



## Review article

# Culturally-tailored plant-based interventions to improve health outcomes in pediatric populations: An integrative review

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## ABSTRACT

**Introduction:** There is an increasing rate in nutrition related health risk in children in the United States. Plant-based diets are a sustainable and cost-effective approach to prevent chronic conditions (e.g., obesity, diabetes) while lowering mortality rates. Plant-based diets should meet nutritional requirements to support appropriate growth and development. The purpose of this integrative review was to explore culturally-tailored plant-based dietary interventions to improve health outcomes in pediatric populations.

**Methods:** A methodological review using Whittemore and Knaf's integrative approach was performed. Databases including CAB Abstracts, CINAHL, MEDLINE via PubMed, Web of Science, Food and Science Technology Abstracts, and PsycINFO were searched for peer-reviewed, primary source articles in English, between 2010 and 2025.

**Results:** Nine articles were included. Findings focused on the specific type of cultural-tailoring used, diet types, and their role and impact on health outcomes.

**Discussion:** Culturally-tailored plant-based interventions improved the consumption of vegetables/fruits and reduced cardiovascular risks. Support and environment were also critical in positively impacting food choices. Given health trends and the impact of plant-based diets, there is a need for more long-term studies on effective strategies to expand culturally-tailored intervention programs to improve nutrition and health outcomes among diverse and historically underrepresented pediatric populations.

## 1. Introduction

According to the National Center for Chronic Disease Prevention and Health Promotion, six in ten adults in the United States have chronic disease and four in ten adults have two or more chronic diseases leading to \$4.1 trillion in annual health care costs (National Center for Chronic Disease Prevention and Health Promotion, 2023). Recently, there is a global trend in shifting toward plant-based diets and a desire to understand the connection between nutrition and chronic disease. Plant-based diets have also been found to prevent and treat chronic diseases including ischemic heart disease, type 2 diabetes, hypertension, some forms of cancer, and obesity (U.S. Department of Agriculture and U.S. Department of Health and Human Services, 2020; Melina et al., 2016). Consuming plant-based diets is cost effective and sustainable for the environment (U.S. Department of Agriculture and U.S. Department of

Health and Human Services, 2020; Melina et al., 2016; Landry et al., 2023). Plant-based diets are suitable in every phase of life, from pregnancy and lactation to infancy, childhood, adolescence, adulthood, and also for athletes (Melina et al., 2016). The World Health Organization recommendations for a healthy diet include daily consumption of at least five portions of vegetables and fruits, legumes, nuts and whole grains; less than 10 % of total energy intake should be from free sugars; less than 30 % of total energy intake should be from fats; and less than five grams of salt, which should be iodized (Malik and Nutan, 2015).

Typical plant-based diets are low in saturated fats and high in vegetables, fruits, whole grains, legumes, nuts and seeds. Plant-based diets are also rich in fiber, phytochemicals, antioxidants, vitamins, and minerals (U.S. Department of Agriculture and U.S. Department of Health and Human Services, 2020; Melina et al., 2016). Plant-based diets are in sharp contrast to the Standard American Diet that is high in refined

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grains, sugar, grain-fed meat, artificial additives, and low in vegetables and fruits, all of which are risks for the leading causes of death: cardiovascular diseases, diabetes, and cancer (National Center for Chronic Disease Prevention and Health Promotion, 2023; U.S. Department of Agriculture and U.S. Department of Health and Human Services, 2020). The benefits of plant-based diets are observed in lower total and low-density lipoprotein cholesterol levels, better blood glucose control, reduction in chronic illnesses, and lower rates of mortality (Melina et al., 2016). Individuals may have concerns that vegan or vegetarian diets may lack vitamin B-12 and vitamin D. However, with a balanced diet, outside sources of fortified foods, and/or supplements, individuals will be able to meet the recommended daily intake of both (U.S. Department of Agriculture and U.S. Department of Health and Human Services, 2020; Melina et al., 2016; Georgetown University, 2024).

Plant-based diets have become prevalent worldwide, to the extent that vegetarianism is often associated with a social identity of increased health and vitality (Hargreaves et al., 2021; Turner-McGrievy et al., 2020). More than 30 years ago, the China Study explored relationships between nutrition, heart disease, diabetes, and cancer, as well as the protective impact of plant-based diets (Campbell and Campbell II, 2016). However, plant-based diets have existed for centuries with records tracing these practices back to the 6th century Before Current Era and earlier (Leitzmann, 2014). More recently, interest in plant-based diets has grown. As adults and children look for ways to reduce their environmental impact, improve health, and promote animal welfare (Chai et al., 2019; Fresán and Sabaté, 2019), there is a need for more research on plant-based diets and the best practices for implementation.

Oftentimes, individuals are advised to follow plant-based diets for health benefits and are provided information on the “#1 Best Diet Overall”—a Mediterranean diet (Hinzey and Chien, 2024). While this diet does have many benefits, there is a need for cultural-tailoring, as not all individuals are able to follow this type of diet for various reasons. Cultural-tailoring is part of food sovereignty which also focuses on long-term health, economic stability, cultural preservation, sustainable methods, justice and equity (Why Food Sovereignty Matters, 2024). In addition, every culture has healthy foods with many of them connecting individuals across generations (UNESCO, 2024; Dhar, 2024). For example, many restaurants in the southern United States are incorporating vegan, soul food choices on their menus in an effort to lower obesity-related illnesses among Black and African American individuals (Turner-McGrievy et al., 2020). Spain, Italy, and other European countries have created food-based vegan dietary guidelines to ensure balanced diets as well as tools for easy meal planning (Chen et al., 2014; Gatto et al., 2012; Alcazar et al., 2017). Furthermore, cultural-tailoring, the process of adapting existing materials for racial, ethnic, or cultural subpopulations, has shown effectiveness in previous studies (Suarez-Balcázar et al., 2013; Resnicow et al., 1999; Koh et al., 2024; Singh et al., 2020). While some studies have looked at the connections between cultural-tailoring interventions and nutrition, further research is needed regarding culturally-tailored plant-based interventions and the association with chronic disease. Considering the global trend is shifting toward plant-based diets, we wanted to explore and understand how education of plant-based diets is currently conducted. Our aim was to conduct an integrative review of the literature to summarize what is currently known about the role and impact of culturally-tailored plant-based nutrition education on health outcomes, specifically in pediatric populations.

### 1.1. Objective

The purpose of this integrative review was to explore culturally-tailored plant-based interventions to improve health outcomes in pediatric populations.

## 2. Methods

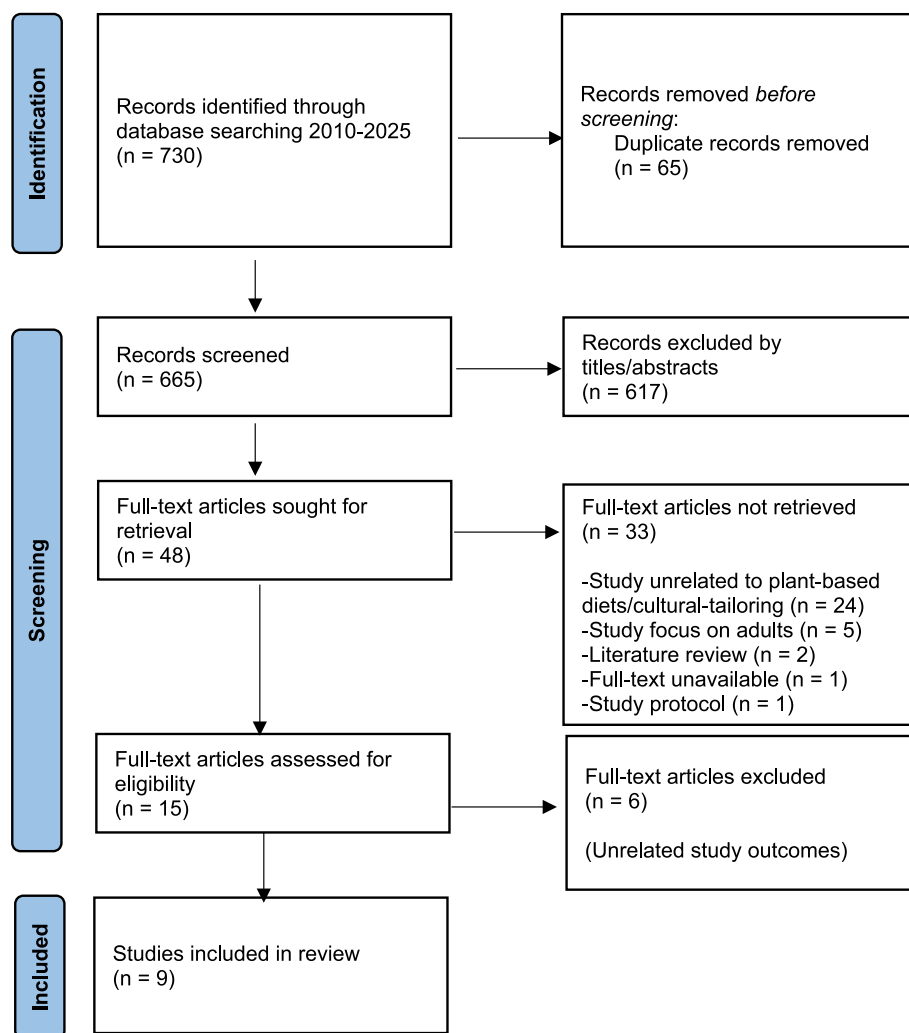
For the purpose of this methodological review using an integrative approach by R. Whittemore and K. Knafl (Whittemore and Knafl, 2005), the keywords “ethnic or culturally based”, “plant based or vegetarian or vegan”, “nutrition”, “education”, and “pediatric or children”, separated by the Boolean operator “AND” were used. These keywords were entered to electronically search for articles in Academic Search Complete, CAB Abstracts, MEDLINE via PubMed, Cumulative Index of Nursing and Allied Health Literature, PsycINFO, Web of Science, Food and Science Technology Abstracts, Google, and Google Scholar. Language and date restrictions were applied in all databases, to ensure that all results were in English and published between 2010 and 2025. Inclusion criteria consisted of primary research studies that focused on cultural-tailoring, plant-based nutrition, and education. Articles were excluded if they were unpublished manuscripts, such as abstracts and dissertations.

After eliminating duplicates, article titles and abstracts were reviewed to examine relevance, and those found to be irrelevant for this review, or not meeting inclusion/exclusion criteria, were excluded (adapted PRISMA (Page et al., 2021, Fig. 1). (PRISMA guidelines were adapted for use with this integrative review as the original guidelines are designed for systematic reviews or meta-analyses.) Articles included were organized into a matrix by the design, culturally-tailored intervention, diet type, and outcome (Table 1). Articles were also examined for rigor and were ranked as having “high” rigor, if the following four criteria were met: method was appropriate for the research question, methodology was clearly described, valid tools were used to measure variables, and researchers were transparent about the study’s limitations/threats to validity (Harley et al., 2018). Articles were scanned by co-authors (LK, ACD, and UH) for relevance, duplication, and the ability to be retrieved and resulted in 730 articles. The articles were organized and stored in Zotero. This study was deemed exempt from Institutional Review Board.

## 3. Results

Review of abstracts and titles (including co-author, SF) resulted in retaining sixteen articles for full-text review, ultimately resulting in a total of nine articles. These articles included five quantitative studies, two qualitative studies, and two mixed methods studies, primarily focused on Hispanic and Latina/o/x populations. A variety of culturally-tailored plant-based interventions were used: tailored teaching and menu/recipes to the ethnic background of participants, discussion topics in focus groups, involvement of families and community, and educational offerings in the native language of participants or families. Findings of the studies focused on cultural-tailoring of the interventions, the specific type of cultural-tailoring used, diet types, and the role and impact on health outcomes. However, while all studies included vegetables and fruits, only one of the studies specifically mentioned plant-based diets (Singh et al., 2020). The interventions resulted in increased familiarity and consumption of vegetables and fruits, increased access to fresh produce, supported healthy weight management, and improved several measures connected to cardiovascular and metabolic health (Table 1) (Chen et al., 2014; Gatto et al., 2012; Alcazar et al., 2017; Singh et al., 2020; Harley et al., 2018; Heerman et al., 2019; Hughes et al., 2020; Linville et al., 2020; Taverno Ross et al., 2018).

All studies had an emphasis on nutrition and included cultural-tailoring. Although the search criteria did not restrict studies based on location, all studies were conducted in the United States. While the specific aims varied, most studies focused on improving healthy habits or outcomes for students, parents, or both. The one study specifically emphasizing a plant-based diet included a family centered design with cultural-tailoring of the intervention (Singh et al., 2020). Interventions included increasing access to and familiarity with ethnically relevant produce, enhancing nutrition education through gardening, cooking,



**Fig. 1.** Adapted Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) (Page et al., 2021) flow diagram of 2010–2025 pediatric plant-based diets search strategy and study report selection. Inclusion criteria for research: (1) primary research; (2) key terms “ethnic or culturally based” and “plant based or vegetarian or vegan” and “nutrition” and “education” and “pediatric or children”; (3) published in English between 2010 and 2025. Inclusion criteria for studies: (1) pediatric population with a (2) culturally-tailored intervention related to plant-based diet/nutrition.

and culinary literacy programs, and improving food preferences and healthy eating behaviors among children and their families. None of the studies focused on the need for increased fiber, beans, nuts, and seeds.

Additionally, the studies focused on assessing behavioral and psychosocial influences, such as attitudes toward vegetables and fruits, as well as the role of these interventions in obesity prevention, weight management, and treatment. Other aims included examining changes in biomarkers related to obesity risk, promoting physical activity, and supporting overall healthy weight maintenance (Table 1). Six of the studies reviewed were classified “high” in the rigor category and three in the “low” category.

#### 4. Discussion

Our review showed that culturally-tailored plant-based nutrition interventions improved the consumption of vegetables and fruits in six studies, lowered obesity in four studies, and one study which described a reduction of cardiovascular risks. In addition, there was lack of a clear definition for cultural-tailoring and plant-based diets found among the manuscripts. Researchers reported on vegetable and fruit intake, but did not always include information on beans, whole grains, nuts, and seeds. Researchers defined cultural-tailoring in a variety of ways. While some researchers provided resources in individuals’ primary language, others

focused on recipes and discussion topics. One research team specified cultural-tailoring of their intervention through a family-based design aligned with traditional foods (Murdaugh et al., 2018). Another research team described their cultural-tailoring efforts in detail by specifying that the recipes were guided by parents in the intervention group (e.g., Hmong, Latino), and included bilingual and bicultural staff members with cooking experience (Chen et al., 2014). This study included seven culturally-tailored foods representing Hmong, Latino, and mainstream American cultures, with one vegetable from each culture being featured in a recipe. While plant-based diets were discussed, the main emphasis remained on increasing vegetables and fruits. Plant-based diets ranged in description from encouraging an increase in vegetables and fruits; to discussion of low-carbohydrate Mediterranean, vegan, plant-based, or whole food plant-based diets.

Regardless of the different approaches utilized, the studies addressed students’ environments and relationships in school, at home, or both to implement interventions to increase consumption of plant-based foods. Children often lack autonomy over dietary choices and may be entirely dependent on family and/or school for food choices. Health promotion interventions targeting the family have been shown to be more successful than those targeting either parents or children individually (Murdaugh et al., 2018). Additionally, the school environment offers a significant opportunity to help students develop healthy behaviors that

**Table 1**

Selected 2010–2025 Pediatric Studies for Integrative Review on Cultural-Tailoring and Plant-Based Diets in the United States.

Authors (Year)	Aim	Sample/Rigor <sup>†</sup> /Design	Timeframe	Location	Culturally-Tailored Intervention/Diet Type	Outcomes
Alcazar et alia (2017)	<p>Purpose: To explore the adoption of Brighter Bites healthy eating strategies in low-income Spanish-speaking families as well as barriers to the sustainability of improved dietary behaviors using photovoice</p> <p>Aim: To increase access to fresh produce among low-income families in Texas to improve dietary habits of both children and parents</p>	<p>Convenience sample of parents (<math>n = 8</math> recruited) (<math>n = 5</math> completed the study)</p> <p>Predominately Hispanic, low-income, public elementary school where 98 % are eligible for free/reduced lunch and 90 % are Hispanic</p> <p>Spanish speaking Parents who have children attending one of the participating schools and were participating in Brighter Bites</p> <p>Rigor: Low</p> <p>Qualitative photovoice project</p> <p>600 students in control group; 605 students in intervention group</p> <p>Rigor: High</p> <p>Mixed methods (Surveys, focus groups)</p>	<p>16-week school-based program</p> <p>February – May 2012</p> <p>Monthly in-class tasting activities which took approximately 20 min to complete in class activities for one recipe</p>	Texas	<p>Community-based</p> <p>Language-Spanish</p> <p>Increased vegetables/fruits</p>	<p>Themes during produce distribution:</p> <ul style="list-style-type: none"> <li>• Cost savings</li> <li>• Increased variety/accessibility of fresh produce</li> <li>• Ability to practice healthy eating</li> </ul> <p>Themes when produce distribution concluded:</p> <ul style="list-style-type: none"> <li>• Increased costs</li> <li>• Lack of variety</li> <li>• Continued effect of Brighter Bites</li> <li>• Innovative ways to cook with produce</li> </ul>
Chen et alia (2014)	To evaluate the impact of a pilot intervention promoting ethnic produce through classroom food demonstrations, tastings, and home cooking activities among ethnically diverse elementary-school children ages 5–8 years old and their family members	<p>600 students in control group; 605 students in intervention group</p> <p>Rigor: High</p> <p>Mixed methods (Surveys, focus groups)</p>	<p>February – May 2012</p> <p>Monthly in-class tasting activities which took approximately 20 min to complete in class activities for one recipe</p>	California	<p>Menu</p> <p>Increased vegetables/fruits</p> <p>Promoted ethnic produce through classroom food demonstrations, tastings, and home cooking activities among ethnically diverse elementary school aged children.</p> <p>Recipe development founded upon seven cultural/ethnic food recipes representing various cultures Latino, Hmong, American and featured local ethnic produce etc.</p> <p>Vegetables for each recipe came from Latino, Hmong, or mainstream American cultures</p> <p>Recipe card feature fun facts, history, culture, nutrition, and related culturally relevant information</p> <p>Curriculum adapted for Latino youth</p> <p>Increased vegetables/fruits</p>	<p>Increased:</p> <ul style="list-style-type: none"> <li>• Familiarity/preferences</li> <li>• Consumption of vegetables</li> <li>• Involvement in home food preparation</li> </ul> <p>Results from the Wilcoxon signed ranks test demonstrate that students reported significantly higher preferences for all seven of the featured vegetables</p>
Gatto et alia (2012)	To develop a 12-week gardening, nutrition, and cooking intervention targeting Latino youth. Secondary aims were to examine the effect of the Los Angeles Sprouts intervention on behavior associated with dietary intake and psychosocial factors.	<p>104 predominately Latino fourth and fifth grade students (mean age 9.8) <math>n = 70</math> control subjects, <math>n = 34</math> Los Angeles Sprouts participants) and more than half (<math>n = 61</math>, 59.8 %) had obesity - Body Mass Index (BMI) <math>\geq 85</math>th percentile</p> <p>Rigor: High</p>	12 weeks	California	<p>Curriculum adapted for Latino youth</p> <p>Increased vegetables/fruits</p>	Results suggest this intervention can improve attitudes and preferences for fruits and vegetables in Latino youth, which may lead to improved nutritional habits and dietary intake and reduced health disparities
Harley et alia (2018)	To examine the effectiveness of Youth Chef Academy, a classroom-	<p>Quasi-experimental</p> <p>Sixth and seventh graders (11–13 year-olds) <math>n = 100</math> intervention and <math>n =</math></p>	Six two-hour classes	Wisconsin	Cooking skills, Ethnic cooking, School setting	Increased:

(continued on next page)

Table 1 (continued)

Authors (Year)	Aim	Sample/Rigor <sup>†</sup> /Design	Timeframe	Location	Culturally-Tailored Intervention/Diet Type	Outcomes
	based experiential culinary and nutrition literacy intervention for sixth and seventh graders (11- to 13-year-olds) designed to impact healthy eating.	95 control Rigor: High Pre-test post-test survey			Increased vegetables/fruits	<ul style="list-style-type: none"> <li>Daily fruits and vegetable consumption (<math>p = .02</math>)</li> <li>Student knowledge on nutrition and classroom engagement</li> <li>Whole grain consumption trending toward significance (<math>p = .07</math>)</li> </ul>
Singh et alia (2020)	To evaluate the efficacy of the Healthy Eating Lifestyle Program for accomplishing weight management in a hospital-based, family centered, culturally-tailored, plant-based diet intervention for Hispanic/Latino children with obesity  Aim: To assess programmatic effectiveness and sustainability in reducing pediatric obesity by educating children ages 5–12 and their families about plant-based eating habits and physical activity (6-week educational phase)	Sample Hispanic/Latino children with obesity ( $n = 348$ plus additional 194 non-referred children)  Rigor: High  Mixed methods (1) A one arm study to measure changes in BMI from pre- to post-intervention, and (2) A stakeholder analysis of the program staff.  Quasi-experimental, one group longitudinal; qualitative interviews	Five month intervention included an intensive six-week educational phase followed by a three-month maintenance phase and program graduation	California	Curriculum, Menu  Plant-based  Family-based  Aligned with Traditional fare	For 31 children (ages 5–12 years), there was a significant decrease in BMI Z-score from pre- to post-intervention ( $p = .04$ )
Heerman et alia (2019)	Aim: To conduct a qualitative evaluation of a behavioral intervention to prevent and treat childhood obesity in minority children.	Hispanic 117 parent-child dyads pre-school children (ages 3–5)  Rigor: Low  Focus groups	15-weeks group based intensive phase with weekly sessions, a three-month maintenance phase with twice monthly coaching  Involved a six-month intervention with six months of additional follow-up	Nashville, Tennessee	COACH: Competency-based and individually-tailored behavioral intervention (diet, physical activity, sleep, media use, and engaged parenting)  Native Spanish speaking health coach, recipes consistent with typical food choices in this community  Increased vegetables/fruits Family-focused feeding approaches	Intervention participants described successful health behavior changes that were shared across generations and were maintained after the program
Hughes et alia (2020)	To assess the short-term effects of an obesity prevention program promoting eating self-regulation and healthy food preferences in low-income Hispanic children.	Sample: 255 families with preschoolers  Rigor: High  Randomized Controlled Trial used to measure efficacy of the obesity prevention program  Prevention ( $n = 136$ ) and control ( $n = 119$ )	Fourteen waves lasted seven weeks with 8–10 mother-child dyads in each group	Head Start and similar learning institutions in Houston, Texas and Pasco, Washington	Videos showed diverse sets of families eating a wide range of foods in culturally relevant settings  Increased vegetables/fruits	Short-term effects of this prevention program highlight the importance of family-focused feeding approach which helps combat children being overweight and child obesity  Maternal reports of an increase in the number of different vegetables that children had tried was the only significant change in child eating behaviors resulting from the program (although the pre-post increase was highly significant for the prevention group [ $P < .001$ ], the condition $\times$ time interaction was only marginally significant [ $P = .1$ ]).

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Table 1 (continued)

Authors (Year)	Aim	Sample/Rigor <sup>†</sup> /Design	Timeframe	Location	Culturally-Tailored Intervention/Diet Type	Outcomes
Linville et al. (2020)	Aim 1) to measure the promise of efficacy, acceptability, and feasibility of the Healthy Balance intervention 2) evaluate whether a culturally adapted version demonstrated more promise when specifically tailored for Latinx immigrant populations, 3) examine how the intervention effects differed between the child and adult participants	65 families study 1	Study 1: Eight sessions, 12-h family-based group intervention	Oregon	Study 1: Family-based group intervention	Study 1: No significant weight gain prevention efforts found for adults or child participants
		27 families study 2		Large pediatric clinic in the Pacific Northwest	Language-Spanish	Study 2: Three significant effects were found for parent outcomes with each change favoring the Healthy Balance group. Parents in the Healthy Balance group showed significantly greater decrease in BMI ( $P = .001$ , $d = -0.28$ [small effect]), neck circumference ( $P = .039$ , $d = -0.33$ [small to medium effect]), and diastolic blood pressure ( $P = .044$ , $d = -0.81$ [large effect])
Taverno Ross et al. (2018)	Purpose: To test the feasibility of a 10-week, promotor-mediated, home-based intervention to promote a healthy weight in Latino preschool children.	Hispanic (89 %)	Study 2: Six sessions, 12-h family-based group intervention		Increased vegetables/fruits	Significant decrease in child BMI percentile for children with obesity from baseline to follow-up ( $p < .05$ )
		Rigor: High			Study 2: Language-Spanish Menu/Recipes	Significant pre/post increases in child daily fruit and vegetable intake
		Pilot, Randomized Controlled Trial	Timeframe	Location	Language - Spanish Family-focused	Significant decreases in child saturated fat and added-sugar intake, and child and parent screen time ( $p$ 's $< 0.05$ ).
		Study 1 tested the original and translated group intervention in a heterogeneous population and Study 2 tested the feasibility of a culturally adapted version for Latinx immigrant families				
		Sample	10 90-min weekly sessions included education, practice, action	Allegheny, Pennsylvania	Increased vegetables/fruits	
		49 parent-child dyads				
		Rigor: Low				
		Pilot, quasi-experimental Single group pre/post intervention design				

<sup>†</sup> High rigor: Method was appropriate for the research question. Methodology was clearly described. Valid tools were used to measure variables. Researchers were transparent about the study's limitations/threats to validity. Low rigor: Missing one (or a combination) of the above components.

will become an integral part of their lives, as students are in their formative years (Murdaugh et al., 2018). For example, in a study with Black/African American and Hispanic parent-child dyads, children identified several ways parents can support healthier eating choices through personal and environment support (Callender et al., 2020). Personal support included encouragement, teaching, and the ability to make choices. Environmental support encompassed home availability, home cooking, and the introduction of new foods. From a parent perspective, "availability" of healthy options and "teaching" matched the facilitators that children also identified as supportive of healthier choices (Callender et al., 2020). This finding reinforces the importance of family-based interventions found in several studies that address both the personal and environmental dimensions, which are critical in positively impacting children's food choices. Interdisciplinary teams, including nurses, pharmacists, and nutritionists, in outpatient and public health settings can work together to help families and communities improve their health through culturally-tailored nutrition interventions (Murdaugh et al., 2018; Cai et al., 2024; Open Resources for Nursing Open, Ernstmeier K, Christman E, 2021).

Another aspect connected to the increased consumption of vegetables and fruits and reduction of risk for disease in the studies in this review is the issue of using culturally-tailored interventions to promote nutrition and health equity. School gardens, nutrition education, and increased access to vegetables and fruits can alleviate food and nutrition insecurity can also help to improve children's health (Landry et al., 2019; Davis et al., 2021). Culturally sensitive nutrition care plans are recommended when designing effective strategies to support healthy

eating behaviors instead of using standardized references of what a healthy plate should look like (Msora-Kasago, 2020). Access to nutritionally adequate and safe food and nutritional literacy are recommended for supporting healthy choices especially for those who live in areas of food insecurity (Vettori et al., 2019). Some studies in this review used this strategy to increase consumption of plant-based foods.

Given the potential positive impact of interventions that increase the consumption of vegetables and fruits in health outcomes, the studies in this review reinforce the importance of culturally-tailored interventions to promote healthy eating.

#### 4.1. Strengths and limitations

Our study contained several limitations. The first limitation was the small number of included articles synthesized to explore culturally-tailored plant-based intervention to improve health outcomes in pediatric populations. However, our research strategy included a consultation with a librarian on the most appropriate databases and search terms for use in conducting the review. Second, while eight of the studies focused on using cultural-tailoring to increase vegetable and fruit intake, only one study specifically mentioned a plant-based diet. Third, although the search criteria did not restrict studies by location, we limited inclusion to published manuscripts in English. This resulted in all studies, meeting inclusion criteria, having been conducted in the United States. Unpublished manuscripts such as abstracts and dissertations were excluded. In addition, although there were a variety of cultural groups represented, many were not. There is also an issue of



acculturation that may interfere with the interventions. This has important policy implications as it highlights the need for more research on similar interventions in the United States and abroad. Additionally, this limitation suggests a potential gap in the availability or reporting of culturally-tailored interventions for pediatric populations in international contexts. Findings from this study may not be fully generalizable or transferable to other regions or countries due to varied cultural, socioeconomic, educational, and healthcare systems.

## 5. Implications for research and practice

By culturally-tailoring nutrition interventions and education, the impact and effectiveness of plant-based nutrition interventions are significantly improved among children. Overall, the result is a healthier lifestyle and well-being. Healthcare professionals must continue practicing cultural humility while acknowledging that culture may impact both food choices and health practices. Nutritional interventions should be individualized and avoid monolithic perspectives of “health” (Wheeler, 2018; Lekas et al., 2020). Future research should focus on culturally-tailored plant-based interventions and health promotion in diverse settings. Given the current health trends in the United States and the positive impact of plant-based diets on health outcomes, there is a need for more long-term studies on effective strategies to expand culturally-tailored intervention programs to improve nutrition and health outcomes among diverse, historically underrepresented, and often marginalized pediatric populations.

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## Institutional review board

Review by the Institutional Review Board was not required for this study because human subjects were not involved, as per US Department of Health and Human Services guidelines.

## CRedit authorship contribution statement

**Linda Koh:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Adelaide Caroci Durkin:** Writing – review & editing, Writing – original draft, Validation, Supervision, Resources, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Sarah Fiske:** Writing – review & editing, Visualization, Validation, Investigation, Formal analysis, Data curation. **Uma Hingorani:** Writing – review & editing, Writing – original draft, Visualization, Validation, Resources, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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## Data availability

No data was used for the research described in the article.

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