscum & Sharma, 2011). The only four studies to demonstrate positive effects targeted primarily overweight or obese Mexican American youth and were conducted in summer camp or school-based settings. The interventions were theoretically grounded in either behavioral or social cognitive theories, and as such, targeted behavioral skill building (e.g., goal-setting, self-monitoring, reinforcement). These interventions also included

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structured physical activity sessions and hands-on nutrition education as well as some form of parental involvement. For example, parents were invited to participate in periodic sessions (e.g., monthly) to learn strategies for preparing healthy meals and supporting physical activity in their children. Overall, these studies were largely exploratory or in the pilot stages of development and did not focus directly on the family system. The National Latino Childhood Obesity Research Agenda, which ranked family as the primary ecological target in the prevention of pediatric obesity among Hispanic youth, emphasized a need for increased family-focused obesity prevention intervention research in this population (Ramirez, Chalela, Gallion, Green, & Ottoson, 2011).

Since the Branscum & Sharma (2011) paper, a more recent systematic review has identified 11 additional obesity-related intervention studies among Hispanic youth ages 5–19 years old published between 2010–2015 (Leung et al., 2017). Consistent with the National Latino Childhood Obesity Research Agenda, the majority of these studies (8 of 11) included some sort of family-based component (e.g., monthly parent-only education sessions held at the child's school; weekly family sessions on healthy lifestyle behaviors without a specific focus on parenting or family functioning; intensive family-based behavioral treatment sessions that included training in behavior modification and positive parenting skills). The authors concluded that studies which included a family component, group-based nutrition education, and in-person physical activity sessions were the most promising. Notably, however, only four of these studies included adolescents (13 years old). Drawing from existing efficacious interventions conducted with Hispanic adolescents may thus serve to advance the field.

Familias Unidas

Familias Unidas is a family-based, parent-centered (i.e., parents as the primary "agents of change") intervention shown to be efficacious and effective in preventing or reducing substance use and sexual risk behaviors in Hispanic adolescents aged 12–16 years old across four randomized trials (Estrada et al., 2017; Prado & Pantin, 2011). These trials have been conducted in universal, selected, and indicated samples of youth (primarily 8th graders, with a primary caregiver willing to participate) and have retention rates >80% over 12- to 36-month periods. Significant intervention effects have been observed on adolescent substance use (e.g., illicit drugs, cigarettes) and unsafe sexual behavior (e.g., sex without condoms) trajectories over 12, 30, and 36 months (Estrada et al., 2017; Pantin et al., 2009; Prado et al., 2007, 2012). Familias Unidas has also had crossover effects on outcomes not directly targeted by the intervention (e.g., internalizing symptoms; Perrino et al., 2014; Vidot et al., 2016). Moreover, improvements in family functioning have mediated the effects of Familias Unidas on adolescent outcomes including problem behaviors and drug use (Prado & Pantin, 2011). Due to the intervention's efficacy and effectiveness, it is listed on multiple national registries of evidence-based programs, including Blueprints (Mihalic & Elliott, 2015).

Familias Unidas is theoretically grounded in the eco-developmental framework (Szapocznik & Coatsworth, 1999), a contextual schema that organizes risk and protective factors from the macrosystem (i.e., broad societal factors) to the microsystem (i.e., contexts in which the individual participates directly). The intervention thus addresses processes operating at multiple systemic levels including increasing parental involvement in adolescents' daily

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lives, improving parent-adolescent communication, fostering connections between the family and other relevant systems (e.g., peers, schools), and linking parents with external support.

Two bilingual facilitators deliver Familias Unidas across 12 sessions: eight parent-only groups and four family sessions. Facilitators conduct parent-only groups using a problem-posing, participatory learning format in which participants' active contribution to dialogue (vs. didactic lectures) forms the basis for acquiring positive parenting skills (namely, parent-adolescent communication and behavior management). These discussions empower parents to see themselves as the sources of the answers they need rather than as passive recipients of information and serve to enhance their understanding of their role in protecting adolescents from engaging in risky behaviors. To further promote skill building, parents engage in guided practice sessions and role-plays and are encouraged to provide one another with feedback and support. Family sessions complement parent-only group sessions by providing parents with structured opportunities to engage in planned discussions (e.g., parents' values about substance use and sex) with adolescents. Overall, because the intervention is driven by the process of improving family functioning, it readily lends itself to adaptation for other behaviors (in this case, physical activity and diet) known to be associated with family functioning as the mechanism of action.

Study Purpose

Based on literature documenting associations between family functioning and youth obesity-related behaviors, the lack of existing family-based obesity prevention interventions for Hispanic youth, and strong empirical support for Familias Unidas in modifying numerous adolescent risk behaviors through improvements in family functioning, Familias Unidas developers collaborated with experts in pediatric obesity and related fields (i.e., exercise physiology, nutrition, the local park system) to expand and adapt the intervention for obesity prevention. We describe the intervention adaptation process, which involved four phases. The first and second phases took place over the course of six months and involved conducting focus groups with parents and adolescents and making initial intervention adaptations. The third and fourth phases took place over the course of three months and involved conducting a pilot study of the adapted intervention, known as Familias Unidas for Health and Wellness, and making final intervention adaptations prior to an ongoing efficacy trial.

Phase 1: Initial Focus Groups

We conducted six focus groups to better understand Hispanic families' experiences (barriers, facilitators) consuming a healthy diet and leading an active lifestyle.

Participants

Parents (n=20; all but one female) and adolescents (n=20; 12 female; 8 immigrants; M_{age}=13.5 yr) were recruited using a convenience sampling strategy from seven middle schools in Miami-Dade County, Florida, each of which had a large Hispanic population (>70%). School counselors helped identify interested Hispanic families by visually selecting

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eighth grade students who appeared to be either overweight or obese using body silhouette images as visual guides (Stunkard, Sorensen, & Schulsinger, 1983). Counselors contacted parents of identified students via phone and invited them to participate.

Procedures

Prior to data collection, we obtained parental informed consent and adolescent assent. Parents and adolescents participated in separate focus group sessions held in school classrooms or indoor park facilities. One bilingual team member who had no prior relationship with participants led each focus group session in the preferred language of the group. Facilitators conducted parent and adolescent focus groups predominantly in Spanish and English, respectively, though several groups did occasionally switch between languages. Before each session, facilitators reviewed the purpose of the study, audio-recording procedures, and confidentiality. A separate facilitator took field notes during the only focus group where two facilitators were present. Facilitators used an open-ended question guide (see Table 1) with questions aimed at understanding participants' knowledge, opinions, and behaviors regarding nutrition and physical activity. Sessions lasted 38–77 min ($M = 55.2$, $SD = 15.9$), and an independent transcription agency transcribed audio recordings verbatim. We did not return transcripts to participants for comments; however, we invited families to participate in a pilot test of the intervention, which two families did. The University of Miami Institutional Review Board approved all study procedures.

Qualitative Analysis

We used a general inductive approach, or a systematic procedure that entails multiple readings and interpretations of study transcripts, to iteratively derive study themes (Thomas, 2006). In a general inductive approach, results emerge directly from the raw data and are thus organized based on participant responses and not a prefigured theoretical framework or an a priori structure. We first read all transcripts in detail to develop a preliminary codebook with numerous categories and themes reflective of participant responses. A team of six bilingual coders participated in six hours of didactic and hands-on training in qualitative data analysis. Throughout the training process, all members of the coding team provided input for codebook revisions. We split the coding team into pairs of raters, each of whom coded approximately two study transcripts in their original language using categories outlined in the codebook. The lead author coded a different study transcript with each member of the coding team. Each member of the coding pair independently coded each transcript prior to meeting with the other member of the coding pair. Raters then met to discuss coding, reach consensus on remaining discrepancies, and calculate percentage agreement as an indicator of inter-coder agreement. Raters consistently endorsed similar codes across transcripts, indicating the study reached data saturation. Initial percentage agreement on independently coded data for all coding pairs (79%) was adequate, and raters reached full consensus on all final codes. Research team members entered all final codes into *Dedoose*, a qualitative software program used to perform a content analysis of themes and to extract coded responses. The consolidated criteria for reporting qualitative research (COREQ) checklist guided the reporting of study methodology (Tong, Sainsbury, & Craig, 2007).

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Results

Rating pairs applied 40 codes 698 times. We then collapsed these codes into four broad themes reflective of potential intervention targets, including the need for: (1) improved health-related family functioning, (2) enhanced nutrition education and skill-building, (3) increased family engagement in physical activity, and (4) stronger links between the family and environmental supports. See Table 2 for participant quotes that correspond to the numbers in parentheses presented in the text below.

Theme 1: Need for improved health-related family functioning.—Parents described numerous challenges communicating with adolescents about exercise and nutrition (1.1., 1.2), and difficulties setting limits around unhealthy behaviors (1.3). “Combating” adolescent behavior was often so challenging that parents reported “giving in” to unhealthy habits (1.4). Adolescents expressed similar difficulties communicating with parents (1.5) and described challenges practicing healthy behaviors in their homes due to inconsistent social support (1.6).

Theme 2: Need for enhanced nutrition education and skill-building.—Although parents and adolescents demonstrated sound general knowledge of healthy versus unhealthy foods, they described difficulties putting this knowledge into practice (2.1). Both parents and adolescents expressed a desire to increase skills and in-depth knowledge related to sustaining healthier eating behaviors (2.2). Adolescents wanted to know more about “what’s a good balance between healthy food and junk food.” For parents, the preparation of healthy foods as well as strategies for introducing healthy foods to the family were described as priorities (2.3).

Theme 3: Need for increased family engagement in physical activity.—Parents and adolescents described instances where they engaged in physical activities, such as swimming, as a family. In these instances, adolescents reported enjoying the experience and feeling motivated by their parents’ support (3.1). These comments, however, contrasted to those of adolescents who perceived their parents to be disengaged from physical activity and “lazy all the time” (3.2).

Theme 4: Need to link family and environmental supports (e.g., schools, parks).—Parents and adolescents shared how schools and parks contributed to their health. Schools were described as having poor nutritional offerings (4.1), and parents reported hearing adolescent complaints about school foods (4.2). With regard to the park system, parents described low use of their local parks, despite having some knowledge about free programs available to them (4.3). This sentiment was echoed by adolescents who said they used to go to the parks but no longer did now that they are older. Perceived lack of safety was the most often cited barrier to park use (4.4, 4.5).

Initial Intervention Adaptations

Themes from the initial focus groups related to improving family functioning and linking families with environmental supports; these mapped on well to the eco-developmental framework and conceptual underpinnings of Familias Unidas. Themes related to increasing

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nutrition education and skill building and family engagement in physical activity provided the multidisciplinary study team with ideas for adaptations that could enhance the intervention's relevance for obesity prevention.

The study team, comprised of Familias Unidas developers and experts in pediatric obesity, exercise physiology, nutrition, and the local park system, conducted a review of the intervention prior to adaptation. Familias Unidas developers reviewed core intervention components with the group (e.g., building family cohesion, parental involvement, positive parenting, and family communication – see Prado & Pantin, 2011) and session-by-session content. They guided the adaptation process to ensure adaptations were consistent with the eco-developmental framework and the intervention's overall structure and delivery (e.g., combination of parent groups and family sessions, participatory learning and discussions, parental role plays). Experts in obesity and related fields participated in this process by providing suggestions for potential modifications (e.g., drawing from evidence-based physical activity curricula) and connecting the team with local health resources. See Table 3 for a summary of adaptations to intervention content, structure, and delivery.

Content Adaptations

We kept the substance use and sexual risk-taking content of the original intervention and added additional content related to physical activity and nutrition. For example, facilitators presented parents with rates of adolescent substance use as well as of adolescent obesity, physical activity, and nutrition behaviors. In addition, though all family-functioning related content (e.g., communication) remained consistent, we rewrote parent role-play scenarios used in both group and family sessions to address challenges specific to adolescent healthy lifestyle behaviors (e.g., ask a parent to respond to an adolescent who prefers to stay indoors playing video games rather than being active; ask a parent to respond to an adolescent who buys sugary beverages at school vending machines). Finally, we focused weekly family homework assignments more explicitly on encouraging families to engage in healthy lifestyle behaviors outside of sessions (e.g., prepare a healthy meal, go for a family walk).

Structure and Delivery Adaptations

Like the original Familias Unidas, two bilingual facilitators deliver the adapted intervention across 12 sessions (eight parent-only group sessions and four family sessions). However, we modified the structure and delivery of group sessions. Specifically, we condensed the content covered with parents during the original 2-h group sessions into 1.5 h. While parents participated in these facilitator-led sessions, adolescents participated in outdoor physical activities led by local park coaches already trained in Sports, Play, and Active Recreation (SPARK; Sallis et al., 1997), an evidence-based physical activity after school program. During the second hour of group sessions, we increased family engagement in healthy activities with both parents and adolescents present. Activities included hands-on nutrition education and training (i.e., cooking) facilitated by a local non-profit organization with experience serving the local Hispanic community, a park obstacle course, and fitness classes (i.e., yoga, Zumba) taught by certified instructors.

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Phase 3: Intervention Pilot Study

We next conducted a small pilot study to assess intervention feasibility and acceptability and inform further adaptations.

Participants

Parents (*n*=19, 18 female; 16 immigrants) and adolescents (*n*=19, 13 female; 8 immigrants; 8 overweight; 11 obese; M_{age}=13 yr) were recruited from four local schools. Eligible participants were Hispanic eighth graders in the overweight or obese weight range. School counselors identified potentially eligible students using body silhouettes as guides and referred them to the research team who invited them to participate by phone. Study staff members confirmed participant eligibility by taking objective measures of height and weight using a SECA 217 mobile stadiometer and SECA 869 digital scale, respectively. Parents completed both demographic and psychosocial measures of family functioning at baseline and post intervention.

Of the 19 families enrolled in the pilot study at baseline, 4 dropped out. Fifteen families participated in the intervention across four groups (4–6 families per group). Thirteen of these were present during the midpoint (i.e., session #5) and final sessions (i.e., session #8), during which focus groups were conducted to obtain participant feedback.

Parents who participated in the focus groups and completed post intervention measures (*n*=13; 12 female) had a mean age of 43.5 ±8.8 yr and an average body mass index (BMI) of 32.0±7.9 kg/m^2. Notably, 10 of the parents were overweight or obese. Adolescents (*n*=13; 8 female) had a mean age of 13.0±0.04 yr. Three were in the overweight range and ten were in the obese range.

Quantitative Measures of Family Functioning

Parents completed measures of family functioning (i.e., positive parenting, parental involvement, parental monitoring, family communication, and parent-adolescent communication) previously used across numerous Familias Unidas trials (e.g., Prado et al., 2007). We assessed positive parenting and parental involvement using their corresponding 9- and 16-item subscales, respectively, from the Parenting Practices Scale (Gorman-Smith, Tolan, Zelli, & Huesmann, 1996). We assessed peer monitoring using the 5-item Parent Relationship with Peer Group Scale (Pantin, 1996). We assessed family communication using the 3-item communication subscale from the Family Relations Scale (Tolan, Gorman-Smith, Huesmann, & Zelli, 1997). Finally, we assessed parent-adolescent communication using the 20-item Parent-Adolescent Communication Scale (Barnes & Olson, 1985). We conducted *t* tests to examine mean differences in family functioning variables at baseline versus post-intervention.

Qualitative Analysis

Bilingual research team members led 16 focus group sessions (four per site; two parent groups, two adolescent groups). Sessions lasted 17 to 50 min (M = 32.9, SD = 9.2), and a separate codebook was developed. Percentage agreement between the coding pairs on

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independent ratings (81%) was adequate, and raters reached full consensus on all final codes.

Results

Quantitative Data on Family Functioning.—Although means from four of the five family functioning variables increased from baseline to post intervention, these increases were not statistically significant (see Table 4).

Qualitative Data.—Rating pairs applied 57 codes 1,163 times. We then collapsed these codes into seven additional themes (the four earlier themes are listed in Table 2) reflective of parents' and adolescents' (separate) experiences with the intervention. Parent themes indicated they: (1) were engaged through the intervention content and social connections, (2) were enthusiastic about hands-on nutrition training, (3) perceived improvements in their family functioning and cohesion, and (4) valued the intervention social climate. Adolescent themes indicated they: (1) were enthusiastic about outdoor physical activities, (2) desired increased parental engagement in physical activity, and (3) appreciated having more time and improved relationships with their parents. See Table 5 for participant quotes that correspond to the numbers in parentheses presented in the text below.

Parent Theme 5: Engagement Though Intervention Content and Social Connections.—Parents described a high level of interest in the range of topics covered as well as in enhancing their social connections. Parents discussed their desire for their adolescents to increase healthy lifestyle behaviors and prevent risky behaviors (5.1). Parents also described the importance of ensuring a smooth adolescent transition from middle to high school and found topics like parent-adolescent communication to be particularly relevant (5.1, 5.2). Parents additionally reported that the intervention would serve as a place for them to share their parenting concerns and ideas with other parents, for their adolescents to spend time with youth their age, and for their family to spend time together (5.3, 5.4).

Parent Theme 6: Enthusiasm for Hands-on Nutrition Training.—Parents overwhelmingly reported enjoying the hands-on nutrition training activities, using words and phrases such as "spectacular," and "the best," to describe them (6.1). Other parents commented on how "incredible" it was that "the kids got involved in the preparation of meals." Aside from their interactive nature, parents commented on how much the nutrition activities contributed to increases in their knowledge and skills. When asked about what could be improved about nutrition activities, parents' comments indicated they liked the sessions so much, they wanted them to occur more frequently and be "more in-depth, more detailed."

Parent Theme 7: Perceived Improvements in Positive Parenting Skills and Family Cohesion.—Parents reported being pleased with the intervention's impact on their parenting skills and reported perceived improvements in family cohesion and communication (7.1). Parents also described thinking more strategically about how to go about becoming invested in their adolescents' "peer world" (7.2). Finally, parents described

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feeling "more united [with their adolescents]," and pleased that adolescents seemed to enjoy the increased time with them (7.3).

Parent Theme 8: Importance of Supportive Social Climate.—Parents' comments about the intervention social climate indicated that receiving support from other parents and facilitators was a valuable part of their experience (8.1). They described "great chemistry as a group," the importance of being able to "open their hearts to what is happening to [them] and to share it …for the benefit of others," and feeling "comfortable sharing with the friends [they] made." Parents noted that the information and emotional support provided by facilitators contributed to this positive climate and described facilitators as having "fluidity in their conversation" and as knowing how to "express themselves well outside of the manuals." They also reported that adolescents had positive experiences with other adolescents and felt a "connection" with park coaches.

Adolescent Theme 9: Enthusiasm for Physical Activity.—Adolescent comments illustrated their fondness for coach-led outdoor activities (9.1, 9.2). Adolescents described preferring to be outside rather than indoors (9.3). When asked what could be improved about the program, adolescents suggested "more things outside."

Adolescent Theme 10: Desire for Increased Parental Engagement in Physical Activity.—Adolescents described a desire for their parents to be more involved in the physical activity portions of the intervention. Some felt parents were not getting as much exercise as they were (10.1). Adolescents noted that they wanted to spend more time with their parents while engaging in physical activities (10.2). Adolescents described enjoying the parent-adolescent interactions because the activities gave them ideas of activities they could do as a family (10.3).

Adolescent Theme 11: Appreciation for Increased Time and Improved Relationship with Parents.—Adolescents reported improvements in their homes, including increased family bonding time through engaging in shared meal preparation, better communication, and a more united relationship with their parents since initiating the intervention (11.1, 11.2, 11.3).

Phase 4: Final Adaptations

Following the pilot study focus groups, we further adapted the intervention (see Table 6 for a side-by-side comparison of weekly content for the original and final adapted versions of the intervention). Specifically, to capitalize on parental enthusiasm for the hands-on nutrition training, we moved the introductory hands-on nutrition training session to the first group session and added a third nutrition training session later in the curriculum. In addition, to increase parental engagement in physical activity and parent-adolescent dialogue concerning the importance of exercise, we paired the parent group session covering the topic of communication with a park obstacle course group activity. We also added strategies for engaging all family members in physical activity through building fun and supportive group environment training materials for park coaches.

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Discussion

We describe the adaptation of Familias Unidas, an evidence-based substance use and sexual risk behavior intervention, for obesity prevention in Hispanic adolescents. Given the low rates of engagement among ethnic minority families in existing obesity prevention interventions (e.g.,Williams et al., 2010), it is especially important to draw from previously efficacious family-based preventive interventions, like Familias Unidas, shown to engage and retain Hispanic families at a high rate. Previous research shows that existing parent training and family management interventions protect against youth weight gain (Brotman et al., 2012; Smith et al., 2015). We have thus recommended that these interventions be enhanced through modifications to content and structure, to amplify intervention effects for obesity prevention and related lifestyle behaviors (Smith, St. George, & Prado, 2017).

We provide researchers with a practical example of how an existing preventive intervention with strong empirical support in one domain (i.e., risky behaviors) may be adapted and expanded to address another (i.e., obesity, healthy lifestyle behaviors). To that end, we obtained feedback from a multidisciplinary team of experts in pediatric obesity and related fields and used qualitative methods to integrate the perspectives of the target population. This integration of both "top down" (use of theory, data, researcher input) and "bottom up" (key stakeholder input) approaches for making adaptations has been identified as central across numerous adaptation frameworks (Barrera, Castro, Strycker, & Toobert, 2013). Key to this process is ensuring that conceptual underpinnings of the intervention, including key mediators, remain central to the adapted intervention. Familias Unidas investigators remained highly involved throughout the adaptation process to ensure the core elements of the intervention, including family functioning, remained intact. We made adaptations to complement and enhance, rather than completely replace, existing material and are currently conducting a large scale randomized controlled efficacy trial of the adapted intervention with 280 Hispanic families in Miami-Dade County. The aims of that study are to (1) examine the relative efficacy of *Familias Unidas* adapted for obesity prevention, compared to community practice, in increasing moderate-to-vigorous physical activity and quality of dietary intake in Hispanic adolescents, and (2) examine whether and to what extent family functioning partially mediates the effect of the intervention on moderate-to-vigorous physical activity and quality of dietary intake. This trial will examine intervention effects on physical activity and quality dietary intake as well as traditional Familias Unidas outcomes including substance use and sexual risk-taking.

Our ongoing efficacy trial aligns with all of the family-level research priorities of the National Latino Childhood Obesity Research Agenda, including: 1) engaging families as advocates of prevention initiatives in schools and the community; 2) comprehensive interventions that treat family as the unit of analysis; 3) parental knowledge, attitudes and behaviors (modeling) related to diet; 4) food literacy education; and 5) family access to local facilities for physical activity, including parks (Ramirez et al., 2011). The adaptations we made to the intervention are also consistent with recommendations from the Expert Committee for Pediatric Obesity Prevention (ECPOP; Barlow & The Expert Committee, 2007) and previous literature on obesity prevention in Hispanic youth. Specifically, the ECPOP identified key behavioral targets for prevention, including decreasing sugar-

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sweetened beverages, increasing fruit and vegetable intake, decreasing screen time, eating breakfast daily, cooking at home, eating together at the table, and engaging in more than one hour of physical activity. The adapted intervention addresses all of these behaviors. The ECPOP also emphasized the importance of allowing families to identify their own motivations for making lifestyle changes, which is consistent with the participatory delivery format of the intervention. Finally, the primary changes to the intervention structure involved the addition of organized physical activity and hands-on nutrition education sessions, both of which were components of interventions that demonstrated significant effects in previous reviews of obesity interventions in Hispanic children and adolescents (Branscum & Sharma, 2011; Leung et al., 2017). Moving forward, it will be important to determine the amount of time facilitators spent discussing different behaviors and behavior change techniques with parents as part of the adapted intervention (Jaka et al., 2017).

Overall, we have described the Familias Unidas obesity prevention adaptation and provided a model for other researchers interested in capitalizing on existing EBIs to target outcomes for which the evidence is either unavailable or currently lacking. In lieu of developing completely new interventions for individual outcomes (e.g., substance use, physical activity), adapting existing EBIs that target shared mechanisms of action across multiple outcomes may be a more resource-efficient approach. In addition, this approach may serve to accelerate the rate at which interventions are brought to scale and thereby exert a positive impact on public health.

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Table 1.

Qualitative Question Guides for Initial Focus Group Study and Intervention Pilot Study

Initial Focus Groups	Intervention Pilot Study		Questions
	Midpoint	Post	
✓			Have you ever participated in a family or group intervention that targets either your needs or your child's needs?
✓			What do the words "physical activity" mean to you?
✓			What does the word "nutrition" mean to you?
✓			Have you ever tried to make changes in the way you or your family eats or exercises? If so, please describe what you have tried to change.
✓			What do you do to plan meals ahead of time?
✓			Some people want more information about better nutrition and the impact of nutrition on health. Others do not find this information useful. What do you think about receiving more information about healthy nutrition?
✓			Many people believe that eating healthy is expensive. Do you think that your selection of food is driven by cost?
✓			Do you think that unhealthy eating habits and sedentary behaviors can affect you now in any way? How about in the future?
✓			Are there any other ways in which you and your family would like to learn about nutrition, exercise, and health?
	✓	✓	Can you describe what motivated you (for mid: to participate; for post: to continue to participate) in the Familias Unidas Health and Wellness program?
	✓	✓	Can you describe your experiences in participating in the group/family sessions (for post: since the last focus group)?
	✓		What challenges have you experienced in attending/completing the family/group sessions?
	✓	✓	Can you please describe to us your experiences with the program facilitator and park coaches (for post: since the last focus group)?
		✓	Can you please describe your experiences with the overall time commitment involved in completing this program and its activities?
		✓	I'm going to briefly review all of the sessions with you first and then we'll talk about ways you might organize the program differently.
	✓	✓	Have we left anything out or not spoken about something that you feel is important in describing your experiences and challenges associated with participating in the Familias Unidas Health and Wellness program?

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Table 2

Initial Focus Group Study Themes and Supporting Quotes

Themes	Supporting quotes
1. Need for improved health-related family functioning	1.1 "Normally every day I try to do [exercise] and invite [my daughter] to do it with me, but she does not want to. She is negative." (P)
	1.2 "I set an example for her, but she doesn't take to it; she does the opposite of everything I say." (P)
	1.3 "She likes to watch TV too much…if she is watching TV, after two hours she gets hungry and she has to eat, I cannot control that, really. So, it is difficult for me to deal with her." (P)
	1.4 "I became frustrated…in the end, I would give him what he wanted from McDonalds and such, because I thought, 'How will I put him to sleep on an empty stomach?' But that upset me." (P)
	1.5 "'Hey, you always like junk food. That's horrible for you. I'm about to start suspending you from eating that. And I've told you 500 times you don't go in that cabinet! Why do you do this? And why do you eat that?'" (A)
	1.6 "It's kind of difficult to eat what you're eating when there's, like, seven other plates in front of you eating something different that you really want from that and you're eating that." (A)
2. Need for enhanced nutrition education and skill-building	2.1 "It's like usually a New Year's resolution, you say, 'I'm going to go on a diet' and then the next day you're just watching Netflix with the girls with, like, pizza and Nutella right next to you." (A)
	2.2 "Well, for example, in my case, I would like to know how to introduce more or offer some kind of vegetables to my son because, my son does not want vegetables at all." (P)
	2.3 "It is shocking to know how many parents do not know how to cook. So, the child, of course, does not want to eat that food. He wants McDonalds... so it would be good to have cooking programs and to teach adolescents that if you buy this juice and do not do it this way, this juice has so much sugar, and even more so the adolescents can say, 'Hey, what am I eating?… What I am drinking is pure sugar, see.'" (P)
3. Need for increased family engagement in physical activity	3.1 "The most exercise I do is play Just Dance on the Wii, and I cheat a lot too, so like, [my mom would] actually try to do that with me, like, even though she came home tired from work she'd be, like, 'oh, let's go do this.'" (A)
	3.2 "[My daughter] is the one who teaches me. 'Mom, let's exercise,' but I do not want to, and she exercises every day." (P)
4. Need to link family and environmental supports (schools, parks)	4.1 "Like the pizza, you can get a napkin and it's not enough to soak up all the grease that it has in it…it's so disgusting that you don't want to eat it." (A)
	4.2 "My daughter was grossed out this week and felt like throwing up, 'I have a headache and am grossed out…they served me chicken heated in the microwave and it was cold…which I ate because I do not get home until 5. But, I am grossed out, please do not even say the word chicken.'" (P)
	4.3 "We used to use [the park] everyday, but now that [her children] are in school, everything has changed." (P)
	4.4 "If I use [the park], I have to be with my daughter …I do not feel safe leaving her in the parks." (P)
	4.5 "The activities of the park, I know that some of them are free … [but] I get scared, I have a lot of mistrust…" (P)

Note. P=parent quote, A=adolescent quote

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Table 3.

Summary of Intervention Adaptations

		Original Familias Unidas	Familias Unidas for Health & Wellness
Content	Target Outcomes	Substance use Sexual risk-taking	Substance use Sexual risk-taking Physical activity Nutrition/ quality dietary intake
	Target Mediators	Family functioning	Family functioning
Structure	Group Sessions	Eight 2-h parent-only group sessions	Eight 2.5-h group sessions with separate parent and adolescent activities • 1st half: parent-only group sessions; adolescent physical activity lead by park coaches • 2nd half: Family group activities (e.g., cooking, yoga, Zumba)
	Family Sessions	Four ~45 min family sessions attended by the parent and adolescent	Four ~45 min family sessions attended by the parent and adolescent
Delivery	Intervention Staff	Two bilingual facilitators	Two bilingual facilitators Park coaches Fitness instructors (yoga, Zumba) Nutrition education and training organization
	Location	Primarily schools	Primarily parks

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Table 4

Pre-Post Differences in Parent-Reported Family Functioning Variables for Pilot Study Families

	Pre (n = 19)		Post (n = 13)			
	M	*SD*	*M*	*SD*	*t*	*p*
Positive parenting	22.05	4.74	23.08	5.59	0.56	0.58
Parental involvement	57.05	9.95	59.69	6.22	0.85	0.40
Parental monitoring	9.63	5.33	12.46	4.63	1.55	0.13
Family communication	75.42	11.46	77.92	10.83	0.62	0.54
Parent-adolescent communication	7.32	1.29	7.23	1.54	0.18	0.86

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Table 5.

Pilot Study Themes and Supporting Quotes

Themes	Supporting quotes
Parents	
5. Engagement Though Intervention Content and Social Connections	5.1 "To me, it caught my attention when they called and talked to me about the many things they were going to cover – nutrition issues, drug issues - things that were to be discussed during the program, and how to prepare them to reach high school with a better way to confront these problems."
	5.2 "What captured my attention was thinking, 'okay, my daughter is having difficulty at this time with communication, has had some personal problems that have led to a lot of miscommunication…'"
	5.3 "I was motivated a lot by the fact that [my son] would be interacting with more children his age, who are in the same school, or, and in the same grade, because he is a very quiet child… And then to be interacting with more children, and me with more mothers that way we can learn from each other's experience and about the children."
	5.4 "[It is] an opportunity to be together with [my daughter], share and do something that would unite us more…"
6. Enthusiasm for Hands-On Nutrition Training	6.1 "I loved it! I loved how they got us involved – you cut, you peel, or whatever, and the kids, too - we were all doing something, participating and learning."
	6.2 "We are learning to eat other foods, but healthy. Other ideas, other ways of combining foods that are normally not eaten or that we had never thought of eating that way and that taste good and are good for us."
7. Perceived Improvements in Positive Parenting Skills and Family Cohesion	7.1 "They've helped me guide my son a little better, to communicate better with him, not to impose things, because he's no longer a small child. That has helped me tremendously. Thanks to this group, I've learned a lot."
	7.2 "[We learned] how we should engage with them, new friends, with friends, interacting with them. That is, getting involved in a way that they do not see us as intruders, in other words, discreetly, how to [get involved] to know who they are interacting with, who are their friends, relatives of friends, and all that."
	7.3 "What my son liked was doing activities with the parents … [it's] not that he does [the activity] better or that he wins, simply the act of doing it together. He feels it's fun and likes it – seeing the parents running, or watching the parents dance like [the adolescents], or if we don't do it well, he laughs. He likes that. He has liked that a lot."
8. Importance of Social Climate	8.1 "There has not been criticism; there has been enthusiasm for helping one another… Even after the sessions, we talk amongst ourselves about our personal experiences."
Adolescents	
9. Enthusiasm for Physical Activity	9.1 The most favorite part would be, of course, the games because it's really fun and you get to learn something new."
	9.2 "[Coaches] have really fun activities to do outside, so it makes us sweat, but also feel good at the same time. And we're getting exercise, so yeah."
	9.3 "Yeah, as long as we're outside. Like if you keep me stuck inside a room for like the whole time, I get tired."
10. Desire for Increased Parental Engagement in Physical Activity	10.1 "I think the parents should do exercise too, that's why in Zumba they did exercise, but I think that going outside and sharing with us exercise every day like how we do it."
	10.2 "I like it because I think it's like sharing more time with mom and how to do more, do more things together. I think it's a great idea because like that we are both learning at the same time."
	10.3 "I think when they put the parents and the kids together is to have that connection to the activities… we would have like, an experience of what we could do further in our lives."
11. Appreciation for Increased Time and Improved Relationship With Parents	11.1 "We got a bit closer. We're spending more time with each other."
	11.2 "With my mom, I can't really explain. I think like with communication. Now we communicate better. Not like yelling."
	11.3 "It's that, I never trusted my mom as much as I do now. I now get along with her since coming here."

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Table 6

Weekly Session Overview for Original Familias Unidas vs. Familias Unidas for Health and Wellness

Session	Key Session Objectives	Original Familias Unidas (Group Sessions: Parent-Only Discussions = 2 h.; Family Sessions: Parent and Adolescent Discussions = ~45 min)	Familias Unidas for Health and Wellness (Group Sessions: Parent-Only Discussions + Adolescent Physical Activity + Group Activity = 2.5 h); Family Sessions: Parent and Adolescent Discussions = ~45 min.)		
			Parent-Only Discussions	Adolescent Physical Activity	Group Activity
Family Session 1 Engagement and Orientation to *Familias Unidas*	1. Meet and join with the family 2. Review intervention goals 3. Map family's needs to intervention goals	Discussion focuses on helping parents protect adolescents from engaging in risky behaviors (e.g., substance use, risky sex)	Discussion focuses on helping parents protect adolescents from physical health risks (e.g., diabetes, heart disease) + risky behaviors		
Group 1 Parent Involvement in Adolescent Worlds	1. Identify parents' goals for their youth 2. Identify adolescent risks in family, school, and peer worlds 3. Discuss parental role in protecting youth from risks	Discussion focuses on protecting youth from risky behaviors; parents presented with adolescent rates of risky behaviors	Discussion focuses on protecting youth from physical health risks + risky behaviors; parents presented with adolescent rates of obesity and lifestyle behaviors + risky behaviors	SPARK games (e.g., Snakes and Lizards, Partner Ball Challenges)	Cooking class: - Review MyPlate.gov guidelines - Prepare healthy recipe
Group 2 Communication	1. Review effective parent-adolescent communication 2. Discuss communication barriers 3. Practice effective communication	Communication discussion and examples are applied to adolescent risky behaviors	Communication discussion and examples are applied to adolescent lifestyle behaviors + risky behaviors	SPARK games (e.g., Workout Buddies, Partner Ball Exchange)	Park overview/ obstacle course
Family Session 2 Family Communication	1. Parents teach adolescents communication skills 2. Discuss a relevant issue in the adolescent's life	Guided discussions and role plays about adolescent risky behaviors	Guided discussions and role plays about adolescent lifestyle behaviors + risky behaviors		
Group 3 Behavior Management	1. Review effective behavior management 2. Discuss behavior management barriers 3. Practice behavior management skills	Behavior management discussion and examples are applied to adolescent risky behaviors	Communication discussion and examples are applied to adolescent lifestyle behaviors + risky behaviors	SPARK games (e.g., Stick with Me, Houdini Hoops)	Yoga class
Group 4 Monitoring of Peers	1. Discuss influence of peers 2. Review parental monitoring of peers 3. Discuss strategies for monitoring peers	Peer monitoring discussion and examples are applied to adolescent risky behaviors	Peer monitoring discussion and examples are applied to adolescent lifestyle behaviors + risky behaviors	SPARK games (e.g., Space Mountain, Super Hero Cape)	Dance activity

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Session	Key Session Objectives	Original Familias Unidas (Group Sessions: Parent-Only Discussions = 2 h.; Family Sessions: Parent and Adolescent Discussions = ~45 min)	Familias Unidas for Health and Wellness (Group Sessions: Parent-Only Discussions + Adolescent Physical Activity + Group Activity = 2.5 h); Family Sessions: Parent and Adolescent Discussions = ~45 min.)		
			Parent-Only Discussions	**Adolescent Physical Activity**	**Group Activity**
Group 5 Substance Use/ Other Unhealthy Behaviors	1. Discuss consequences of substance use/other unhealthy behaviors 2. Role-play peer pressure resistance skills	Discussion focuses on substance use only	Discussion focuses on substance use and other unhealthy behaviors (e.g., sugary beverage intake, screen time)	SPARK games (e.g., Triangle Tag, Builders and Bulldozers)	Cooking class: - Portion control activity - Mindful snacking activity
Family Session 3 Monitoring of Peers/ Unhealthy Behaviors	1. Adolescents describe relationship with peers 2. Parents and adolescents communicate about consequences of substance use/ unhealthy behaviors 3. Develop a family plan for addressing peer issues	Guided discussions and role plays about substance use only	Guided discussions and role plays about substance use and other unhealthy behaviors (e.g., sugary beverage intake, screen time)		
Group 6 Parental Investment in School World	1. Discuss parents' involvement in school 2. Parents review strategies for increasing school involvement	Discussion focuses on adolescent school bonding and academic achievement and how this relates to reduced risky behaviors	Discussion focuses on adolescent school bonding, academic achievement, and school wellness opportunities for improved health; parents are taught to access school lunch menus to review with adolescents	SPARK games (e.g., SNAG Golf)	Cooking class: - Prepare healthy school lunch - Plan healthy breakfast and lunch menus
Group 7 Adolescent Risky Sexual Behavior/HIV	1. Discuss prevalence and consequences of risky sex 2. Learn safety skills to promote safe sex. 3. Role-play safe sex conversations	Guided discussions and role plays about adolescent risky sex	Guided discussions and role plays about adolescent risky sex	SPARK games (e.g., QuickStart Tennis)	Zumba class
Family Session 4 Adolescent Risky Sexual Behavior/HIV	1. Parents and adolescents communicate about consequences of risky sex 2. Parents describe rules and values around risky sex 3. Practice peer pressure resistance skills	Discussion focuses on adolescent risky sex	Discussion focuses on adolescent risky sex		
Group 8 Prevention Every Day	1. Review content of all intervention sessions 2. Process experiences in intervention, including skills learned	Discussion focuses on adolescent risky behaviors	Discussion focuses on adolescent lifestyle behaviors + risky behaviors	SPARK games (e.g., the Amazing Race)	Healthy group party

Note. SPARK = Sports, Play, and Active Recreation (Sallis et al., 1997)