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Is parenting style related to children's healthy eating and physical activity in Latino families?

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Abstract

Parenting styles influence a child's risk for obesity. The goals of this study are to evaluate the influence of (i) parenting style on children's health behaviors (physical activity and dietary intake), (ii) children's sociodemographic characteristics on parenting style and on children's health behaviors and (iii) parents' sociodemographic characteristics on their use of controlling styles to promote a healthy home environment. Survey and anthropometric data were collected from a community sample of Latino parents (n = 812) and their children in kindergarten through second grade. Parental use of positive reinforcement and monitoring was associated with children's healthy eating and exercise. Also, parents' use of appropriate disciplining styles was associated with healthier eating, while parental use of control styles was associated with unhealthy eating. The daughters of parents who used controlling styles ate more unhealthy foods than did the sons. Older, employed and more acculturated parents used less controlling styles than their counterparts. Parenting interventions targeting children's dietary intake and physical activity should encourage parents to use more positive reinforcement and monitor their children's health behaviors as these parenting styles are associated with healthier behaviors. Moreover, intervention researchers may want to encourage Latino parents to use less controlling styles with girls as this parenting style increased girls' risk for unhealthy eating.

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Introduction

The obesity epidemic among children has been growing rapidly over the past 10 years, particularly in Latino children [1]. In 1999–2002, US national data suggested that 26.3% of children ages 2–5 years and 38.9% of children ages 6–11 years were overweight or at risk for overweight [1]. Although biological factors may influence children's risk for becoming overweight [2], compelling evidence suggests that children's contexts such as the home and school environments promoting unhealthy eating and exercise habits, precursors for the emergence of obesity [3]. Because children's health habits develop in the home context and are highly dependent on parents' actions and attitudes regarding eating and exercise, the home environment can have lasting effects on children's weight trajectories [3].

A number of effective parenting styles can reduce the risk of childhood overweight. Parental monitoring of children's dietary intake and physical activity has been associated with children's health practices [4, 5]. Also, parents who set appropriate limits (i.e. provide structure and boundaries) and consequate healthy eating with either tangible (e.g. stickers) or intangible (e.g. praise) reinforcers are more likely to have children who eat healthy [6]. In contrast, research shows that parents who are authoritarian

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(i.e. highly directive, demanding and strict) regarding health behaviors increase their children's risk for overweight. When considering children's dietary intake, observational, experimental and longitudinal studies suggest that parents who use a controlling parenting style have children who are less likely to consume healthy foods, more likely to consume unhealthy foods and consume more food overall than children with parents who do not [7–18].

The impact of parental styles on children's health behaviors may depend, in part, on characteristics of the child. Studies suggest that overweight children and girls respond differently to a given parenting style than normal weight children or boys. Overweight children may respond more negatively to parental control by eating more calories [19]. Similarly, girls are likely to consume more energy when their mothers restrain or control their eating [10, 20]. Almost all studies examining the impact of parenting styles on children's health practices have included primarily White/Anglo samples limiting the generalizability of these findings. Among children from diverse ethnic backgrounds, there may be culturally mediated mechanisms that alter children's interpretations and responses to their parenting styles. Understanding the health practices and parental response of children from diverse cultural backgrounds will help researchers develop culturally appropriate parenting intervention/prevention programs targeting childhood obesity.

Cultural values may provide a general or initial template for guiding parental decisions and socialization practices. Because parents' attitudes toward child rearing are influenced by cultural norms and sociocultural issues, parenting practices may differ across ethnic groups. The Mexican culture has been generally described as one emphasizing respect for authority where parents employ strict rules when disciplining children [21, 22]. However, Mexican American parents demonstrate a variety of styles, and socioeconomic factors associated with minority status (e.g. low educational and income level) rather than affiliation to Mexican culture may instead account for parents' use of authoritarian styles [23]. In a study comparing the parenting practices of two-parent Mexican, Mexican American families and White/non-Hispanic, the parenting style of first generation Mexican immigrants and US born Mexican American was more authoritarian than that of Mexican parents. Varela *et al.* [23] concluded that Mexican descent parents living in the United States may amplify their use of authoritarian styles with their children as an adaptation to living in the United States. Several investigators have noted that the function of this parenting style is that it may help protect children from problem behavior [24]. However, additional research is needed to shed light on how sociodemographic and cultural characteristics influence parents' use of authoritarian style.

The overall goal of this study was to expand current research evaluating the influence of effective and ineffective parenting styles associated with obesity-related behaviors by including Latino families. The first aim of this study examined the influence of parental styles on children's health behaviors, controlling for parents' sociodemographic factors. Previous research involving an exclusively Latino sample and evaluating the role of parenting styles for promoting a healthy home did not control for confounding variables such as parents' sociodemographic characteristics. We hypothesized that a parenting style characterized by monitoring, use of reinforcement, appropriate limit setting and discipline (i.e. neither severe nor permissive) would be positively associated with children's healthy eating and physical activity. We also hypothesized that the use of a controlling style would be negatively associated with children's healthy eating and physical activity. Moreover, as previous studies have found that overweight children and girls respond differently to parenting styles, we examined the moderating role of children's characteristics, namely body mass index (BMI) and gender, on parenting styles (monitoring, reinforcement, discipline, limit setting and control) and children's health behaviors. Finally, we examined the association between parents' sociodemographic variables, including acculturation, and their use of a controlling parenting style regarding children's dietary intake and physical activity, with the expectation that parents who are unemployed, less educated and holding more

traditional values will use a more controlling parenting style.

Methods

Participants

Parent–child dyads were recruited as part of a four-arm-randomized community intervention trial called '*Aventuras para Niños*' designed to implement and evaluate an environmentally centered intervention study for Latino children grades K-2 and their families. The current study uses survey data collected from the caretakers and anthropometric data on the children and caretakers. Thirteen schools in the southwest region of San Diego county, CA, USA, averaging 6 miles from the US–Mexican border, were recruited to participate in the trial. To be eligible, the schools had to have a minimum of 70% of Latino enrollment, no involvement in an obesity-related intervention program in the past 4 years and have a defined attendance boundary (i.e. not a charter or magnet school). Families of children enrolled in kindergarten to second grade, regardless of their ethnicity, were recruited to participate if they met the following criteria: (i) no major health problems, (ii) residence within the school attendance boundaries and (iii) family did not intend to move away from the area within a year. Families were recruited via flyers, letters, telephone calls, face-to-face contact at the school and presentations at school events.

Procedure

Parents completed a self-administered survey at their children's school; surveys were available in Spanish and English and took ~60 min to complete. The children and their parents' weight and height were measured by trained research assistants using portable scales and stadiometers. Following completion of the parent survey and anthropometric measurements, parent–child dyads were given a $20 incentive. This protocol was approved by the San Diego State University Institutional Review Board to ensure the protection of human participants.

Measures

Children's dietary intake

A food frequency questionnaire was used to assess children's dietary intake. Food items included in the survey were identified from previous studies with the target population [25]. Parents were asked to rate how often their child consumed each food item with responses collapsed into the following categories: (i) never, (ii) at least once a month, (iii) at least once a week and (iv) everyday. The foods were categorized by three independent reviewers as healthy or unhealthy in terms of their contribution to risk for obesity. Items in each category (e.g. dairy foods) were averaged to form a scale and each food group (healthy versus unhealthy) was summed. 'Healthy foods' included (i) fruits and vegetables (e.g. 100% orange juice, green salad, fruit, vegetables—not potatoes), (ii) low-fat dairy foods (e.g. cheese, milk, milk, yogurt), (iii) low-sugar cereals (e.g. oatmeal, Kix®, Cheerios®), (iv) wheat bread and (v) crackers. 'Unhealthy foods' included (i) regular soda, (ii) flavored drinks (e.g. Kool Aid®), (iii) fats and sweets (e.g. butter, salad dressing, potato chips) and (iv) sugar cereals (e.g. Lucky charms®).

Children's physical activity

Parents rated their children's physical activity level compared with other children. Answer choices were on a five-point Likert scale ranging from (1) 'much less than others' to (5) 'much more than others'. The single-item question was positively associated with several other questions assessing children's physical activity level, therefore, providing some evidence for construct validity: 'During a typical week, how many days do you or another adult in the house participate in physical activities with your child?' ($r = 0.28$, $P < 0.001$) and total number of sports and other organized activities engaged in by the child from a list of 16 activities ($r = 0.17$, $P = 0.001$).

Parenting styles

This scale assesses parents' styles associated with children's eating and activity. The 26-item scale

(14 for eating and 12 for limiting activity) was developed for this project using qualitative and quantitative methods [26]. Focus group discussions with 30 Latina mothers and a review of existing scales used with Hispanic mothers (Child Feeding Questionnaire [27, 28]) yielded a scale representing the following constructs: parental concern, limit setting, monitoring, reinforcement, discipline and control regarding children's eating and activity. An exploratory factor analysis (EFA) was conducted with a sample of 240 Latina mothers yielding a scale with 33 items. Following the EFA, a confirmatory factor analysis (CFA) was conducted to assess construct validity (n = 387). Because parental concern was not related to any of the four constructs, a second CFA without parental concern was tested. All items loaded significantly to their respective factors. The full parenting styles scale consisted of five subscales (monitoring, limit setting, reinforcement, discipline and control) yielding good fit [Root Mean Square Error of Approximation = 0.06, χ^2 (279) = 2.79]. In the original scale, each factor includes parenting styles associated with both children's activity and diet. For the purposes of the study goals, however, questions regarding children's eating (e.g. monitoring children's eating) and activity were analyzed separately. For a description of the items of each scale, please refer to Table I.

Monitoring: Seven items (five for eating and two for activity) measured the frequency with which parents' monitored their children's health behaviors. Discipline: Five items (three for eating and two for activity) measured the frequency with which parents disciplined their children for unhealthy eating (e.g. drinking soda) and engaging in sedentary behaviors (e.g. watching TV) without their permission. Control: Six items (five questions for eating and one question for activity) measured parents' use of control styles. Limit setting: Six items (two for eating and four for activity) assessed parents' use of appropriate boundaries with unhealthy eating and sedentary behavior. Reinforcement: Two items (one for eating and one for activity) measured parents' use of praise when their children ate healthy snacks or engaged in activity.

Table I. *Items describing each of the parenting scales*

		α
Monitoring		
Diet	*How much do you keep track of the ...?*[a]	0.76
	Sweet snacks (candy, ice cream, cake) that your child eats?	
	Salty snack foods (potato chips, tortilla chips) that your child eats?	
	High-fat foods that your child eats?	
	Servings of fruits and vegetables your child is eating	
	How often must your child ask permission before ...?[a]	
	Getting a snack	
Activity	*How much do you keep track of the ...?*[a]	N/A
	Amount of TV or videos your child is watching?	
	Exercise your child is getting?	
Discipline		
Diet	*How often do you discipline your child for doing the following without your permission?*[a]	0.73
	Getting a snack	
	Drinking a soda	
	How often must your child ask permission before ...?	
	Drinking a soda	
Activity	*How often do you discipline your child for doing the following without your permission?*[a]	N/A
	Watching TV or videos	
	Playing video games or the computer	
Control		
Diet	*How much do you agree or disagree with each statement?*[b]	0.72
	Offer sweets (candy, ice cream, cake) to my child as a reward for good behavior	
	My child should always eat all the food on his/her plate	
	I have to be especially careful to make sure my child eats enough	
	If my child says 'I'm not hungry', I try to get him/her to eat anyway	
	If I don't regulate or guide my child's eating, he/she would eat much less than he/she should	
Activity	I offer TV, videos, or video games to my child as a reward for good behavior	N/A

Table I. *Continued*

		α
Limit setting		
Diet	*How much do you agree or disagree with each statement?*[b] I limit the amount of soda my child drinks I limit the number of snacks my child eats	N/A
Activity	I limit the amount of time my child watches TV or videos during the week (Mon-Fri) I limit the amount of time my child watches TV or videos during the weekend (Sat/Sun) I limit the amount of time my child plays video games (*like Game boy, Sega, Play station*) or is on the computer during the week (Mon-Fri) I limit the amount of time my child plays video games (*like Game boy, Sega, Play station*) or is on the computer during the weekend (Sat/Sun)	0.87
Reinforcement		
Diet	*How often do you ...?*[a] Praise your child for eating a healthy snack	N/A
Activity	*How often do you ...?*[a] Praise your child for being physically active	N/A

[a]Five-point Likert scale from 'never' to 'always'. [b]Five-point Likert scale from 'disagree' to 'agree'.

Parents' acculturation

The Acculturation Rating Scale for Mexican Americans (ARSMA-II) developed by Cuéllar *et al*. [29] consists of 30 items on a five-point Likert-type response format, with 1 = 'not at all' to 5 = 'often'. Respondents receive a composite score reflecting greater assimilation to the Anglo culture with higher scores ($\alpha = 0.72$).

Parents' demographic variables

Participants were asked to provide information about their age, gender, marital status, educational attainment, employment status, household income, years in the United States and country of origin if born outside the United States.

Child and parent BMI

BMI scores were calculated for each child and their caregiver/parent. Weight was measured three times to the nearest pound using a Health-o-Meter standard scale with the participant standing without shoes. Height was measured three times to the nearest one-quarter of an inch, using a standard portable stadiometer with shoes removed. Indices of BMI were calculated using the Quetelet index ($w\ h^{-2}$, [30]). Overweight status was determined by using children's gender-specific BMI—for age charts from Centre for Disease Control (CDC's) National Center for Health Statistics and adult BMI cutoff points for overweight and obesity from the CDC.

Data analysis

The linearity of the dependent variables modeled as continuous measures was assessed by visual inspection of scatter plots of univariate models. Multiple linear regression was used to examine the influence of parents' sociodemographic variables on parenting styles. To perform these analyses, parents' marital status was dichotomized as married (reference) versus not, employed (reference) versus not and attained a high school education or less (reference) versus those who attained more education. Children's weight was categorized as underweight/normal versus 'at risk for overweight/overweight'. Parental reports of children's physical activity, healthy eating and unhealthy eating were regressed on each of the parenting styles controlling for potential confounding variables (age, marital status, education and employment). Income was not included as a covariate due to significant collinearity with employment ($r = 0.43$, $P < 0.001$) and age ($r = 0.26$, $P < 0.001$). To examine the moderating role of children's characteristics on parenting styles and children's health behaviors, a series of main effects with their corresponding interaction terms were entered predicting children's health behaviors (healthy eating, unhealthy eating and physical activity) separately. To examine the moderating role of children's characteristics, namely BMI and gender, on parenting styles for activity and eating and on children's health behaviors (eating and physical

activity), a series of main effects with their corresponding interactions between the moderating variables and the predictors were estimated. Each model included main effects and interaction terms (separated by parenting style for eating and activity by child characteristic), adjusting for confounding variables (parents' age, marital status, employment and education). Standardized betas were reported and an alpha of 0.05 was used for all statistical tests. All analyses were conducted using the Statistics Analysis Software 8.0 (1999; SAS Institute Inc., Cary, NC, USA). Participant characteristics are shown in Table II.

Table II. *Parent and child demographic characteristics* (n = *812*)

Parent characteristics	
Mean age (SD)	34 (8)
Gender (%)	
Female	96
Marital status (%)	
Married	70
Education (%)	
High school or less	67
Employment (%)	
Employed	38
Mean income (per month) (%)	
⩽$1500	40
Mean years in the United States (SD)	16 (12)
Country of origin (%)	
Mexico	71
Other	28
Weight status (%)[a]	
Underweight	1
Normal weight	22
Overweight	33
Obese	40
Child characteristics	
Mean age (SD)	6 (0.94)
Gender (%)	
Girls	52
Weight status (%)[b]	
Underweight	12
Normal	55
At risk of overweight	6
Overweight	26

[a]Categories recommended by CDC: <18.5 (underweight), 18.5–24.9 (normal weight), 25.0–29.9 (overweight), ⩾30 (obese).
[b]BMI adjusted for age and gender: <5th percentile (underweight), ⩾5th–85th (normal), >85th and <95th (at risk for overweight), ⩾95th (overweight).

Results

The influence of parenting styles on children's health behaviors

Table III shows bivariate associations between parenting styles and children's health behaviors, controlling for potential confounding variables (parental age, marital status, employment and education). Parental monitoring for healthy eating was positively related to children's healthy eating and negatively related to children's unhealthy eating. Parental monitoring for activity was positively related to children's activity. Parental use of reinforcement styles for healthy eating was positively related to children's healthy eating and negatively related to children's unhealthy eating. Parental use of reinforcement styles for activity was positively related to children's physical activity. Parents' use of appropriate disciplinary styles was positively related to children's healthy eating. Parental discipline was not significantly related to children's unhealthy eating or physical activity. However, parental control was positively related to children's unhealthy eating. Parental control was not significantly associated with children's healthy eating or physical activity.

Moderating role of child characteristics on parenting styles and child health behaviors

Main effects and their corresponding interactions were entered in each model. The data revealed significant main effects for the child's gender ($\beta = -0.50$, $P < 0.05$) and parental control ($\beta = -0.17$, $P < 0.01$) predicting unhealthy eating above and beyond the effects of the confounding variables. There was a significant two-way interaction between children's gender and parents' use of controlling styles predicting unhealthy eating ($\beta = -0.16$, $P < 0.05$). The simple slope of each line was tested and found that the regression parameter of girls was positively related to unhealthy diet ($\beta = 0.17$, $P < 0.01$; see Fig. 1). In other words, girls were significantly more likely to eat unhealthy than

Table III. *Bivariate associations between parenting styles subscales and children's health behaviors*

	Healthy eating[a] (β)	Unhealthy eating[b] (β)	Physical activity (β)
Monitoring	0.45***	−0.17**	0.19***
Reinforcement	0.32***	−0.08**	0.13***
Discipline	0.20*	−0.004	0.04
Limit setting	0.08	−0.05	0.03
Control	−0.07	0.10**	−0.02

Models adjusted for parents' age, marital status, employment and education.
[a]Fruits and vegetables, low-fat dairy foods, low-sugar cereals, wheat bread and crackers. [b]Regular soda, flavored drinks, fats and sweets and sugar cereals. *$P < 0.05$, **$P < 0.01$, ***$P < 0.001$.

boys when parents' used more control strategies for eating. Moreover, there was a significant two-way interaction between children's gender and parents' use of limit setting in predicting unhealthy eating ($\beta = -0.18$, $P < 0.02$; see Fig. 2). The simple slope of each line was tested and found that the regression parameter of boys was negatively related to unhealthy eating ($\beta = -0.15$, $P < 0.01$). In other words, boys ate significantly less unhealthy than girls when their parents engaged in limit setting regarding food. No other interactions were evident between children's characteristics and parenting styles (for eating and activity) predicting children's health behaviors.

Demographic influences on parenting controlling style subscale

To investigate the independent association of parents' sociodemographic variables and parental controlling style subscale, a multiple linear regression was conducted. Table IV shows the associations between parents sociodemographic characteristics and controlling parenting style. The omnibus test for the association between parental control and child eating was rejected [F (5,696) = 6.46, $P < 0.001$, $R^2 = 0.04$]. Parents' who were younger, unemployed and less acculturated were significantly more likely to use a controlling style regarding their children's eating. In terms of parental control for children's activity, the omnibus test was also rejected [F (5,701) = 4.37, $P < 0.001$, $R^2 = 0.03$]. Parents who were not employed and were less acculturated were significantly more likely to report using a controlling style for their children's activity.

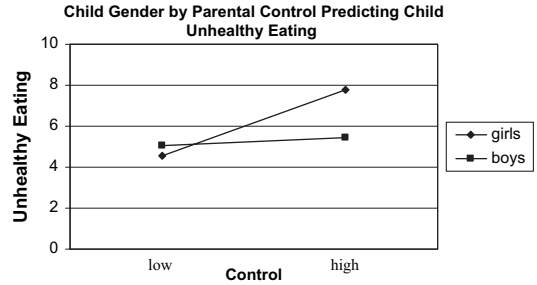

Fig. 1. The moderating role of children's gender on controlling parenting styles and children's unhealthy eating. Model adjusted for parents' age, marital status, employment and education.

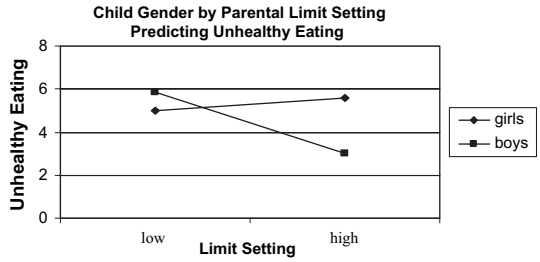

Fig. 2. The moderating role of children's gender on limit setting and children's unhealthy eating. Model adjusted for parents' age, marital status, employment and education.

Table IV. *Associations between parents' demographic characteristics and parental control strategies*

Parent characteristics	Control for eating	Control for activity
Age	−0.01**	0.006
Marital status[a]	0.14	0.001
Education[b]	−0.09	−0.01
Employment[c]	0.25**	0.24*
Acculturation	−0.09**	−0.17***

Predictors for each DV were entered simultaneously in one block.
[a]'0' = married/living as married, '1' = divorced/widowed/separated/never been married. [b]'0' = high school or less, '1' = greater than high school. [c]'0' = employed, '1' = not employed.

Discussion

One of the primary study goals was to examine the influence of parenting styles on children's health behaviors. Our findings suggest that the children of parents who monitored and reinforced healthy behaviors ate more healthy foods and less unhealthy foods, and were more physically active compared with the children of parents who did not use these parenting styles. These findings are consistent with previous research [6, 31]. In a longitudinal study, Faith *et al*. [31] found that parents who monitored their children's fat intake were less likely to have children who were overweight 2 years later than parents who did not monitor their children's diet. Parental monitoring of children's sedentary activities such as television viewing may help protect children from becoming overweight given the links among television watching, inactivity and increased caloric consumption [4]. The use of reinforcement techniques by parents has been shown to cause an increase in children's healthy snack intake [6]. Moreover, study finding suggests that parenting styles characterized by the use of appropriate discipline was associated with eating healthier foods. These results held even after controlling for potentially confounding variables such as parents' age, marital status, employment status and education. Consistent with previous studies involving primarily White middle- and upper-class families, these parental styles appear to reduce the risk of overweight among Latino children [4, 5].

Parents who engage in a controlling parenting style regarding children's eating had children who ate more unhealthy foods. These findings are consistent with those reported by Olvera-Ezzell *et al*. [32] who found that parents who used threats and bribes had children who consumed less healthy foods. Also, Patrick *et al*. [33] found that, after adjusting for caregiver education, African–American and Hispanic parents who exhibited an authoritarian feeding style had children who consumed less fruits and vegetables. Parental control regarding children's eating impacted daughters' eating compared with sons. Consistent with previous research [10, 20], girls ate more unhealthy food when their parents engage in a controlling parenting style regarding their eating. Several explanations may account for these findings. One interpretation may be that boys and girls differ in their awareness of and responsiveness to maternal restriction. Alternatively, it may be that parents treat girls differently, but are not aware of it. In an observational study, Olvera-Ezzell *et al*. [32] found that Latino mothers engaged in more restraining behaviors with their daughters than with their sons. If indeed, mothers treat girls differently than boys, their behaviors may be influenced by several factors such as the concern that their daughters will become overweight and likely face health or self-esteem issues and the possibility of teasing by their peer group; these concerns may reflect society's pressures toward thinness, particularly among women and young adolescent females [34, 10]. Regardless of parents' motives, it is apparent from our findings that, at least with girls, control styles are counterproductive and may be placing them at risk for overweight.

In comparison, boys were less likely to eat unhealthy when their parents set appropriate limits regarding eating. These findings suggest that overly restrictive parenting has deleterious effects on their children's eating, but parenting characterized as lax and little limit setting is also ineffective, particularly with boys. When examining the moderating influence of children's characteristics on the relationship between each of the parenting styles and children's health behaviors, children's BMI did not moderate this relation. These findings are in contrast to those found by Birch and Fisher [19]. Although mothers of children who were overweight were more likely to accurately report that they were overweight (data not shown), it is possible that given the perception that better health is ascribed to heavier weight [35], the children's weight status may not impact parenting style related to diet and physical activity.

Another study aim was to evaluate the influence of parents' sociodemographic variables on their use of control or authoritarian styles for children's eating and activity. Our study findings provide a mixed picture as to whether sociodemographic correlates of minority status (e.g. low education

and income) or aspects of Latino culture influence parental styles characterized as authoritarian. When considering children's eating, parents who were younger, unemployed and less acculturated reported using controlling or authoritarian styles. These findings suggest that, in addition to acculturation, sociodemographic factors associated with minority status in the United States were also related with having an authoritarian parenting style. In comparison, parents who were unemployed and less acculturated were more likely to use parenting styles to promote physical activity characterized as authoritarian. In both health behaviors, parents who were less acculturated engaged in more authoritarian styles, independent of other sociodemographic characteristics. These results are consistent with those showing evidence that Latino parenting styles may have aspects of authoritarian parenting [22], but more studies are needed to confirm this.

There are several limitations that merit noting. Due to the correlational nature of the study, it is not possible to infer causation. For instance, we cannot state whether each of the parenting styles subscales cause healthy or unhealthy eating by their children or vice versa. Additionally, our measure of parenting styles regarding children's dietary intake and activity is not identical to those published; therefore, our findings may not be comparable to other studies. Moreover, our measure of children's physical activity is limited to parents' report of children's activity compared with other children rather than an estimate of actual physical activity per day. Despite these limitations, there were several strengths. The large sample size in the present study augments the limited amount of research examining the influence of parental styles on children's health practices involving Latino families. Our measure of parenting styles captures both obesity-related behaviors diet and activity—thus providing additional evidence for the importance of parenting styles on risk for obesity. Moreover, we augment previous studies by examining the parenting practices of families with a younger age group of children. Previous studies have largely included older children.

In conclusion, it is clear that parenting styles play an important role in shaping children's health behaviors associated with obesity. If replicated and confirmed, findings from the current study may help inform the development of culturally appropriate interventions. Intervention researchers may want to focus on teaching parents how to monitor and positively reinforce their children's health behaviors. For example, parents could be encouraged to reward their children's healthy eating and physical activity by providing them with more tangible and intangible reinforcers. Moreover, parents could be encouraged to be mindful of the costs associated with the using a controlling parenting style, particularly the association with unhealthy eating practices among daughters. For instance, parents may want to avoid being rigid and forcing their daughters to eat healthy foods and avoid unhealthy foods. It is crucial that interventions focus on the home environment and the types of parenting styles associated with the risk of obesity because children's physical activity and dietary habits form in this context.

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Conflict of interest statement

None declared.

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