Published in final edited form as:

J Nutr Educ Behav. 2018 ; 50(10): 968–976. doi:10.1016/j.jneb.2017.12.010.

Latino parents' perceptions of physical activity and healthy eating: at the intersection of culture, family, and health

Sharon E. Taverno Ross, PhD¹, Laura Macia, PhD², Patricia I. Documét, DrPH³, Carla Escribano, MS⁴, Tahereh Mirzakazemi, MD⁵, and Ivonne Smith-Tapia, MSW⁶

¹Department of Health and Physical Activity, University of Pittsburgh; 32 Oak Hill Court, Pittsburgh, PA 15261

²MHP Salud, Bradenton, FL 34203

³Department of Behavioral and Community Health Sciences, University of Pittsburgh, Pittsburgh, PA 15261

⁴John Kane Regional Center, Pittsburgh, PA 15132

⁵Santa Rosa Family Medicine, Santa Rosa, CA 95403

⁶Office of Child Development, University of Pittsburgh, Pittsburgh, PA 15261

Abstract

Objective—To explore Latino parents' perspectives on healthy living and identify strategies to incorporate in future child obesity intervention.

Design—Descriptive, qualitative study.

Setting—Participants were recruited from an emerging Latino community (area with low (<5%) yet growing concentrations of Latinos) in Allegheny County, Pennsylvania.

Participants—Thirty-two parents of preschool children participated in 5 Spanish-language focus groups.

Phenomenon of Interest—Parents' perceptions of a healthy lifestyle (i.e., physical activity and nutrition).

Analysis—Data were analyzed using the constant comparison method to identify salient categories, themes, and patterns.

Results—Three overarching themes were identified: (1) Healthy living: beyond one's control; (2) “Estamos *acostumbrados*” (We are used to [a certain lifestyle]); and (3) Latin American and U.S. culture conflict. In general, parents perceived that maintaining a healthy lifestyle required

Corresponding Author: Sharon E. Taverno Ross; 32 Oak Hill Court, Pittsburgh, PA 15261; Phone: 412-383-4042, Fax: 412-488-4045; seross@pitt.edu.

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

enormous effort and change is difficult given lack of knowledge and control. Recommendations for future interventions were also discussed.

Conclusions and Implications—Key intervention approaches with this population may include a focus on the family environment. Increasing knowledge, building self-efficacy and modeling behavior through family recipe preparation and physical activity breaks, and an emphasis and orientation to community resources to support behavior change and physical activity and healthy eating habits may be necessary.

Keywords

Hispanic Americans; pediatric obesity; physical activity; nutrition; focus groups

INTRODUCTION

Latinos comprise approximately 16% of the total U.S. population and are the largest growing minority group in the United States.¹ Nearly 16.7% of Latino preschool children are considered obese compared with 3.5% of non-Latino white, 11.3% non-Latino black, and 3.4% of non-Latino Asian children.^{2,3} Consequently, children from Latino families face greater risk of weight-related health problems such as diabetes, heart disease, and cancer compared with their non-Latino white counterparts.⁴ As the U.S. Latino population continues to increase, the public health need for effective, culturally-appropriate obesity interventions for Latino children escalates. Further, obesity prevention efforts should begin early, given that child obesity tracks into adolescence and adulthood.⁵

The social ecological model (SEM) posits that the causes of child obesity are multifactorial, spanning across multiple, nested levels.⁶ Within these nested levels, families play an integral role in shaping children's health behaviors.⁶⁻⁸ Family-based interventions tailored to Latinos may be particularly successful, given the collectivist cultural orientation that puts the needs of the family above those of the individual.⁹ In fact, Salud America, the Robert Wood Johnson Foundation's research network to prevent Latino childhood obesity, has identified 'family' as the foremost ecological level in which to focus these important public health efforts.¹⁰ As such, childhood obesity interventions that target Latino children early on and include parents and the home environment are essential.

In order for interventions to be most effective and culturally-appropriate, they should be grounded in theory and tailored to the community.¹¹ Qualitative approaches, particularly focus groups, are ideal to explore collective perceptions and beliefs regarding a given topic and inform program development.¹² Previous studies with Latino parents of preschool children have explored perceptions surrounding behaviors associated with risk of obesity in children. There is a widely held belief in the Latino community that a "chubby baby" is a healthy baby, and few Latina mothers with preschool children are able to recognize their children as being overweight.¹³ One study reported the main sources of information for Latina mothers' regarding physical activity and nutrition stem from the child's maternal grandmother and health professionals through interpersonal communication, TV, and magazines.¹⁴ Another study found that cultural beliefs, social pressures, and immediate social support networks shaped mothers' feeding practices and beliefs about child weight

status.¹⁵ Regarding physical activity, other studies have reported a parental preference toward more sedentary forms of behavior (e.g., TV viewing) to benefit learning in their young children.^{16–18} Further, Latino parents perceived access to recreational facilities, neighborhood safety, and weather to be key influences on their preschool children's physical activity behaviors.¹⁹

Little is known about the determinants of obesity and successful intervention approaches for Latinos living in emerging Latino communities (ELCs; areas with low (<5%) yet growing concentrations of Latinos²⁰). Because of insufficient linguistically- and culturally-appropriate services, families living in these communities are likely at-risk for poorer health outcomes; however, little is known or published on these populations.^{20,21} It is important to understand the perceptions and needs of Latino parents living in ELCs, as they may differ from those living in more established Latino enclaves. The purpose of the current study was to explore perspectives of Latino parents of children ages 2–5 years living in an ELC on a healthy lifestyle, specifically nutrition and physical activity. The ultimate goal is to apply this rich, culturally-derived information into developing a child obesity intervention targeting Latino preschool children and their families.

METHODS

Participants and Setting

Participants were recruited from the Greater Pittsburgh area (Allegheny County, Pennsylvania), an ELC. According to U.S. Census data, the Latino population in Allegheny County experienced a 71% increase between 2000–2010;²² the most recent reports estimate the population at 24,000.²³ The majority of Latinos in the region come from Mexico (36%) and Puerto Rico (20%).²² On average, the population tends to be young (median age of 26.6 years) with low education (35% of those over the age of 25 have a high-school diploma equivalent or less). The population is scattered throughout the region with no concentration in a single neighborhood or area.^{24,25} Furthermore, this population faces many obstacles to their mental and physical health, including barriers to health care, legal, and social services.^{21,24,26,27}

Participants included parents of children between the ages of 2–5 years old. Purposive sampling procedures were employed to recruit participants representative of the Latino population in the Greater Pittsburgh area. Bilingual study staff recruited parents using various strategies, including approaching families at events and places where Latinos congregate (i.e., Latino grocery stores, churches), using flyers, Facebook, and word of mouth. Further, a bilingual health clinic and two community resource centers serving Latinos referred participants after receiving their approval. Study staff screened interested participants for eligibility on the phone or in-person. Eligibility included parents who: (1) self-identify as Hispanic/Latino, (2) have at least one child between 2–5 years old, and (3) speak either English or Spanish.

Theoretical Framework

The current study was guided by a Social Ecological framework²⁸ and the Social Cognitive Theory (SCT).²⁹ A socioecological perspective emphasizes the interconnectedness of systems;³⁰ the relationships between child physical activity, diet, and weight status are nested within the parent, home, and cultural environment. Cognizant of this heightened role of family and early experiences, the study also drew from Social Cognitive Theory (SCT) as a framework to explain why people develop and maintain health behaviors, and how these learned behaviors are influenced by the individual's environment and self-efficacy.³¹ Questions included in the focus group discussion guide drew on concepts from both theories. Specifically, while questions centered on healthy living within interpersonal relationships (parent / child; SCT), prompts attempted to solicit additional details across levels of the SEM (e.g., parents, home, school, neighborhood). The researchers purposefully did not include questions about childhood obesity but rather focused on family physical activity and nutrition practices, key modifiable behaviors that could be targeted in a future intervention.

Data Collection

Focus group methodology was used to explore Latino parents' perspectives on a healthy lifestyle. This approach was selected to solicit information on the shared group experience and perceptions of Latino parents of preschoolers regarding a healthy lifestyle, a non-sensitive topic. A trained moderator facilitated the focus groups in Spanish at convenient community locations (e.g., community center, church). The moderator was a Latino native Spanish-speaking, public health researcher with over 10 years of experience facilitating focus group discussions. A Latino facilitator who was well known in the local community could create rapport more easily than a non-Latino facilitator. The target of 4–5 focus groups (which would comprise approximately 30–35 participants) was selected based on focus group design recommendations to reach saturation for a single category of participants.^{12,32}

The moderator used a semi-structured interview script to guide participants through a series of questions and prompts (see Supplementary Materials). Specifically, participants shared how they conceptualized a healthy lifestyle, cited specific barriers and facilitators to healthy living, and provided suggestions for topics to include in a future home-based intervention. Questions were developed using guidelines outlined by Krueger & Casey¹² based on the existing literature on Latino child obesity and the researchers' extensive knowledge of the local Latino community. The interview guide was developed and revised by members of the research team. The draft was translated from English into Spanish by a trained professional, and back translated into Spanish to check for accuracy. The interview script was then presented to 3 separate individuals from the Latino community and read over to ensure that the questions made sense and used appropriate forms of Spanish. Example questions include: 'What does living a healthy life mean to you?'; 'What are things that help your family/your child(ren) eat healthy?'; 'What are things that get in the way or prevent your family/your child(ren) from being physically active?'; 'What do you believe would be important components or information to include in a program for Latino parents with young children to help them be more physically active or eat healthier?'

Sessions lasted approximately 1.5 hours, occurred in Spanish, were audio recorded, and attended by a note taker. Before starting the sessions, the moderator read aloud an informational script to provide study details and communicate steps to preserve participant confidentiality (see Supplementary Materials). Following the reading of this script, participants provided their verbal consent to participate in the research study. Verbal consent was preferred and recommended over written consent by a Community Research Advisory Board due to participant concerns of confidentiality and to preserve trust between the participants and researchers. Further, verbal consent was deemed adequate by the University of Pittsburgh's Institutional Review Board given the study's exempt status for being low-risk and not collecting identifiable information. After the focus group session, participants were invited to complete a short demographic questionnaire. To ensure trustworthiness of the data, at the end of each session the note taker summarized the main issues presented in the discussion and invited participants to add or further explain points that may have been incomplete. Additionally, the moderator and note taker met after every session to debrief, discuss the most salient issues for both of them, and possible challenges that should be taken into account at the analysis phase. Onsite childcare was provided and participants received a \$30 incentive following the session. The current study was reviewed and approved by the Institutional Review Board at the University of Pittsburgh with an exempt review.

Analytical Approach

A trained professional (Verbal Ink, Santa Monica, CA) transcribed verbatim audio recordings from the focus groups. A bilingual research staff member verified all transcripts against the original audio files. Transcripts were analyzed in Spanish according to the inductive processes of conventional content analysis and the constant comparison method using NVivo10 qualitative data management software (QSR International [Americas] Inc., Burlington, MA). Six bilingual researchers (4 Latino) trained in qualitative analyses, read the transcripts and developed a free-coding scheme based on emergent themes they identified; codes were developed both in English and Spanish, using Spanish for in vivo codes. This initial exercise resulted in a list of over 150 codes, which were organized based on the study research questions and the focus group discussion guide. The research team then had a series of discussions to design a final codebook, deciding on the appropriate level of detail for coding (e.g., should coding be provided for specific food items such as broccoli, chicken, etc.? for specific activities such as yoga, soccer, etc.), whether codes should be merged, and how to name them. To ensure inter-rater reliability, 2 researchers sequentially coded all the transcripts separately. After each document was coded, inter-rater reliability was assessed by code using NVivo with a Kappa value of 0.61 or above rated as "substantial agreement."^{33,34} Then the 2 researchers met and revised the coding for all codes with a kappa lower than 0.6, resolving any coding discrepancies.

To identify salient categories and patterns in the data, the research team discussed a summary of the codes and quotes iteratively until they reached consensus. Specifically, coded transcripts were analyzed, identifying those codes that were most prevalent and that emerged in most or all of the sessions. The team then focused their attention on those key codes, re-reading transcripts referenced and identifying similarities across them. Discussions also confirmed whether saturation was reached with the originally planned number of

groups, i.e., no additional themes or categories came out in subsequent focus groups,³⁵ and thus end of data collection was appropriate. Based on this exercise, analysis revealed key overarching themes surrounding the parents' perceptions of a healthy lifestyle.

RESULTS

Thirty-two parents provided consent and participated in 5 focus group sessions (3–10 parents per session, both mothers and fathers) held throughout the Greater Pittsburgh area in 2014 and 2015. Twenty-nine parents completed the demographic questionnaire (Table 1). The majority of the participants were female (N=27), and Mexican (N=21). On average, participants were 33.7 ± 5.6 years old (range 22 – 44 years) and had 2 children. Approximately 48% of participants reported having completed high school or less, 41% said their yearly household income was under \$35,000, and 41% reported working outside the home while 59% were stay-at-home parents.

Data analysis revealed 3 overarching themes surrounding the parents' perceptions of a healthy lifestyle: (1) Healthy living: beyond one's control; (2) '*Estamos acostumbrados*' (We are used to [a certain lifestyle]); and (3) Latin American and U.S. culture conflict. Additional details of these themes are provided in the following sections citing specific examples and representative quotes to enhance the narrative.

Theme 1 - Healthy living: beyond one's control

The most prominent theme during the focus group discussions was that factors beyond participants' control prevented them from having a healthier lifestyle. Specifically, these factors or barriers included the weather, children's school, time, and cost.

Weather—Participants from all groups discussed the difficulties of engaging in physical activity during the winter months. For example, not wanting to go outside due to the cold and fear of dangerous conditions. In 1 group, participants mentioned weather as a deterrent to both physical activity and healthy eating: *"I don't want to go out any more because of the cold. Also, cold weather lends itself to me not eating healthy, you don't want a salad as much as you do something warm."* (FG #5)

School influences—Another issue frequently mentioned by participants was the negative influence of children's schools on living a healthy lifestyle. Participants said school food, and the eating habits learned at school, were unhealthy. For instance, vegetables became undesirable, and water was replaced with juice boxes and milk.

"School food isn't nutritional at all, you know? So, they spend a lot of time at school, of course they get used [...] to what they get at school, more than at home." (FG #2)

Participants also identified peer influence at schools as having a negative impact.

"Many kids at school [...] see vegetables and they go, 'Ew,' so my girl started to hear that [...] and also started... 'It's just that I don't like them any more.'" (FG #3)

Time—A 3rd factor that participants identified as beyond their control was time. They stated that work and school activities often left little time and energy to prepare healthy food and be physically active: *“That’s the Latino problem. Like, they have a hard work schedule and are always working.” (FG #3)* As an example of how to overcome this constraint, a mother in this group shared that she integrated physical activity into her daily tasks rather than finding extra time to exercise. *“I work ten blocks away from where I live. [...] I walk there every day. I leave the car and walk to [...] the bus stop.” (FG #3)*

Cost of healthy living—Finally, participants said that healthy living was expensive. Certain physical activity costs, including gym memberships or home exercise equipment, were considered luxuries often out of reach for participants. Similarly, participants in 2 groups identified healthy foods as more expensive than their alternatives. *“It was already mentioned that organic items, or those with less preservatives, are always more expensive. And that can be a problem for some families, the costs...” (FG #5)* Participants also made the connection between the limited availability of seasonal foods and high cost of foods.

Theme 2 – ‘*Estamos acostumbrados*’ (We are used to [a certain lifestyle])

Having a daily routine, being ‘*acostumbrado*’ to a certain lifestyle, was a common barrier to a healthy lifestyle for participants. Key subthemes identified included unhealthy routines, change is difficult, and breaking the cycle.

Unhealthy Routines—When discussing the need to avoid fat when cooking, a participant explained: *“And although we know what is bad [...], we do it because we are acostumbrados.” (FG #4)* Additionally, participants also said healthy eating was difficult because Latinos were used to consuming large portions of the foods they like. Some participants discussed that there are routines around family time, which is important, but sometimes these routines do not include physical activity.

“Before [I had] Sofia I did do a lot of sports and after her, not so much. [...] I could go to the gym because it’s right there, but I prefer to spend that time with her coloring or painting or something else rather than go to a gym and doing things that I know she won’t enjoy.” (FG #5)

Change is Difficult—Participants expressed that maintaining a healthy lifestyle required enormous effort. Achieving change of any kind that became habitual required hard work, and even small changes were hard to maintain: *“You set out and do it one day or two, but by the third day it is - then you go back to the same usual habits.” (FG #2)* Participants often expressed that engaging in regular physical activity required extreme self-determination, which was countered by laziness and lack of commitment: *“There’s always the plan that ‘I’ll start tomorrow.’” (FG #3)*

It was also difficult for parents to get the children *acostumbrado(s)* to eating healthy foods and they mentioned that promoting healthy eating in children was a battle. In all groups, parents expressed frustration and difficulty in getting their kids to eat healthy, which was exacerbated by the negative influence of schools on children’s eating habits. Participants expressed that even if they prepared healthy food, it was too much effort to convince their

children to consume it. Faced with the battle of having children eat foods they don't prefer, such as fruits and vegetables, participants in all groups expressed that occasionally it was easier to give up.

"If they see that it has broccoli or whatever, 'No, I don't want that.' Or, I don't know - they are scared of trying something healthy. So I don't cook it any more [...]. I say, 'No, why am I preparing it if they won't eat it [...]and like it?'" (FG #3)

Breaking the Cycle—Participants recognized that behavior was learned by example, and parents had an important role in this regard: *"If you go on a walk, not so fast, but two or three times around the block, you are inviting them to exercise without making them do it."* (FG #5) When prompted, participants shared strategies for promoting a healthy lifestyle within their family by instituting new and healthy family routines. For example, participants in 2 groups suggested utilizing family time as physical activity time. For some, this strategy helped address the lack of energy resulting from demanding work schedules.

"We play for a while and she enjoys it and well. It is a way of exercising, so I'll say, she gets me to exercise because I have to be with her." (FG #5)

Participants also shared strategies they currently use to encourage healthy eating among children. One participant said she tried to make food more attractive to her children by making it more colorful, or fun by using cookie cutters. Another participant mentioned offering his children the healthier but often least desirable food (such as carrots and celery) while they were hungry and cooking dinner.

Theme 3 – Latin American and U.S. culture conflict

Participants discussed a conflict between Latin American and U.S. culture; 2 subthemes were identified including cultural preferences and confusion surrounding healthy eating.

Cultural preferences—Participants in all groups drew clear lines separating Latin American and mainstream U.S. culture, particularly surrounding food. Food in the U.S. was commonly described as unhealthy and lacking flavor. Overall, participants said that school food was representative of the popular U.S. (junk) foods. They identified hamburgers, pizza, or boxed foods such as mac and cheese as belonging to this group: *"comida chatarra"* (junk food).

"At school they give the kids pizza, Yoggie's, Macaroni Cheese, that is that quick pasta, and that is where it gets hard, because we have the children used to home cooked food, but then the American food is at school." (FG #1)

A common perception of participants was that healthy food was bland and lacking flavor: *"the thing is, everything that's bad tastes better than the healthy stuff."* (FG #4) Participants commonly described healthy foods as *"simple steamed chicken, without oil or anything, vegetables with few spices and rice. Vegetables that have no fat or seasoning and more vegetables than tortilla. And more chicken and vegetables than tortilla."* (FG #4) In contrast, participants described Latino food as flavorful, appealing, good smelling, and warm.

Participants in 1 group also mentioned cultural preferences related to physical activity, and how that might influence (or preclude) the types of activities they engage in.

P1: “I’d like to go out and run but I’m embarrassed to go out [...]

P2: It’s about self-esteem.

P3: Latino culture likes to mock. Right here, an [American] girl goes running and she doesn’t care if they’re looking at her or not.

P1: I’m embarrassed that they would watch me, and say I’m crazy.” [FG #3]

Confusion surrounding healthy eating—Interestingly, participants were inconsistent in labeling Latino food as healthy or unhealthy. Some said Latino food was fresher than its U.S. counterpart, with less sodium or preservatives. Meanwhile, some voiced concerns about Latino food using too much oil, or being unhealthy if not coming directly from “the backyard.” In addition, participants expressed confusion and difficulty in fully understanding how to adapt their cooking customs to the new U.S. context in which they lived. Participants in 1 group were particularly vocal about this issue, and said they were confused as to how to make appropriate decisions given the often contradictory information they received:

“I don’t know if it is too much information or what is going on. There are conflicts with dairy. You could say, how is it possible that all our lives we’ve had dairy, and now no? It’s the devil. No milk, no cheese, no cream, nothing. Everything kills you.” (FG #3)

DISCUSSION

The current study used focus groups to explore Latino parents’ perspectives on a healthy lifestyle, specifically nutrition and physical activity. The theme of external factors that negatively affect the family’s healthy living, including time, cost, weather, and school, were perceived as being out of their control. Similar barriers to a healthy lifestyle have been found in previous studies with Latinos from both established and emerging communities.^{36–39} While the purpose of this study was to solicit perceptions from parents of preschool children specifically, often the discussions were focused on topics that applied to the family or home environment more broadly. For example, the perceived negative influence of school on children’s food preferences, which has been documented elsewhere.^{40,41} Operating within SCT and a SEM framework, family-level factors are hypothesized to influence children’s weight status, physical activity, and nutrition. As such, the researchers considered this information valuable and did not restrict parents’ conversations during the focus groups.

Two major themes were related to cultural factors, including being ‘*acostumbrados*’ to a certain lifestyle, and the conflict of social norms and preferences with U.S. mainstream culture. In previous studies with Latino families, similar results have been documented.^{9,42} In the current study, these perceptions led to a pervasive feeling that behavior change was hard and a losing battle (with children) given parents’ lack of control over many external influences. Participants expressed they wanted simple and accurate information on nutrition as well as physical activity resources in the community. This is in line with findings from a review article reporting that Mexican-American mothers’ barriers to engagement in

childhood obesity preventive behaviors included confusion over proper nutrition information and lack of knowledge of physical activity opportunities.³⁹ However, knowledge is unlikely to be enough to change behavior.⁴³ SCT strategies to increase self-efficacy (e.g., healthy recipe preparation, physical activity breaks) and skills (e.g., self-monitoring, contracting) to promote a health weight may be beneficial in this population.

Through the focus groups discussions, parents shared strategies for promoting a healthy lifestyle in their families. For example, including the whole family in physical activities to model healthy behaviors for children, and making meals and snacks more attractive and kid-friendly. These approaches are supported by the literature to promote healthy habits in children^{44–46} and should be included and promoted among all families. They also provided suggestions for culturally-appropriate information (e.g., recipe modification) and approaches (e.g., take into account social norms surrounding physical activity) that they would like to see in a future intervention.

Strengths and limitations

Major strengths of this study include collecting rich, detailed information on perspectives of Latino parents of preschoolers living in an ELC regarding a healthy lifestyle. To date, little has been published surrounding the lived experience of this at-risk community; even less on the topic of child obesity prevention. This research included 5 focus groups with 32 parents. The community-based recruitment strategy employed by the researchers permitted them to reach a sample of participants who demographically, reflected the broader Latino community, which allowed them to reach saturation. While unlikely, it is possible that additional focus groups with more participants would have revealed additional themes and categories related to the phenomenon of interest. Further, the present findings are likely not generalizable to all Latino immigrant parents of preschool children; however, trustworthiness, rather than generalizability, is the goal of qualitative research. The risk of researcher bias in the conduct of this type of qualitative study and subsequent results is relevant; however, the research team (including individuals removed from the formulation of the research question and data collection), and the iterative analytic approach, decreased the likelihood of these biases. Specifically, that the research team included Latino and/or bilingual researchers, analysis of transcripts occurred in the original language (Spanish), and all 6 researchers discussed the codes and emerging themes extensively.

Implications for Research and Practice

Focus group discussions with Latino parents of preschool children living in an ELC revealed important information regarding their beliefs and barriers surrounding healthy living. The researchers have identified 3 key ways in which other researchers and practitioners could apply the current findings to their future work. (1) Capitalize on strategies already being implemented in this population, along with cultural adaptations of current evidence-based strategies to promote a healthy weight in Latino families. Specifically, increase knowledge, build self-efficacy and modeling behavior, and emphasize and orient participants to community resources in order to support physical activity and nutrition behavior change. These recommendations are in line with findings from previous studies with Latino parents of preschool children.^{46,47} (2) In keeping with the cultural construct of *familismo*,⁴⁸ a

family-based intervention would be beneficial to build social support within the family and modify social norms related to physical activity and nutrition. (3) Given the lack of control perceived by participants related to their lifestyle choices, interventions that incorporate advocacy or empowerment may also be useful. Empowerment improves health, especially when interventions promote authentic participation in making decisions and encompass the social environment.⁴⁹ For example, an intervention could encourage and support parents to join a parent-teacher organization at their children's school to influence the school environment to promote healthy habits in their children.

In conclusion, the present study adds to a developing and vital body of literature surrounding parents' perceptions of a healthy lifestyle (i.e., physical activity and nutrition) living in an ELC. Specifically, this study has identified key modifiable intervention targets and supports necessary to champion these families promote a healthy weight in their young children in spite of social isolation with low access to resources. Furthermore, key intervention approaches with this population should include a focus on the family environment. Increasing knowledge, building self-efficacy and modeling behavior through family recipe preparation and physical activity breaks, and an emphasis and orientation to community resources to support behavior change and physical activity and healthy eating habits may be necessary. While many of the current findings were in line with those from previous studies with more established Latino communities, given the additional barriers families living in an ELC face (e.g., social isolation, lack of resources, etc.), attention should be given to these factors when designing and tailoring future child obesity prevention interventions.

Acknowledgments

This work was supported by the National Heart, Lung, and Blood Institute at the National Institutes of Health (S.E.T.R., grant number R21HL119395); The authors would like to acknowledge our local community partners, Sauld Para Niños, the Latino Family Center, and Casa San Jose for their assistance with participant recruitment;

References

1. Ennis SR, Rios-Vargas M, Albert NG. The Hispanic population: 2010. Washington DC: U.S. Census Bureau; 2011.
2. Ogden CL, Carroll MD, Kit BK, et al. Prevalence of childhood and adult obesity in the United States, 2011–2012. *JAMA*. 2014; 311(8):806–814. [PubMed: 24570244]
3. Anderson SE, Whitaker RC. Prevalence of obesity among us preschool children in different racial and ethnic groups. *Arch Pediatr Adolesc Med*. 2009; 163(4):344–348. [PubMed: 19349563]
4. Kumanyika SK. Minisymposium on obesity: Overview and some strategic considerations. *Annu Rev Public Health*. 2001; 22:293–308. [PubMed: 11274523]
5. Singh AS, Mulder C, Twisk JW, van Mechelen W, Chinapaw MJ. Tracking of childhood overweight into adulthood: A systematic review of the literature. *Obes Rev*. 2008; 9(5):474–488. [PubMed: 18331423]
6. Davison KK, Birch LL. Childhood overweight: a contextual model and recommendations for future research. *Obes Rev*. 2001; 2(3):159–171. [PubMed: 12120101]
7. Berge JM. A review of familial correlates of child and adolescent obesity: what has the 21st century taught us so far? *Int J Adolesc Med Health*. 2009; 21(4):457–483. [PubMed: 20306760]
8. Lindsay AC, Sussner KM, Kim J, Gortmaker S. The role of parents in preventing childhood obesity. *Future Child*. 2006; 16(1):169–186. [PubMed: 16532663]

9. Parra-Medina D, Hilfinger Messias DK. Promotion of physical activity among Mexican-origin women in Texas and South Carolina: an examination of social, cultural, economic, and environmental factors. *Quest*. 2011; 63(1):100–117. [PubMed: 21731409]
10. Ramirez AG, Chalela P, Gallion KJ, Green LW, Ottoson J. Salud America! Developing a national Latino childhood obesity research agenda. *Health Educ Behav*. 2011; 38(3):251–260. [PubMed: 21278306]
11. Fertman CI, Allensworth DD, editors *Health Promotion Programs: From Theory to Practice*. 2. San Francisco, CA: Jossey-Bass; 2017.
12. Krueger RA, Casey MA. *Focus Groups: A Practical Guide for Applied Research*. 4. Thousand Oaks, CA: SAGE Publications, Inc; 2009.
13. Gauthier KI, Gance-Cleveland B. Hispanic parental perceptions of child weight in preschool-aged children: An integrated review. *Child Obes*. 2015; 11(5):549–559. [PubMed: 26218438]
14. Davis RE, Cole SM, McKenney-Shubert SJ, Jones SJ, Peterson KE. An exploration of how Mexican American WIC mothers obtain information about behaviors associated with childhood obesity risk. *J Nutr Educ Behav*. 2017; 49(3):187–195. e181. [PubMed: 27876321]
15. Lindsay AC, Sussner KM, Greaney ML, Peterson KE. Latina mothers' beliefs and practices related to weight status, feeding, and the development of child overweight. *Public Health Nurs*. 2011; 28(2):107–118. [PubMed: 21442018]
16. Woo Baidal JA, Criss S, Goldman RE, Perkins M, Cunningham C, Taveras EM. Reducing Hispanic children's obesity risk factors in the first 1000 days of life: A qualitative analysis. *J Obes*. 2015; 2015:945918. [PubMed: 25874127]
17. Davis RE, Cole SM, Reyes LI, McKenney-Shubert SJ, Peterson KE. "It hurts a Latina when they tell us anything about our children": Implications of Mexican-origin mothers' maternal identities, aspirations, and attitudes about cultural transmission for childhood obesity prevention. *Child Obes*. 2015; 11(5):608–615. [PubMed: 26186285]
18. Grzywacz JG, Arcury TA, Trejo G, Quandt SA. Latino mothers in farmworker families' beliefs about preschool children's physical activity and play. *J Immigr Minor Health*. 2016; 18(1):234–242. [PubMed: 24522435]
19. Lindsay AC, Sussner KM, Greaney ML, Peterson KE. Influence of social context on eating, physical activity, and sedentary behaviors of Latina mothers and their preschool-age children. *Health Educ Behav*. 2009; 36(1):81–96. [PubMed: 18689491]
20. Cunningham P, Banker M, Artiga S, Tolbert J. Health coverage and access to care for Hispanics in "new growth communities" and "major Hispanic centers". Washington, DC: Kaiser Commission on Medicaid and the Uninsured; 2006.
21. Documet PI, Kamouyerou A, Pesantes A, et al. Participatory assessment of the health of Latino immigrant men in a community with a growing Latino population. *J Immigr Minor Health*. 2015 Feb; 17(1):239–47. [PubMed: 25759869]
22. U.S. Census Bureau. 2010 Census, Summary File 1. American FactFinder; 2010. <http://factfinder2.census.gov> [Accessed Sept 1, 2017]
23. U.S. Census Bureau. 2015 American Community Survey 1-Year Estimates. American Fact Finder; 2015. https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_16_1YR_B03002&prodType=table [Accessed Sept 20, 2017]
24. Documet PI, Sharma RK. Latinos' health care access: Financial and cultural barriers. *J Immigr Health*. 2004; 6(1):5–13. [PubMed: 14762320]
25. Macia L. Experiences of discrimination in an emerging Latina/o community. *PoLAR: Political and Legal Anthropology Review*. 2016; 39(1):110–126.
26. Macia-Vergara L. Dealing with grievances: the Latino experience in Pittsburgh, PA. Department of Behavioral and Community Health Sciences, University of Pittsburgh; 2012.
27. Pesantes Villa MA. Taking care of undocumented children: How parents and providers secure health care for uninsured latino children in a new growth community. Behavioral and Community Health Sciences, University of Pittsburgh; 2014.
28. Bronfenbrenner U, Bronfenbrenner U. *The ecology of human development: Experiments by nature and design*. Harvard university press; 2009.

29. Bandura A. Social foundations of thought and action: A social cognitive theory. Prentice-Hall, Inc; 1986.
30. Elder JP, Ayala GX, Campbell NR, et al. Interpersonal and print nutrition communication for a Spanish-dominant Latino population: Secretos de la Buena Vida. *Health Psychol.* 2005; 24(1):49–57. [PubMed: 15631562]
31. Spinner JR, Alvarado M. Salud Para Su Carozón—a Latino promotora-led cardiovascular health education program. *Fam Community Health.* 2012; 35(2):111–119. [PubMed: 22367258]
32. Creswell J. *Qualitative Inquiry and Research Design: Choosing Among Five Traditions.* Thousand Oaks, CA: SAGE Publications, Inc; 1998.
33. [Accessed Sept 20, 2017] NVivo 11 for Windows Help - run a coding comparison query. fom: http://help-nv11.qsrinternational.com/desktop/procedures/run_a_coding_comparison_query.htm
34. Landis JR, Koch GG. The measurement of observer agreement for categorical data. *Biometrics.* 1977; 33(1):159–174. [PubMed: 843571]
35. Green J, Thorogood N. *Qualitative Methods for Health Research.* 3. Los Angeles, CA: SAGE; 2014.
36. Umstatt Meyer MR, Walsh SM, Sharkey JR, Morgan GB, Nalty CC. Physical and social environmental characteristics of physical activity for Mexican-origin children: examining differences between school year and summer perceptions. *BMC Public Health.* 2014; 14:958. [PubMed: 25224797]
37. Turner BJ, Navuluri N, Winkler P, Vale S, Finley E. A qualitative study of family healthy lifestyle behaviors of Mexican-American and Mexican immigrant fathers and mothers. *J Acad Nutr Diet.* 2014; 114(4):562–569. [PubMed: 24529984]
38. Torres ME, Meetze EG, Smithwick-Leone J. Latina voices in childhood obesity: a pilot study using Photovoice in South Carolina. *Am J Prev Med.* 2013; 44(3 Suppl 3):S225–231. [PubMed: 23415187]
39. Sosa ET. Mexican American mothers' perceptions of childhood obesity: a theory-guided systematic literature review. *Health Educ Behav.* 2012; 39(4):396–404. [PubMed: 21551423]
40. Cullen KW, Baranowski T, Rittenberry L, et al. Social-environmental influences on children's diets: Results from focus groups with African-, Euro- and Mexican-American children and their parents. *Health Educ Res.* 2000; 15(5):581–590. [PubMed: 11184217]
41. Hesketh K, Waters E, Green J, et al. Healthy eating, activity and obesity prevention: A qualitative study of parent and child perceptions in Australia. *Health Promot Int.* 2005; 20(1):19–26. [PubMed: 15668217]
42. Larsen BA, Pekmezi D, Marquez B, Benitez TJ, Marcus BH. Physical activity in Latinas: Social and environmental influences. *Womens Health (Lond).* 2013; 9(2):201–210. [PubMed: 23477325]
43. Glanz K, Rimer BK, Viswanath K. *Health Behavior: Theory, Research, and Practice.* 4. San Francisco, CA: Jossey-Bass; 2007.
44. DeCosta P, Møller P, Frøst MB, Olsen A. Changing children's eating behaviour - A review of experimental research. *Appetite.* 2017; 113:327–357. [PubMed: 28286164]
45. Xu H, Wen LM, Rissel C. Associations of parental influences with physical activity and screen time among young children: A systematic review. *J Obes.* 2015; 2015:546925. [PubMed: 25874123]
46. Evans A, Chow S, Jennings R, et al. Traditional foods and practices of Spanish-speaking Latina mothers influence the home food environment: Implications for future interventions. *J Am Diet Assoc.* 2011; 111(7):1031–1038. [PubMed: 21703381]
47. Skala K, Chuang R-J, Evans A, Hedberg A-M, Dave J, Sharma S. Ethnic differences in the home food environment and parental food practices among families of low-income Hispanic and African-American preschoolers. *J Immigr Minor Health.* 2012; 14(6):1014–1022. [PubMed: 22262411]
48. Smith-Morris C, Morales-Campos D, Alvarez EAC, Turner M. An anthropology of "familismo": On narratives and description of Mexican immigrants. *Hisp J Behav Sci.* 2013; 35(1):35–60.
49. Wallerstein N. What is the evidence on effectiveness of empowerment to improve health?. Copenhagen: WHO Regional Office for Europe; 2006. (Health Evidence Network report)

Table 1

Demographic Characteristics of Focus Group Participants (N=32 Latino Parents of Preschool Children) Living in an emerging Latino community in Allegheny County, Pennsylvania.

Characteristic	M (SD) or %	N
Age	33.7(5.6)	32
Female	93.1	27
Country of Origin		
Mexico	72.4	21
Central America	13.8	4
South America	10.3	3
Other	3.4	1
Education		
Less than High School	31.0	9
High School	13.8	4
Some College	20.7	6
College or Advanced Degree	31.0	9
No response	3.4	1
Occupation		
Stay-at-home parent	55.2	16
Employed full- or part-time	37.9	11
Unemployed/student	6.9	2
Annual Household Income		
Less than \$20,000	27.6	8
\$20,000 – \$34,999	10.3	3
\$35,000 – \$49,999	0	0
\$50,000 – \$74,999	13.8	4
\$75,000 and over	17.2	5
No response	27.6	8
Language Preference		
Preferred language to read or speak, % Spanish or mostly Spanish	75.9	22
Language used to think, % Spanish or mostly Spanish	86.2	25
Language spoken at home, % Spanish or mostly Spanish	86.2	25
Language spoken with friends, % Spanish or mostly Spanish	82.8	24

NOTE: Only n = 29 of n = 32 focus group participants completed the full demographic questionnaire;

Table 2

Emergent Themes and Subthemes from Qualitative Data Analysis of Focus Groups with N=32 Latino Parents of Preschool Children Living in an emerging Latino community in Allegheny County, Pennsylvania.

Themes	Subthemes
Theme 1. Healthy living: beyond one's control	Weather
	School Influences
	Time
	Cost of Healthy Living
Theme 2. <i>'Estamos acostumbrados'</i> (We are used to [a certain lifestyle])	Unhealthy Routines
	Change is Difficult
	Breaking the Cycle
Theme 3. Latin American and U.S. Culture Conflict	Cultural Preferences
	Confusion Surrounding Healthy Eating