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Latino children have a disproportionately high prevalence of obesity. Parenting styles and food- and activity-related parenting practices influence children's weight and weight-related behaviors. Fathers are underrepresented in existing healthy lifestyle intervention studies for families. The Padres Preparados, Jóvenes Saludables program was designed with an emphasis on paternal involvement for preventing childhood obesity among early adolescents. It offers eight weekly sessions delivered by Extension educators at community sites, with major topics of parenting skill training, positive parent-adolescent relationships, and healthy lifestyles related to healthy eating, physical activity, and screen time. The current study described pilot testing of the program for feasibility with a small sample of families in the Spring of 2017. Of the thirteen parents enrolled in the program, nine families, including all fathers, completed the program by attending five or more sessions and pre- and post-intervention evaluation sessions. Participant feedback indicated that program satisfaction was high. Participants also reported positive behavioral changes related to dietary intake, food- and activity-related parenting practices, and general parenting style. Findings demonstrated the feasibility of the program for engaging Latino fathers in promoting healthy lifestyle behaviors among early adolescents.

Keywords: childhood obesity, parenting skills, intervention, Latinos

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Introduction

Latino children and adolescents are an important and fast-growing ethnic group in the United States. In 2016, 25% of U.S. children and adolescents were of Hispanic origin, and this proportion is projected to be 32% by 2050 (U.S. Census Bureau, 2017). The well-being of Latino children and adolescents is challenged by overweight and obesity. In 2015-2016, 46% of Latino children and adolescents were overweight or obese, which was the highest compared to other major racial and ethnic groups (Skinner, Ravanbakht, Skelton, Perrin, & Armstrong, 2018). This may be affected by the acculturation challenges and socioeconomic disadvantages of Latino immigrant families (Pérez-Escamilla, 2009). Studies found that greater acculturation was associated with poorer dietary quality and sedentary lifestyle among Latinos (Ayala, Baquero, & Klinger, 2008; Murillo, Albrecht, Daviglius, & Kershaw, 2015). Latino households also experienced disparities of poverty, food insecurity, and lack of access to health-care resources (Berchick, Hood, & Barnett, 2018; Coleman-Jensen, Rabbitt, Gregory, & Singh, 2018; Fontenot, Semega, & Kollar, 2018). National data showed that Latino children and adolescents generally had inadequate fruit and vegetable intake and physical activity, and excessive consumption of foods high in solid fat and added sugars and excessive screen time (Dunford & Popkin, 2018; Kann et al., 2018; Moore, Thompson, & Demissie, 2017; Rosiner, Herrick, Gahche, & Park, 2017). These energy balance-related behaviors are linked to obesity risk, which indicates a need for public health efforts to promote healthy lifestyle behaviors for obesity prevention among Latino children and adolescents.

Parents are key players in shaping the physical and social/emotional environments that guide eating and exercise behaviors and consequently influence children's and adolescents' weight status. Common behavior change techniques to engage parents in promoting healthy lifestyle behaviors have included providing general information regarding lifestyle-health relationships and teaching skills around healthy eating and activity (Golley, Hendrie, Slater, & Corsini, 2011). Several meta-analyses concluded that existing programs had promising but limited effects to address the epidemic of childhood obesity (Biddle, Petrolini, & Pearson, 2014; Brown et al., 2014; Diep, Chen, Davies, Baranowski, & Baranowski, 2014; Kobes, Kretschmer, Timmerman, & Schreuder, 2018; Owen, Curry, Kerner, Newson, & Fairclough, 2017). Therefore, further research on effective intervention strategies is warranted.

Parenting style and parenting practices are associated with children's and adolescents' energy balance-related behaviors (Patrick, Hennessy, McSpadden, & Oh, 2013). Parenting style, which is commonly categorized by dimensions of responsiveness and demandingness, determines the emotional climate through general parent-child interactions (Maccoby & Martin, 1983). Findings from a recent systematic review supported the protective nature of an authoritative parenting style (high responsiveness and high demandingness) toward childhood obesity (Sokol, Qin, & Poti, 2017) and its associations with children's and adolescents' positive behavioral outcomes related to dietary intake, physical activity, and screen time (Pearson, Biddle, & Gorely,

2009; Rodenburg, Oenema, Kremers, & van de Mheen, 2012; van der Horst et al., 2007). In addition, parenting practices, such as setting rules and expectations, role modeling, and managing availability and accessibility, have also been associated with children's and adolescents' dietary intake, physical activity, and screen time (Aftosmes-Tobio et al., 2016; Sleddens et al., 2012; Yee, Lwin, & Ho, 2017). Thus, parenting styles and parenting practices specific to children's and adolescents' dietary intake and activity can be important constructs of family-based healthy lifestyle interventions.

Several studies have documented parenting style and food- and activity-related parenting practices among Latino families. Some studies showed that Latino parents tended to indulge children's unhealthy food preferences and not restrict the availability and accessibility of unhealthy foods and screen-time opportunities at home (Gallagher, 2010; Skala et al., 2012; Taveras, Hohman, Price, Gortmaker, & Sonnevile, 2009). One large sample survey among parents of middle and high school students found that Latino parents tended to exert efforts to control their children's dietary intake and use authoritarian approaches such as expecting the child to clean his/her plate and forcing the child to eat regardless of hunger/fullness cues (Loth, MacLehose, Fulkerson, Crow, & Neumark-Sztainer, 2013). Therefore, intervention programs to improve Latino parents' general parenting skills as well as food- and activity-related parenting practices would enhance parental influences on promoting healthy lifestyle behaviors among children and adolescents.

Improving paternal engagement may benefit the efficacy of childhood obesity prevention initiatives among Latino families. In the U.S., 71% of Latino children and adolescents have fathers present in the household (Federal Interagency Forum on Child and Family Statistics, 2017). Latino culture highly values familism and respect, which usually considers the father as the head of the household and responsible for providing leadership and making major decisions (Saracho & Spodek, 2008). Latino mothers have indicated that fathers' dietary preferences significantly influenced family dietary choices (Lora, Cheney, & Branscum, 2016; Mena, Gorman, Dickin, Greene, & Tovar, 2015). Latino fathers may also influence their children and adolescents' physical activity and screen time through supporting/encouraging children being active, setting limits on screen time, or spending screen time with their children (Davis, Cole, Blake, McKenney-Shubert, & Peterson, 2016; Lindsay, Wallington, Muñoz, & Greaney, 2018; Lora et al., 2016; Turner, Navuluri, Winkler, Vale, & Finley, 2014). Therefore, paternal involvement would be a potential strategy to enhance the efficacy of childhood obesity prevention among Latinos.

Community-based, parent-focused, healthy lifestyle intervention programs for adolescents may make unique contributions to the prevention of childhood obesity. National data showed that adolescents not only had the highest obesity rate but also had the most apparent positive linear trend compared to other pediatric age groups (Skinner et al., 2018). Even though adolescents gain greater autonomy and are exposed to more potential influences on intake and activity

outside of the home than younger children, parents still play important roles in the weight and weight-related behaviors of adolescents (Dickens & Ogden, 2014; Jago et al., 2011; Loth, MacLehose, Larson, Berge, & Neumark-Sztainer, 2016; Vereecken & Maes, 2010). This is especially true for young adolescents who are in the early stages of pubertal, social, and intellectual development (Irwin, Burg, & Uhler Cart, 2002). However, existing intervention programs for older children and adolescents were primarily school-based and tended to use fewer and/or passive strategies (e.g., sent-home materials) to engage parents (Kader, Sundblom, & Elinder, 2015), which may not be adequate to result in positive behavioral change outcomes (Schlechter, Rosenkranz, Guagliano, & Dzewaltowski, 2016). Community-based intervention programs have the advantages of being able to accommodate family schedules beyond school hours and address neighborhood environmental factors. Therefore, community-based, family-focused, healthy lifestyle intervention programs could be a feasible strategy to actively engage Latino parents in promoting positive behavioral outcomes among early adolescents.

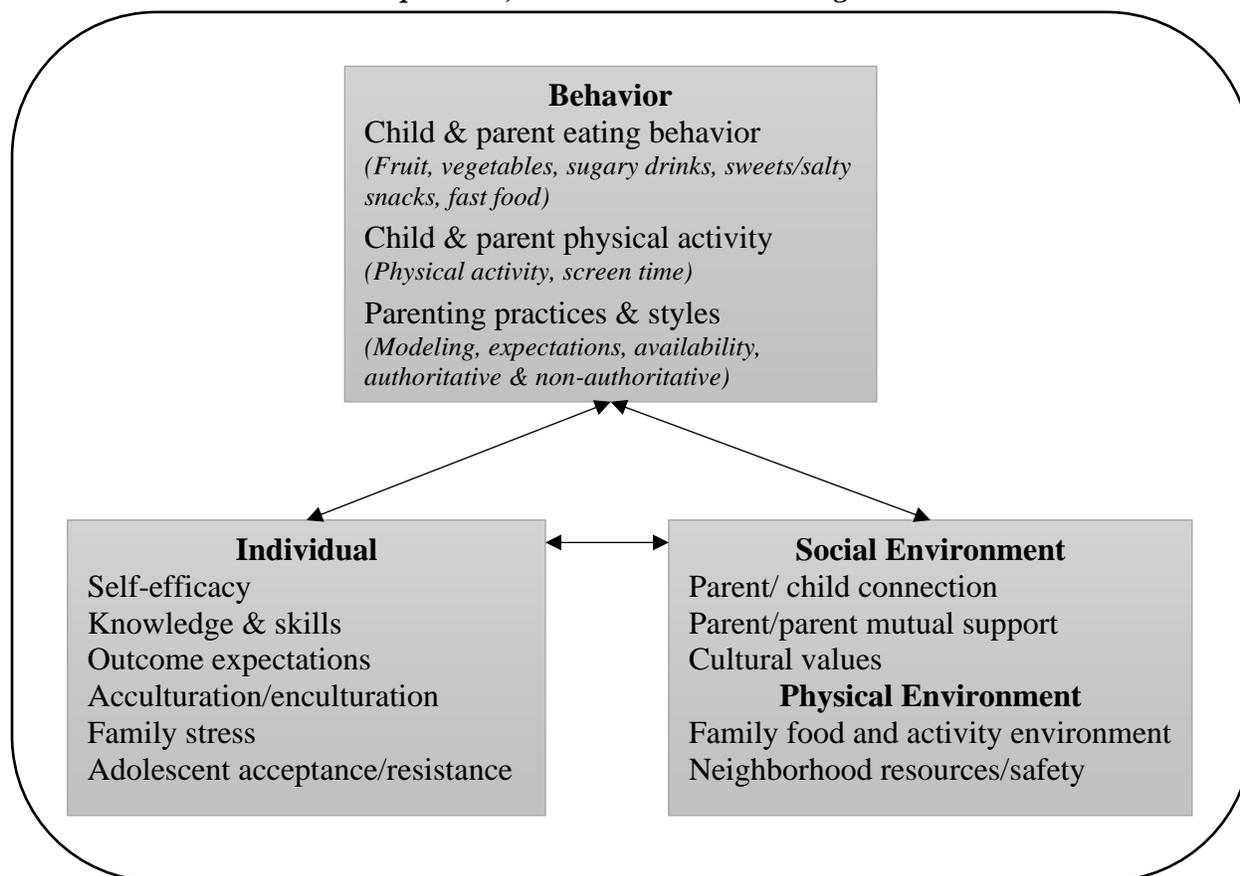
A previous community-based parenting skill education program was developed for substance use prevention among Latino adolescents (Allen et al., 2012). The program was well-received by community partners and Latino parents, especially mothers (Allen et al., 2013). In response to community agencies' requests and the need for obesity prevention among Latino early adolescents, that parenting skill education program was adapted to promote healthy lifestyle behaviors using a community-based participatory research approach. Latino fathers were actively engaged in curriculum development through father advisory board meetings and focus group discussions (Zhang, Hurtado, Flores, Alba-Meraz & Reicks, 2018). Their beliefs, parenting experiences, and program preferences contributed to the design of *Padres Preparados, Jóvenes Saludables* in terms of format, length, session structure, and content. Best practices for behavior-based interventions indicate that program feasibility and potential effectiveness should be assessed (Horodyska et al., 2015). Therefore, the current study pilot tested the curriculum to assess feasibility and preliminary effectiveness based on acceptability and behavioral change outcomes. Primary behavioral outcomes included dietary intake, physical activity, and screen time among early adolescents and their parents. Secondary behavioral outcomes included Latino parents' parenting styles and food- and activity-related parenting practices.

Methods

Program Description

The theoretical framework for the *Padres Preparados, Jóvenes Saludables* program was based on the social cognitive theory (Cullen et al., 2001; Glanz, Rimer, & Viswanath, 2008). This theory emphasizes the reciprocal determinism of interactions between the behavior and the individual and environmental factors that influence individuals' behaviors. In the application to energy balance-related behaviors addressed in the *Padres Preparados, Jóvenes Saludables* program, the behavior, and individual and environmental factors are shown in Figure 1.

Figure 1. A Social Cognitive/Reciprocal Determinism Framework of the Behavior and the Individual and Environmental Factors Related to Behavioral Outcomes of the Padres Preparados, Jóvenes Saludables Program



The pilot version of the Padres Preparados, Jóvenes Saludables curriculum consisted of eight 2.5-hour weekly sessions. An overview of the eight sessions, including primary topics and session activities, are summarized in Tables 1 and 2. At each session, parents and adolescents participated in joint and separate skill-building activities. The joint activities included food preparation using culturally-tailored, simple recipes modified to increase fruit, vegetable, and whole grain consumption and reduce solid fat and added sugar consumption; and physical activities that could be done easily indoors or outdoors regardless of time and resource constraints. In separate skill-building activities, parents and adolescents reflected on their experiences, learned basic concepts, and participated in hands-on practice and discussion related to healthy eating, physical activity, and screen time in formats tailored to adults and adolescents. In addition, parent activities included parenting skill education related to parent-child interactions and food- and activity-related parenting practices. Adolescent activities included an exploration of topics to build strong family communication and connections. Instead of weight loss and maintenance, the curriculum emphasized overall health and its relationship to healthy eating and physical activity.

Table 1. Primary Content and Structure of Sessions 1-4

Contents	Session 1	Session 2	Session 3	Session 4
Topics	<i>Positive parenting and healthy habits</i>	<i>Multiple cultures and active lifestyles</i>	<i>Adolescent development and healthy eating</i>	<i>Communication and limiting screen time</i>
Food Prep (30 min)	P+C: fruit yogurt parfait	P+C: veggie mix	P+C: mango salsa	P+C: guacamole
Intro (10 min)	P+C: intro to the program	P, C: review last session		
Interactive segment part I (45 min)	P: hopes and dreams for child, lifestyle assessment, energy balance C: goals and dreams, lifestyle assessment	P: cultural values, acculturation, culture, and health C: cultural values	P: adolescent development, parent's role C: decision making	P, C: communication basics, active listening, "I" messages P: PP
Physical Activity (15 min)	P+C: group dance	P+C: indoor cardio	P+C: chair yoga	P+C: house chore relay
Interactive segment part II (45 min)	P: parenting styles, PP C: energy balance, healthy recommendations	P, C: benefits and barriers to physical activity P: PP	P, C: nutrition for growth, portion size, MyPlate FV messages P: PP	P, C: screen time assessment and consequences, family media plan P: PP
Review (10 min)	P: key messages, post-session evaluation, setting weekly goals C: key messages, feedback			

C: child only; P: parent only; P+C: parent and child together; P, C: parent and child separate; Food Prep: food preparation activity; PP: three key parenting practices including setting expectations, role modeling, and creating a supportive environment; this content was for parent only; FV: fruits and vegetables.

Table 2. Primary Content and Structure of Sessions 5-8

Contents	Session 5	Session 6	Session 7	Session 8
Topic	<i>Family rules and healthy beverages</i>	<i>Managing conflicts and healthy snacks</i>	<i>Supervision and fast food</i>	<i>Family connection and family meals</i>
Food Prep (30 min)	P+C: fruit infused water	P+C: fruit kebabs	P+C: sweet potato fries with yogurt dip	P+C: veggie mix
Intro (10 min)	P, C: review last session			
Interactive segment part I (45 min)	P: discipline strategies, negotiable vs. non-negotiable rules	P: problem solving, managing conflict	P: supervision and monitoring, parents as coaches	P: family connection and priorities, time management

Contents	Session 5	Session 6	Session 7	Session 8
	C: family rules, natural vs. logical consequences	C: 5 steps of conflict resolution	C: types of friends, peer influence	C: family connection and support
Physical Activity (15 min)	P+C: agility ladder	P+C: Zumba	P+C: indoor cardio	P+C: agility ladder
Interactive segment part II (45 min)	P: label reading, sugar and calories in SSBs, PP C: traffic light drinks, label reading, sugar and calories in SSBs	P: label reading, portion sizes for sweets and salty snacks, healthy alternatives, PP C: label reading, healthy alternatives, emotional vs. mindful eating	P: fast food culture, peer pressure, PP C: calorie balance and fast food, fast food marketing, making healthier decisions	P, C: benefits and barriers to family meals, MyPlate P: PP P+C: program completion celebration
Review (10 min)	P: key messages, post-session evaluation, setting weekly goals C: key messages, feedback			
C: child only; P: parent only; P+C: parent and child together; P, C: parent and child separate; Food Prep: food preparation activity; PP: three key parenting practices including setting expectations, role modeling, and creating a supportive environment; this content was for parent only; SSBs: sugar-sweetened beverages				

Study Design

This study used a one-group, pre-test/post-test, quasi-experimental design with a small convenience sample. This study design has shown adequacy in generating preliminary findings related to program feasibility and potential effectiveness of family-focused childhood obesity prevention programs among Latinos (Arredondo, Morello, Holub, & Haughton, 2014; Weaver, Kelley, Griggs, Weems, & Umstatt Meyer, 2014). The study location was a Christian church, which primarily served Latino families. The church had the capacity to host adolescents and parents in separate rooms and provided a kitchen for food preparation and open space for physical activity. Participants were recruited using flyers, word of mouth, and social media. Eligibility criteria included 1) having a Latino early adolescent (10-14 years), 2) being a Latino male caregiver who speaks Spanish and has meals with the child at least three times in a week, and 3) both the child and male caregiver being able to attend the program together. In addition, female caregivers were welcome to participate if the family met the eligibility criteria. The parent group was co-facilitated by an Extension nutrition educator and a parenting educator. The adolescent group was co-facilitated by an Extension nutrition educator and a graduate research assistant. One week before and after implementing the curriculum, families attended data collection sessions where research assistants collected demographic and anthropometric information and assessed frequency of parenting practices, dietary intake, physical activity, and screen time through the administration of questionnaires. Parents received \$35, and adolescents received \$25 for participating in each data collection session. The intervention was conducted

on eight Friday evenings between March and May 2017. The study was approved by the University of Minnesota Institutional Review Board.

Assessment Instruments

For this pilot test, program feasibility was based on acceptability and assessment of preliminary effectiveness regarding behavioral outcomes. Therefore, attendance information and post-session evaluation surveys were collected. Behavioral outcomes were evaluated based on pre- and post-intervention comparisons of dietary intake, physical activity, and screen time, food- and activity-related parenting practices and parenting styles. Assessment instruments are summarized in Table 3.

Table 3. Summary of Assessment Instruments

Assessment Method	Respondents
Demographic and anthropometric measurements	
Height, weight measurements	Adolescents/parents
Demographic survey	Parents
Program acceptability	
Participant attendance	Program coordinator
Post-session evaluation	Parents
Dietary behavioral outcomes	
NDSR 24-hour dietary recall	Adolescents
Food Behavior Checklist	Parents
Physical activity and screen time-related behavioral outcomes	
Project EAT physical activity questions adapted from Godin-Shepherd Leisure-Time Exercise Questionnaire	Adolescents
International Physical Activity Questionnaire short form	Parents
Project EAT screen time questions	Adolescent/parents
Parenting behavioral outcomes	
Parenting Style & Dimension Questionnaire	Parents
Parenting practices measures adapted from the Parenting Strategies for Eating and Activity Scale	Adolescents/parents
Project EAT home food availability and accessibility questions	Adolescents/parents

NDSR: Nutrition Data System for Research; Project EAT: Project Eating Among Teens

Demographic and anthropometric measurements. Parents reported their age, country of origin, number of years they lived in the U.S., preferred language spoken at home, educational attainment, and household income. Research assistants measured height and weight of parents and early adolescents according to standard procedures (Centers for Disease Control and Prevention, 2017). Body mass index (BMI) of parents was calculated using weight (kg) divided by height squared (kg²). BMI categories and z-scores of early adolescents were determined using a SAS Program for the 2000 CDC Growth Charts (Centers for Disease Control and Prevention, 2016).

Post-session evaluation. Parents completed the post-session evaluation survey at the end of each of the eight sessions. The survey consisted of five satisfaction questions, three true-or-false questions related to key session content, and two open-ended commentary questions. The five satisfaction questions asked participants to what extent they felt that the session 1) was helpful for them as a parent, 2) made them feel comfortable sharing opinions, 3) held their interest, 4) the facilitator supported their learning, and 5) the facilitator addressed their needs and interests. The response options were on a 4-point Likert scale ranged from *not at all* to *a lot*. The true-or-false questions addressed the main content of each session. The two commentary questions were, “What are the most important things you learned during today’s session?” and “What could have made today’s session better?”

Adolescents’ behavioral outcomes. Adolescents’ dietary intake was assessed using 24-hour dietary recalls from three nonconsecutive days collected during a one-week period using NDSR software (Nutrition Data System for Research 2016, Nutrition Coordinating Center, University of Minnesota, Minneapolis, MN). The NDSR-assisted 24-hour dietary recall procedure has shown adequate validity for assessing dietary intake among children (Lytle et al., 1993). A previous study found that reducing the retention interval increased recall accuracy among 4th graders (Baxter et al., 2009). Therefore, the present study asked early adolescents to report their dietary intake within the immediate 24-hour timeframe starting from the day of the interview to the day before the interview. Fruit and vegetable consumption and consumption of sugar-sweetened beverages were calculated from a three-day average using the NDSR 2016 food and nutrient database.

Adolescents’ physical activity was assessed using three questions from the Project EAT 2010 survey, which were originally adapted from the Godin-Shepherd Leisure-Time Exercise Questionnaire (Berge et al., 2016; Godin & Shephard, 1985). Early adolescents reported weekly hours spent in mild, moderate, and vigorous physical activities with response options ranging from *zero* to *six or more hours*. The response options were converted to 0, 0.3, 1.3, 3.3, 5.3, and 8 hours to estimate hours per week that adolescents participated in each type of activity. This method has shown good test-retest reliability ($r = 0.73-0.84$, $p < 0.05$) among adolescents (Berge et al., 2016). Early adolescents also reported the time spent on four types of screen time activities (watching TV/DVD/videos, using a computer, playing electronic games while sitting, and using smartphones and tablets) on an average weekday and weekend day with response options ranging from *zero* to *five or more hours*. This method showed good test-retest reliability among adolescents in the Project EAT study ($r = 0.77-0.84$, $p < 0.05$) (Berge et al., 2016). Daily averages for screen time were calculated by weighted weekday and weekend day screen time.

Parents’ behavioral outcomes. Parents’ dietary intake was assessed using a Food Behavior checklist (Blackburn et al., 2006). This checklist included six questions regarding the frequency of eating more than one kind of fruit or vegetable daily, eating two or more servings of vegetables at the main meal, eating fruits or vegetables as snacks, and daily servings of fruit

intake and vegetable intake. The checklist also included two questions assessing the frequency of fruit, sports drink, and regular soda intakes. The response options for frequency-type questions included *no*, *yes*, *sometimes*, *yes*, *often*, and *yes*, *always*. The Food Behavior checklist has demonstrated acceptable test-retest reliability ($r = 0.35-0.83$, $p < 0.05$), convergent validity with serum carotenoids and dietary recalls ($r = 0.20-0.39$, $p < 0.05$), and sensitivity to change ($p < 0.05$) among low-income nutrition education program participants (Blackburn et al., 2006).

Physical activity of parents was assessed using the International Physical Activity Questionnaire (IPAQ) short form (Craig et al., 2003). The IPAQ short form showed good test-retest reliability ($r = 0.66-0.88$, $p < 0.05$) and acceptable criterion validity (>150 min/week: $\rho = 0.5$, $p < 0.05$) among U.S. adults (Craig et al., 2003).

Parenting styles were assessed using a 32-item Parenting Style and Dimension Questionnaire (Olivari, Tagliabue, & Confalonieri, 2013). This questionnaire assessed three parenting styles and corresponding subfactorial dimensions. They included the authoritative parenting style (Cronbach $\alpha = 0.86$) with three dimensions of warmth (5 items), reasoning (5 items), and autonomy granting (5 items); the authoritarian style (Cronbach $\alpha = 0.82$) with three dimensions of physical coercion (4 items), verbal hostility dimension (4 items), and non-reasoning (4 items); and the permissive style (Cronbach $\alpha = 0.64$) with an indulgent dimension (5 items) (Olivari et al., 2013). The response for each item was based on a 5-point Likert scale ranging from *never* to *always*. A summed score was calculated from each dimension of the corresponding parenting style.

Parenting practices were assessed using a scale adapted from the Parenting Strategies for Eating and Activity Scale (Larios, Ayala, Arredondo, Baquero, & Elder, 2009). Both parents and adolescents reported frequencies of food- and activity-related parenting practices based on a five-point scale ranging from *almost never/never* to *almost always/always*. Food- and activity-related parenting practices included setting goals or limits, role modeling, managing availability and opportunities, teaching, encouraging/discouraging, reminding, monitoring, and rewarding early adolescents' energy balance-related behaviors. Parental role modeling was measured according to parents' report regarding the frequency of engaging in certain energy balance-related behaviors in front of and with their child, respectively (Draxten, Fulkerson, Friend, Flattum, & Schow, 2014). Parent and early adolescents also reported home food availability and accessibility using a 7-item home food environment questionnaire from Project EAT ($r = 0.65-0.76$, $p < 0.05$) (Robinson-O'Brien, Neumark-Sztainer, Hannan, Burgess-Champoux, & Haines, 2009). Four items assessed the home availability and accessibility of fruits and vegetables, and three assessed the home availability of unhealthy food items, including sugary drinks, sweets, and salty chips, with four response options ranging from *hardly ever* to *almost always*. Mean scores of these items were calculated to indicate home healthy and unhealthy food availability.

Statistical Analysis

Analyses were performed using SAS 9.4 for Windows (Cary, NC, USA). Descriptive analyses were performed on sample characteristics and outcome variables. Pre- and post-intervention comparisons were conducted using paired sample *t*-tests. Statistical significance was set at $p < 0.05$. The use of *t*-tests with small sample sizes was shown to be valid by de Winter (2013). However, the statistical power for detecting significant differences may not be adequate with small sample sizes depending on effect sizes. Participant satisfaction was calculated based on percentages of affirmative responses. Themes based on parents' suggestions were extracted from compiled comments.

Results

Participant Characteristics

Fourteen families indicated interest in participating in the program, and thirteen families completed baseline data collection. These thirteen families included 13 fathers, 10 mothers, and 13 early adolescents (8 boys, 5 girls). Fathers were 41 ± 7 years, mothers were 39 ± 7 years, and early adolescents were 12 ± 1 years. Eleven fathers, nine mothers, and eight early adolescents were either overweight or obese. The majority of parents had obtained a high school or less education and reported an annual household income of $\leq \$35,000$ to $\$49,999$. All parents were born in Mexico and had lived in the U.S. for an average of 20 ± 10 years. Twenty parents reported speaking Spanish or primarily Spanish at home. Nine families (9 fathers, 4 mothers, and 8 early adolescents) completed the post-intervention data collection session. No sociodemographic differences were observed between families that completed the program or withdrew from the program. Weight status did not differ between parents who completed or withdrew from the program. However, the mean BMI-z score of adolescents who completed the program was 0.6 versus 1.9 for those who withdrew from the program ($p = 0.06$).

Participant Attendance and Post-Session Evaluation

One family dropped out after completing the baseline data collection, and twelve families attended at least two class sessions. Nine of these twelve families completed five to eight sessions. Post-session evaluation surveys were collected from each parent after attending each class session ($n = 109$ surveys). Results based on the satisfaction survey questions indicated that about 90% rated class sessions as interesting and helpful for them as a parent, and that the sessions allowed them to feel comfortable sharing opinions. Most parents (94%) indicated that the session facilitators supported their learning and addressed their needs and interests. The overall rate of correct responses to the true-or-false questions was 88%. Two common themes were identified from the two open-ended commentary sections. One was to start and finish the class on time, and the other was to include more interactive activities with their adolescents.

Adolescents' Behavioral Outcomes

Eight adolescents participated in pre- and post-intervention evaluation activities, including 24-hour dietary recalls, to assess changes in dietary behaviors. Table 4 presents group means of adolescents' behavioral outcomes collected at pre- and post-intervention. Adolescents' vegetable intake, SSB intake, moderate activities, mild activities, and screen time behaviors showed changes in the desired direction.

Table 4. Pre- and Post-intervention Comparisons of Adolescents' Behavioral Outcomes ($n = 8$)

Behavioral Outcomes	Pre-intervention (Mean \pm SD)	Post-intervention (Mean \pm SD)
Dietary intake (servings per day)		
Fruit	1.4 \pm 1.2	1.0 \pm 1.1
Vegetable	1.0 \pm 0.4	1.1 \pm 0.7
Sugar sweetened beverages	0.7 \pm 0.9	0.3 \pm 0.4
Physical activity (hours per week)		
Vigorous activities	3.1 \pm 1.2	3.0 \pm 0.9
Moderate activities	2.5 \pm 1.2	2.6 \pm 1.2
Mild activities	2.4 \pm 1.3	3.2 \pm 1.4
Screen time (hours per day)		
TV/DVD	1.5 \pm 1.1	1.3 \pm 0.9
Computer	1.3 \pm 1.8	0.8 \pm 1.2
Video games	1.4 \pm 1.5	0.6 \pm 0.8
Phones/tablets	2.0 \pm 1.1	1.7 \pm 1.4

Parents' Behavioral Outcomes Related to Dietary Intake and Physical Activity

According to the parent-reported Food Behavior Checklist, parents ($n = 14$) reported significantly higher daily servings of fruit and lower frequency of regular soda consumption at post- compared to pre-intervention (Table 5). Even though the IPAQ showed validity among multiple populations, participants in the current study had difficulties completing the questionnaire as indicated by six parents at both pre- and post-intervention who had missing responses to one or more questions. Therefore, data related to parents' physical activity and sedentary time were not shown.

Table 5. Pre- and Post-intervention Comparisons of Parents' Responses to the Food Behavior Checklist (n = 14)

Measures (range or servings)	Pre-intervention (Mean ± SD)	Post-intervention (Mean ± SD)	<i>p</i>
Fruit intake frequency (1-4) ^a	2.7 ± 0.8	2.7 ± 0.7	1.00
Daily fruit servings ^b	2.2 ± 0.9	3.2 ± 1.2	0.00
Fruit or vegetable snacks (1-4) ^a	2.7 ± 0.8	2.4 ± 0.8	0.10
Vegetable variety (2-8) ^c	4.6 ± 1.2	5.1 ± 1.5	0.39
Daily vegetable servings ^b	2.0 ± 1.0	2.6 ± 1.0	0.09
Fruit/sports drink intake frequency (1-4) ^a	1.8 ± 0.8	1.7 ± 0.6	0.80
Regular soda intake frequency (1-4) ^a	2.2 ± 0.8	1.8 ± 0.6	0.03

^aA range of intake frequencies in response to “do you eat/drink ...?” 1 = *no*; 2 = *yes, sometimes*; 3 = *yes, often*; 4 = *yes, always*.

^bSelf-reported daily intake servings.

^cA summed score of intake frequencies of eating one or more kinds of vegetables each day and eating two or more vegetables at main meals.

Pre- and post-values were compared using paired sample *t*-tests, *p* < 0.05.

Parents' Behavioral Outcomes Related to Parenting Styles and Practices

The pre- and post-intervention scores and comparisons of the seven parenting dimensions of the three parenting styles are shown in Table 6. Parents reported significantly lower non-reasoning scores of the authoritarian parenting style and a marginal increase in the reasoning score of the authoritative parenting style at post- compared to pre-intervention based on the Parenting Style and Dimension Scale.

Table 6. Pre- and Post-intervention Comparison of Parents' Responses to the Parenting Style and Dimension Scale (n = 14)^a

Parenting Styles Dimensions (scale range)	Pre-intervention (Mean ± SD)	Post-intervention (Mean ± SD)	<i>p</i>
Authoritative			
Warmth (5-25) ^b	17.5 ± 3.1	17.1 ± 2.3	0.62
Reasoning (5-25) ^b	17.1 ± 3.1	17.6 ± 1.9	0.07
Autonomy granting (5-25) ^b	15.7 ± 3.7	16.2 ± 2.8	0.62
Authoritarian			
Physical coercion (4-20) ^c	5.7 ± 1.8	5.3 ± 1.4	0.29
Verbal hostility (4-20) ^c	9.7 ± 2.3	9.6 ± 1.9	0.92
Non-reasoning (4-20) ^c	8.3 ± 2.3	6.6 ± 2.2	0.00
Permissive			
Indulgent (5-25) ^b	11.2 ± 2.3	11.6 ± 2.6	0.13

^aResponse options were 1 = *never*, 2 = *once in a while*, 3 = *about half of the time*, 4 = *often*, and 5 = *always*.

^bSummed score of five items measuring the parenting dimension.

^cSummed score of four items measuring the parenting dimension.

Pre- and post-values were compared using paired sample *t*-tests, *p* < 0.05.

Frequencies of 41 types of adolescent-reported paternal and maternal food- and activity-related parenting practices based on energy balance-related behaviors (FV, SSB, sweets/salty snacks, fast food, PA, screen time) and availability were compared between pre- and post-intervention. Numbers of adolescents who reported positive changes were tallied. Eight paternal food- and activity-related parenting practices showed positive changes reported by four or more adolescents. They were reminding the adolescent regarding FV intake, modeling SSB intake and sweets/salty snacks intake (reversed), making SSB available (reversed), discouraging SSB intake, monitoring sweets/salty snacks intake, and modeling and teaching about PA. Thirteen maternal food- and activity-related parenting practices showed positive changes reported by four or more adolescents. They were modeling and reminding the adolescent regarding FV intake, modeling SSB and sweets/salty snacks intake (reversed), making SSB and fast food available (reversed), discouraging SSB, sweets/salty snacks, and fast food intake, modeling and reminding the adolescent about PA, and modeling and making ST opportunities available (reversed).

In response to questionnaire items regarding parenting practices related to their child's food intake, physical activity, and screen time, parents reported increased frequency for six practices from pre- to post-intervention (Table 7). These included modeling vegetable intake, making vegetables available, teaching children to eat fruits and vegetables, modeling physical activity, making physical activity opportunities available, and setting goals for physical activity. Parents also reported having fewer unhealthy foods at home from pre- to post-intervention ($p = 0.01$).

Table 7. Pre- and Post-intervention Comparisons of Parent-reported Food- and Activity-related Parenting Practices (n = 14)

Parenting Practices	Pre-intervention (Mean \pm SD)	Post-intervention (Mean \pm SD)	p^3
FV¹-related parenting practices			
Model fruit intake	3.3 \pm 0.7	3.7 \pm 0.6	0.09
Model vegetable intake	3.0 \pm 0.8	3.5 \pm 0.6	0.04
Make fruit available	3.8 \pm 0.5	4.0 \pm 0.5	0.12
Make vegetables available	3.2 \pm 0.8	3.9 \pm 0.7	0.02
Encourage FV intake	3.9 \pm 0.9	4.0 \pm 1.0	0.50
Set goals for child to eat FV	3.1 \pm 1.0	3.3 \pm 0.8	0.33
Teach child to eat FV	3.5 \pm 0.9	4.1 \pm 0.8	0.01
Remind child to eat FV	3.6 \pm 0.9	3.7 \pm 1.0	0.84
Praise child for eating FV	3.4 \pm 1.2	4.2 \pm 0.8	0.03
Monitor child FV intake	2.5 \pm 0.7	2.8 \pm 1.0	0.21
SSBs¹, sweets/salty snacks, fast food-related parenting practices			
Model SSB intake	2.4 \pm 0.8	2.3 \pm 0.5	0.33
Model sweets/salty snacks intake	2.1 \pm 0.4	2.1 \pm 0.5	1.00
Model fast food intake	2.5 \pm 0.6	2.4 \pm 0.5	0.55
Make SSBs available	2.1 \pm 0.7	2.0 \pm 0.7	0.33
Make sweets/salty snacks available	2.1 \pm 0.9	1.9 \pm 0.8	1.00
Make fast food available	2.4 \pm 0.8	2.4 \pm 0.9	0.77

Parenting Practices	Pre-intervention (Mean ± SD)	Post-intervention (Mean ± SD)	<i>p</i> ³
Limit SSB intake	3.6 ± 1.3	3.2 ± 1.2	0.24
Limit intake of sweets/salty snacks	3.4 ± 1.1	3.3 ± 1.1	0.58
Limit fast food intake	3.4 ± 0.8	3.4 ± 1.2	0.88
Discourage SSB intake	2.8 ± 1.0	3.4 ± 0.9	0.27
Discourage intake of sweets/salty snacks	3.1 ± 0.8	3.0 ± 1.1	0.82
Discourage fast food intake	2.9 ± 0.9	2.8 ± 1.1	0.63
Monitor SSB intake	3.0 ± 1.0	3.2 ± 1.1	0.46
Monitor intake of sweets/salty snacks	3.1 ± 1.1	3.2 ± 1.3	0.55
Monitor fast food intake	2.8 ± 1.1	2.7 ± 1.3	0.81
Reward child with SSB	1.7 ± 1.2	1.5 ± 0.8	0.66
Reward child with sweets/salty snacks	1.5 ± 0.9	1.4 ± 0.5	0.43
Reward child with fast food	1.8 ± 0.7	1.6 ± 0.7	0.43
PA¹-related parenting practices			
Model PA	2.9 ± 0.7	3.6 ± 0.9	0.02
Make PA opportunities available	3.6 ± 0.8	4.2 ± 0.8	0.01
Encourage PA	3.8 ± 0.8	4.1 ± 0.9	0.26
Set PA goals for child	3.3 ± 0.9	3.9 ± 0.8	0.01
Teach child about PA	3.4 ± 1.0	3.9 ± 0.9	0.08
Remind child about PA	3.8 ± 1.1	3.7 ± 1.1	0.81
Praise child for PA	3.7 ± 1.0	3.9 ± 1.1	0.39
Monitor child PA	3.3 ± 1.0	3.7 ± 1.1	0.25
ST-related parenting practices			
Model ST	2.6 ± 0.6	2.3 ± 0.6	0.06
Make ST opportunities available	2.7 ± 1.1	3.0 ± 0.8	0.40
Limit ST	3.0 ± 1.4	3.3 ± 1.1	0.57
Monitor ST	3.5 ± 0.9	3.6 ± 0.9	1.00
Reward child with ST	2.0 ± 1.0	1.9 ± 0.9	0.55
Home availability²			
Healthy foods	2.8 ± 0.5	3.1 ± 0.3	0.06
Unhealthy foods	1.9 ± 0.4	1.7 ± 0.3	0.01

¹FV: fruit and vegetable; SSB: sugar-sweetened beverage; PA: physical activity; ST: screen time. Responses for all items were based on a 5-point frequency scale: 1 = *never*, 2 = *seldom*, 3 = *sometimes*, 4 = *often*, 5 = *always*.

²Home availability response options: 1 = *hardly ever*, 2 = *sometimes*, 3 = *often*, 4 = *almost always*.

³Pre- and post-values were compared using paired sample *t*-tests, *p* < 0.05.

Discussion

In this pilot test, the Padres Preparados, Jóvenes Saludables program demonstrated feasibility based on acceptability and preliminary effectiveness regarding behavioral outcomes.

Participants rated the program favorably in terms of perceived benefits. Attendance among fathers and adolescents was high. Improvements were observed regarding parent fruit and soda intake and parenting practices specific to adolescents' FV intake and physical activity. However,

findings regarding behavioral outcomes need to be interpreted with caution, given the small sample size.

A previous study reported that attendance in community-based parenting education among Latino fathers has been problematic in the past for several reasons (Garcia-Huidobro et al., 2015). Latino fathers may refuse to participate because they consider parenting to be the responsibility of the mother. Employment can also present challenges to program participation among fathers. The majority of fathers (92.8%) with children under 18 years of age in the U.S. are employed and are more likely to work full time than mothers (Bureau of Labor Statistics, 2018). However, the high attendance by Latino fathers in the current study indicated a commitment to childhood obesity prevention. Three-quarters of families attended most of the eight 2.5-hour sessions with no fathers missing program sessions when adolescents were present. The Padres Preparados, Jóvenes Saludables program successfully engaged Latino fathers in this community-based, healthy lifestyle intervention program, indicating that the program structure was feasible and the program content was of interest.

This pilot study found significant increases in parent-reported daily servings of fruit and decreased SSB intakes and potential improvement in adolescent-reported SSB intake and weekday screen time. More dietary changes were reported by parents than children, which may be partially explained by the small sample size. Changes in parents' dietary intake suggested a potential positive influence on dietary practices of families. The lack of positive changes regarding intake of sweets/salty snacks and fast food as well as physical activity may be attributed to the limitation of the assessment methods. Nearly half of the parents were not able to provide valid responses to the IPAQ, which made the estimation of parents' weekly active and sedentary hours impossible, thereby limiting the ability to test all behavioral outcomes for changes from pre- to post-intervention (Skender et al., 2016).

This program focused on parenting skill training and the development of positive parent-adolescent relationships related to topics of healthy eating, physical activity, and screen time. After completing the program, parents reported more reasoning than non-reasoning/punishment in their interactions with adolescents. This change was in accordance with the enhancement of food- and activity-related parenting practices such as setting expectations/limits, teaching, and modeling fruit and vegetable consumption and physical activity. Parenting practices have been found to mediate children's behavior change (Crespo et al., 2012; Lloyd, Lubans, Plotnikoff, & Morgan, 2015). For example, the Aventuras Para Niños program showed that parental monitoring and support of children's physical activity significantly mediated the increase in child physical activity after a school-based childhood obesity intervention program among 5- to 8-year-olds (Crespo et al., 2012). Results from the Healthy Dads, Healthy Kids program for Australian school-aged children showed that paternal involvement and role modeling significantly mediated children's physical activity (Lloyd et al., 2015). Findings from these studies and the current study indicated that improvements in food- and activity-related parenting

practices might promote positive changes in children's and adolescents' dietary intake and physical activity.

This study has several limitations. First, the quasi-experimental design compromised the internal validity and ability to determine causality between program exposure and measured outcomes. Second, the small sample size contributed to a lack of power to detect significant changes from pre- and post-intervention. Third, the program outcome assessment largely relied on participants' self-report, which was subject to social desirability. These limitations, together with the preliminary findings regarding program feasibility, suggest that further implementation with a larger sample in a controlled trial is warranted.

Conclusion and Implications

Results from the pilot test of the Padres Preparados, Jóvenes Saludables program with Latino fathers and early adolescents demonstrated feasibility based on acceptability and preliminary results regarding effectiveness in promoting healthy lifestyle behaviors among early adolescents through improvements in parenting styles and food- and activity-related parenting practices. Participant feedback from the pilot test indicated that several improvements should be made before further implementation, which included having parents and adolescents learn about nutrition and physical activity concepts together, providing take-home activities, using a gift card drawing at the beginning of each session to motivate families to arrive on time, and using a valid measure of parents' physical activity to improve the outcome evaluation survey.

The Padres Preparados, Jóvenes Saludables program focused on Latino fathers' involvement in promoting healthy eating, physical activity, and screen-time behaviors for adolescents aged 10-14. This pilot study confirmed that Latino fathers were committed to childhood obesity prevention through their attendance, ratings of satisfaction, and positive changes in healthy lifestyle behaviors and related parenting practices. Additional intervention studies and efforts are needed for Latino fathers or male caregivers in general, as they are less likely to participate in obesity prevention programs than mothers (Davison et al., 2018).

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