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A Systematic Review of Culturally Sensitive Strategies to Address Obesity Among Hispanic-American Pediatric Patients in the **Primary Care Setting**

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Walden University 2020

Abstract

A Systematic Review of Culturally Sensitive Strategies to Address Obesity Among
Hispanic-American Pediatric Patients in the Primary Care Setting

by

Rachel Vurbeff

MS, Texas A & M University, 1994 BS, Incarnate Word University, 1990

Project Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Nursing Practice

Walden University

November 2020

Abstract

Obesity significantly increases morbidity and mortality, and its incidence among Hispanic-American children and adolescents exceeds that of any other ethnic group in the United States. Without proper intervention, these children and adolescents will experience the burden of costly comorbidities across the lifespan. Guided by Leininger's theory of culture care diversity and universality, the purpose of this project was to identify evidence-based, culturally sensitive strategies to prevent and treat obesity among Hispanic-American pediatric patients in the primary care setting through a systematic review of the literature utilizing the Joanna Briggs Institute method. The practice-focused question that guided this review focused on finding the culturally- sensitive strategies that are effective in preventing and treating obesity in the primary care setting among Hispanic-American pediatric patients. After screening 644 single, relevant studies for inclusion and exclusion based on predetermined criteria, a total of 16 articles were chosen for the review. This review identified 4 specific, evidence-based strategies to successfully prevent and treat obesity among Hispanic-American pediatric patients in the primary care setting, including the provision of anticipatory guidance in Spanish, involvement of the family when devising the plan of care, use of a promotora, and follow-up home visits or phone calls. Each of these strategies can be incorporated into most pediatric primary care settings without incurring significant additional costs, and their implementation is recommended. Successful prevention and treatment of pediatric obesity among the Hispanic-American pediatric population will reduce the physical, psychological, social, and economic burden on patients, their families, and society as a whole, thereby creating positive social change.

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Section 1: Nature of the Project

Introduction

Pediatric obesity is a growing epidemic in the United States, with its incidence tripling during the past 50 years (White, Murphy, Hodges, & Berry, 2016). Without timely and proper medical intervention, these children will continue to gain weight at a steady pace, with the majority growing into obese adults (White et al., 2016). Obesity among children and adolescents is a serious public health problem for members of all races in the United States, but it is exceptionally high in minority groups (Centers for Disease Control and Prevention [CDC], 2013). According to the U.S. Census Bureau, the two largest minority groups in the United States are Hispanic and African Americans, with the American Hispanic population having the greatest prevalence of obesity, more than that of Caucasians (CDC, 2013).

In the local facility where I practice as a primary care pediatric nurse practitioner (PNP), a steady increase in overweight and obese Hispanic-American children and adolescents has been noted (Office Practicum Medical Software, 2016). Ninety-five percent of the clinic patient population is of Hispanic descent (Office Practicum Medical Software, 2016). Twenty-six percent of Hispanic adolescents assigned to the clinic are either overweight or obese, and 30% between the ages of 2 and 5 years are overweight or obese (Office Practicum Medical Software, 2016). Although patients assigned to my practice and their parents are provided anticipatory guidance regarding healthy nutrition, lifestyle, and weight management, the rate of overweight and obese Hispanic patients continues to grow (Office Practicum Medical Software, 2016). Based on this information, coupled with the tremendous effects that cultural beliefs and practices have on eating

habits and weight management among members of the Hispanic population, the current approach to preventing and treating these children is ineffective (Acheampong & Haldeman, 2013; Davis, Cole, Reyes, McKenny-Shubert, & Peterson, 2015; White et al., 2016). A provider knowledge deficit related to culturally sensitive strategies to address obesity among Hispanic-American pediatric patients in the primary care setting is the gap-in-practice largely contributing to this clinical practice problem.

Identifying evidence-based, culturally sensitive strategies to address obesity among Hispanic-American pediatric patients in the primary care setting through a systematic review of the literature was the focus of this doctor of nursing practice (DNP) scholarly project. The review provides an evidence-based foundation upon which high-quality recommendations for pediatric primary care providers can be developed for use to facilitate the successful prevention and treatment of obesity among this patient population (Peterson et al., 2014).

Problem Statement

The incidence of obesity among Hispanic-American children in the United States is disproportionately higher compared with that of the general pediatric population (Leung et al., 2017). Approximately 38.9% of Hispanic children in this country are either overweight or obese, whereas the overall national prevalence is 31.8% (Leung et al., 2017). My pediatric practice is located in the southwestern region of the country where approximately 95% of patients assigned to the practice are of Hispanic descent, more than 26% of adolescents are overweight or obese, and nearly 30% of those between the ages of 2 and 5 years are considered either overweight or obese (Office

Practicum Medical Software, 2016). Obesity in Hispanic-American children and adolescents is a state and national health problem (CDC, 2017).

Cultural traditions and social norms, largely influenced by ethnicity and socioeconomic factors, strongly affect food choices, food preparation, and feeding practices (Acheampong & Haldeman, 2013; Davis et al., 2015; White et al., 2016). The manner in which *health* is often defined varies among different cultures and ethnicities, and Hispanic mothers often incorrectly perceive their children's weight as "healthy" when they are, indeed, overweight or obese (Davis et al., 2015; White et al., 2016). Although patients assigned to my practice and their parents are provided anticipatory guidance regarding healthy nutrition, lifestyle, and weight management, the rate of overweight and obese Hispanic-American pediatric patients continues to grow (Office Practicum Medical Software, 2016). Based on this information, as well as insight gained from a cursory review of the literature, I have concluded that pediatric primary care providers are not utilizing evidence-based, culturally sensitive approaches to weight management among their Hispanic-American patients (Acheampong & Haldeman, 2013; Davis et al., 2015; White et al., 2016). The DNP project's systematic review has rendered high-quality, evidence-based recommendations for culturally sensitive approaches to weight management in pediatric primary care, with an overall goal of reducing the incidence of obesity among Hispanic-American children and adolescents (Grove, Burns, & Gray, 2013; White et al., 2016).

Inequities in access to health care, the quality of care received, and opportunities to make healthy choices where people live, learn, work, and play all contribute to the higher rates of obesity among Hispanic-American children and adolescents (Acheampong

& Haldeman, 2013). Without timely and proper medical intervention, obese children will continue to gain weight, with a majority growing into obese adults who will suffer multiple, costly, chronic comorbidities (White et al., 2016). Addressing obesity in the Hispanic-American pediatric population in a culturally sensitive manner will decrease morbidity and mortality across the lifespan, reduce the social difficulties and psychological disorders associated with obesity, and decrease the economic burden on the health care system and society as a whole (Acheampong & Haldeman, 2013; White et al., 2016). The DNP project is nurse driven and contributes to the existing body of nursing literature and knowledge and reflects scholarship in the field of nursing (White et al., 2016; Walden University, 2017b).

Purpose Statement

Obesity is a public health problem in the United States, but its incidence is exceptionally high among Hispanic-American children and adolescents (CDC, 2013). In the local, pediatric primary care facility, approximately 26% of adolescent patients and 30% of children between the ages of 2 and 5 years in this minority group are overweight or obese, despite the routine provision of anticipatory guidance related to healthy eating practices and the need for adequate levels of age-appropriate physical activity (Office Practicum Medical Software, 2016). This information, coupled with an initial review of the literature, led me to conclude that a provider knowledge deficit related to culturally sensitive weight management strategies in pediatric primary care is the gap-in-practice largely contributing to this clinical practice problem. The purpose of the DNP project was to examine current, evidence-based, culturally sensitive strategies that have proven effective in addressing obesity among Hispanic pediatric patients in the primary care

setting with the intent of addressing my knowledge deficit (Acheampong & Haldeman, 2013; White et al., 2016). The guiding practice-focused questions for the DNP project are:

- 1. Will a systematic review of the literature identify evidence-based, culturally sensitive strategies to effectively prevent and treat obesity among Hispanic-American pediatric patients in the primary care setting?
- 2. Among Hispanic-American pediatric patients, what culturally sensitive strategies are effective in preventing and treating obesity in the primary care setting?

Nature of the Doctoral Project

Largely attributed to a provider knowledge deficit related to culturally sensitive weight management strategies in the primary care setting, the rate of obesity among pediatric Hispanic-American patients in the local facility continues to grow (CDC, 2013; White et al., 2016). The purpose of the DNP project was to identify evidence-based, culturally sensitive strategies that have proven successful in addressing obesity among Hispanic-American pediatric patients in the primary care setting. An initial search of the literature focused on supporting the need for and approach to the project. Key terms and Boolean phrases extracted from the clinical questions guided searches of the relevant databases in the Walden University Library for primary, peer-reviewed sources that provided insight to the background and significance of the clinical practice problem, evidence-based interventions to bridge the gap-in-practice contributing to that problem, and evidence-based methods to evaluate the intervention's efficacy in addressing it (Peterson et al., 2014; Sherrod & Goda, 2016). Specifically, I used the Elton B. Company (EBSCO) database, cumulative Index of Nursing and Allied Health Literature

(CINAHL), MEDLINE, PubMed, ProQuest, Cochrane Liberty, and Ovid were used for the purpose of the project (White et al., 2016). Websites hosted by professional organizations, including, but not limited to, the American Nurses Association (ANA) and the American Academy of Pediatrics were accessed in search of policy statements and white papers to support the project. I arranged literature to support the project in a matrix and synthesized and appraised the literature utilizing the Joanna Briggs Institute (JBI) method. I address this tool in Section 3 of this DNP project (JBI, 2016).

Significance

The DNP project will provide pediatric primary care providers with the tools to successfully prevent and treat obesity among their Hispanic-American patient population (Acheampong & Haldeman, 2013). Potential stakeholders include medical providers, third-party payers, patients, and their parents (Acheampong & Haldeman, 2013). Successful prevention and treatment of obesity evidences the provision of high-quality care and positive patient outcomes, which will increase quality of life and life expectancy, while decreasing the cost of health care across the lifespan (Acheampong & Haldeman, 2013; CDC, 2013; White et al., 2016). A nurse-driven initiative, the DNP project contributes to the existing body of literature and knowledge and reflects scholarship in the field of nursing (CDC, 2013; CDC, 2017; White et al., 2013). The identification of evidence-based, culturally sensitive strategies that have proven effective in successful weight management among Hispanic-American pediatric patients will be useful to any provider providing primary care to Hispanic-American patients across the life span, thereby reflecting a high potential for transferability of project findings in similar settings across the nation (Acheampong & Haldeman, 2013; White et al., 2013).

There are multiple potential implications for positive social change when the incidence of obesity among Hispanic children is reduced (CDC, 2013). Successful prevention and treatment of obesity in childhood reduces its associated social difficulties and psychological disorders, as well as the likelihood of obesity into adulthood (White et al., 2016). This will increase quality of life and decrease the long-term economic effects on the health care system and society as a whole, thereby creating positive social change (Acheampong & Haldeman, 2013; CDC, 2017; Davis et al., 2015; White et al., 2016).

Summary

Largely attributed to a provider knowledge deficit related to culturally sensitive weight management strategies, the rate of obesity among Hispanic-American pediatric patients in the local primary care facility continues to grow (Office Practicum, 2016). Without proper, culturally sensitive intervention, many of these children will grow into obese adults with long-term, chronic comorbidities (Leung et al., 2017). The purpose of the DNP project was to conduct a systematic review of the literature to identify evidence-based, culturally sensitive strategies for successful weight management among Hispanic-American pediatric patients in the primary care setting.

I discuss background and context related to the identified practice problem in the local setting in Section 2. I will also identify concepts related to the practice problem, the gap-in-practice that is causing it, and the proposed intervention to bridge that gap to solve the problem. I will discuss the theoretical foundation for the project, and I will address the model that will be utilized to facilitate the practice change. I will then turn to the relevance of the project to nursing practice, as well as the role of the DNP student.

Section 2: Background and Context

Introduction

Ninety-five percent of the patients assigned to the local primary care facility are of Hispanic decent, and more than 26% of the adolescents are overweight or obese and nearly 30% of those between the ages of 2 and 5 years are considered either overweight or obese (Office Practicum Medical Software, 2016). Despite anticipatory guidance related to healthy nutrition, lifestyle, and weight management, the number of overweight and obese Hispanic pediatric patients assigned to the local facility continues to grow (Office Practicum Medical Software, 2016). Based on this information, a provider knowledge deficit related to culturally sensitive weight management strategies in the primary care setting is the gap-in-practice largely contributing to the clinical practice problem in the local facility. To bridge this gap-in-practice and solve the identified clinical practice problem, evidence-based, I identified culturally sensitive strategies to successfully prevent and treat obesity among Hispanic-American pediatric patients in the primary care setting. The following practice-focused questions guided the doctoral project:

- 1. Will a systematic review of the literature identify evidence-based, culturally sensitive strategies to effectively prevent and treat obesity among Hispanic-American pediatric patients in the primary care setting?
- 2. Among Hispanic-American pediatric patients, what culturally sensitive strategies are effective in preventing and treating obesity in the primary care setting?
 In this section of the DNP project, I discuss the background and context of the identified clinical practice problem in the local setting. I present related concepts and the

theoretical framework for the project, along with its relevance to nursing practice. I also explore my role in the project.

Concepts, Models, and Theories

Influenced by ethnicity and socioeconomic factors, cultural traditions and social norms directly affect food choices, food preparation, and feeding practices (Acheampong & Haldeman, 2013; Davis et al., 2015; White et al., 2016). Even the manner in which health is defined often varies among individuals of different cultures and ethnicities (Davis et al., 2015; White et al., 2016). Despite the routine provision of anticipatory guidance related to healthy nutrition, lifestyle, and weight management, the number of overweight and obese Hispanic-American pediatric patients in the local facility continued to grow (Office Practicum Medical Software, 2016). This has been attributed to a provider knowledge deficit related to culturally sensitive approaches to weight management among Hispanic-American pediatric patients. This DNP project is a systematic review of the literature to identify evidence-based, culturally sensitive strategies pediatric primary care providers can utilize to prevent and manage obesity among this patient population in the primary care setting. Utilized to determine the health needs and inform the care of patients from diverse cultural backgrounds in hospitals and community-based settings across the country, Madeline Leininger's theory of cultural care diversity and universality provided the theoretical framework for the project (Leininger, 1977; Leininger, 1991). Focused on the close interrelationships between culture, patient care, and cure, the theory of cultural care diversity and universality places emphasis on the health care provider's understanding of the patient's cultural belief systems and the effects of those beliefs on compliance and healing (Leininger, 1977;

Leininger, 1991). Based on the premise that a patient's motivation to heal is based on how they cared for, Leininger (1977) theorized that an in-depth understanding of cultural values and beliefs within life's experiences are essential to the provision of safe, effective nursing care, and cure cannot be achieved without the incorporating the patient's cultural beliefs in the plan of care.

Utilizing Leininger's theory as a framework for the project provided focus on making culturally sensitive treatment decisions by the following three theoretical principles: (a) Culture care preservation and/or maintenance, which include the acts or decisions that support a culture's beliefs and values and incorporates the patient's input in the nursing care plans; (b) Culture care accommodation and/or negotiation, which are the acts or decisions that facilitate cultural adaptation to or negotiation with others for culturally congruent, safe, and effective care (such as agreements between the patient and caregiver to facilitate the provision of safe, effective, culturally sensitive care); and (c) Culture care repatterning and/or restructuring, which are the acts or decisions that help to reorder, change, modify, or restructure lifeways of the patient to facilitate better health care outcomes (Leininger, 1977; Leininger, 1991).

Cultural traditions strongly influence lifestyle, food choices, food preparation, and the perception of "health" (Acheampong & Haldeman, 2013). These influences may be significantly contributing to the obesity epidemic among Hispanic-American children and adolescents in the local area (Acheampong & Haldeman, 2013). Leininger's model has been used as a theoretical framework to guide many research studies, and it is appropriate for use by nurses seeking to improve the provision of patient care in any setting (Acheampong & Haldeman, 2013; CDC, 2013; Leininger, 1977; Leininger, 1991; White

et al., 2013). Its use as a theoretical framework for the project will facilitate the development of a culturally sensitive approach to effectively promote compliance with evidence-based treatment plans to successfully prevent and treat obesity among Hispanic-American pediatric patients in the primary care setting (Leininger, 1977; Leininger, 1991).

Relevance to Nursing Practice

The Hispanic population is the second most rapidly growing ethnic group in the United States and is expected to more than double by the year 2060 (Kiraly, Turk, Kalarchian, & Shaffer, 2017). In a recent study of Hispanic children aged 6 to 11 years old, 24.1 % of females and 25.8 % of males were considered obese, while in that same age-group of Caucasian children, only 14.4% of females and 13.0% of were considered obese (Kiraly et al., 2017). Pediatric obesity is associated with high morbidity and mortality across the lifespan, contributing to a significant economic burden on the health care system and society as a whole (Acheampong & Haldeman, 2013; White et al., 2016). As a first line of defense against pediatric obesity, the current scholarly literature suggests patient and families be provided with education in the primary care setting (Acheampong & Haldeman, 2013; CDC, 2013; Kiraly et al., 2017; White et al., 2013).

Cultural beliefs and practices significantly impact the type of foods consumed, eating habits, and perceptions and attitudes regarding "health" among members of the Hispanic population (Acheampong & Haldeman, 2013; White et al., 2013; Kiraly et al., 2017). The current literature suggests primary care providers fail to provide patient and family teaching in a culturally sensitive manner, which is essential to facilitating patient and family adherence to the evidence-based recommendations provided by primary care

providers (CDC, 2013; Acheampong & Haldeman, 2013; Kiraly et al., 2017; White et al., 2016). Patients and families are routinely provided with anticipatory guidance related to the prevention of pediatric obesity and weight management in the local pediatric primary care facility; however, trends indicate the current approach has been largely ineffective, particularly among Hispanic-American pediatric patients (Office Practicum Medical Software, 2016). Based on a review of the current scholarly literature, a provider knowledge deficit related to culturally sensitive weight management strategies is the gap-in-practice largely contributing to the practice problem in the local facility (CDC, 2013; Acheampong & Haldeman, 2013; Kiraly et al., 2017; White et al., 2016). The purpose of the DNP project was to identify culturally sensitive strategies that have led to successful weight management of Hispanic-American pediatric patients and offer recommendations to pediatric primary care providers in an effort to bridge the gap-in-practice.

Inequities in access to health care, the quality of care received, and the lack of opportunities to make healthy lifestyle choices contribute to the higher incidence of obesity among Hispanic children and adolescents (Acheampong & Haldeman, 2013). Although the nursing profession cannot control a patient's access to and quality of health care, nurses working in the primary care setting can provide culturally sensitive patient and family teaching to facilitate adherence to treatment plans. The project provides high-quality, evidence-based recommendations for the provision of culturally sensitive anticipatory guidance in the pediatric primary care setting (Acheampong & Haldeman, 2013; CDC, 2017; White et al., 2016). Utilization of the recommendations will lead to a reduction in the incidence of obesity among Hispanic pediatric patients, which will

increase overall quality of life and reduce the economic burden on the health care system and society as a whole (Acheampong & Haldeman, 2013; White et al., 2016).

Local Background and Context

Pediatric obesity is a growing epidemic across the United States. (White et al., 2016). The incidence has tripled during the past 50 years (White et al., 2016). Approximately 95% of the patients assigned to my practice are of Hispanic descent (Office Practicum Medical Software, 2016). More than 26% of the adolescents are overweight or obese, and nearly 30% of those between the ages of 2 and 5 years are overweight or obese (Office Practicum Medical Software, 2016). Patients and their parents are provided anticipatory guidance regarding healthy nutrition, lifestyle, and weight management; however, the incidence of obesity among Hispanic patients continues to grow in the local pediatric practice (Office Practicum Medical Software, 2016). Current teaching strategies to prevent and treat obesity among these patients have been largely unsuccessful. Without timely, effective medical intervention, these children will continue to gain weight at a steady pace, and most will grow into obese adults (White et al., 2016; CDC, 2017).

Cultural beliefs and practices have a tremendous effect on eating habits and weight management among members of the Hispanic population (Acheampong & Haldeman, 2013). Studies show that patient teaching must be culturally sensitive to be effective in treating and preventing pediatric obesity (Acheampong & Haldeman, 2013; White et al., 2016). The current, scholarly literature suggests a provider knowledge deficit related to the provision of culturally sensitive anticipatory guidance has led to an ineffective teaching style (Acheampong & Haldeman, 2013; White et al., 2016). Based

on the foregoing, a provider knowledge deficit related to the provision of culturally sensitive, anticipatory guidance is the gap-in-practice largely contributing to the continued increase of overweight and obese Hispanic-American children in my practice and in pediatric primary care settings across the country. In the project, a systematic review of the literature, I used current, scholarly literature to identify evidence-based interventions to bridge the gap-in-practice and solve the identified clinical practice problem. I extracted culturally sensitive strategies utilized in primary care settings that have demonstrated efficacy in facilitating successful weight management among Hispanic-American pediatric patients from the current, scholarly literature, and I used the literature to formulate high-quality recommendations for pediatric primary care providers.

Role of the DNP Student

I am a PNP with 25 years of clinical experience and the owner of and only provider in a pediatric clinic located in the southwestern region of the United States.

Most of the patients are of Hispanic descent, and all are pediatric patients younger than 18 years (Office Practicum Medical Software, 2016). Approximately 30% are overweight or obese, and the incidence continues to rise (Office Practicum Medical Software, 2016). I became concerned about her pediatric patients suffering from weight-induced comorbidities, including high blood pressure, hyperinsulimia, and depression (White et al., 2016). Because patients and their parents are provided with anticipatory guidance related to healthy weight management, I noted that the teaching provided was not effective in reducing the incidence of obesity among the pediatric patients assigned to the clinic (Office Practicum Medical Software, 2016). The current, scholarly literature

suggests anticipatory guidance be delivered in culturally sensitive manner to be effective (Acheampong & Haldeman, 2013; White et al., 2016).

I am the primary care provider for all patients assigned to the local clinic, and she is motivated to seek new, evidence-based approaches to facilitate positive patient outcomes by providing evidence-based, culturally sensitive, comprehensive health care.

Because I am the primary care provider to all patients seeking care through the facility, I have a vested interest in improving their health status and quality of life. For that reason, the potential for bias is greatly reduced, and the efforts focused on devising culturally sensitive, evidence-based strategies to solve the clinical problem in my clinic.

Summary

The local pediatric primary care clinic provides routine anticipatory guidance to patients and their families; however, the incidence of obesity among the Hispanic-American patients continues to rise (Office Practicum Medical Software, 2016). A review of the current literature suggests a provider knowledge deficit related to culturally sensitive strategies that effectively address obesity in the patient population. The project identified culturally sensitive strategies that have proven effective in preventing and treating obesity among the Hispanic-American pediatric population in the primary care setting through a systematic review of the literature. I developed high-quality recommendations for use of these strategies in primary care settings to facilitate successful weight management among the Hispanic-American pediatric patient population.

Section 3: Collection and Analysis of Evidence

Introduction

Hispanic-American children have the highest incidence of pediatric obesity in the country (CDC, 2017). Approximately 95% of the patients assigned to my practice are of Hispanic descent (Office Practicum Medical Software, 2016). More than 26% of the adolescents are overweight or obese, and nearly 30% of those between the ages of 2 and 5 years are overweight or obese (Office Practicum Medical Software, 2016). Without timely medical intervention, overweight and obese children will likely grow into obese adults with a multitude of costly comorbidities (White et al., 2016). Although anticipatory guidance is routinely provided to patients and parents, the incidence of obesity among Hispanic-American pediatric patients in the local facility continues to gradually increase (Office Practicum Medical Software, 2016). A provider knowledge deficit related to the provision of culturally sensitive anticipatory guidance is the gap-in-practice largely contributing to this problem (Acheampong & Haldeman, 2013). The purpose of the project was to identify strategies to effectively identify and treat obesity among Hispanic-American pediatric patients in the primary care settings.

Section 3 of this project is focused on collection and analysis of the evidence derived from the project. In this section, I will identify the practice-focused question along with the sources of evidence that I used to address it. I will also detail the manner in which I gathered, analyzed, and synthesized data derived from the project.

Practice-Focused Questions

Ineffective treatment of obesity among Hispanic-American pediatric patients in the primary care setting was the clinical practice problem I sought to address by

completing the project. Though patients and their parents are provided with anticipatory guidance as it relates to healthy nutrition, lifestyle, and weight management, the incidence of obesity among Hispanic-American pediatric patients continues to increase (Office Practicum Medical Software, 2016). A provider knowledge deficit related to culturally sensitive strategies that effectively address this issue is the gap-in-practice largely contributing to the practice problem (Acheampong & Haldeman, 2013). The purpose of the project was to identify evidence-based, culturally sensitive strategies that have effectively addressed obesity among Hispanic-American pediatric patients in the primary care setting, prompting the following clinical questions:

- 1. Will a systematic review of the literature identify evidence-based, culturally sensitive strategies to effectively prevent and treat obesity among Hispanic-American pediatric patients in the primary care setting?
- 2. Among Hispanic-American pediatric patients, what culturally sensitive strategies are effective in preventing and treating obesity in the primary care setting?

Sources of Evidence

The purpose of the DNP project was to identify current, evidence-based, culturally sensitive strategies that have proven effective in addressing obesity among Hispanic-American pediatric patients in the primary care setting. With approval from the Walden University Institutional Review Board (IRB), deidentified, auto-generated, statistical data extracted from electronic health records maintained in the facility supported the need for the project locally. I also undertook a review of the current, scholarly literature to support the need for the project and answered the following clinical question: Will a systematic review of the literature identify evidence-based, culturally

sensitive strategies to effectively prevent and treat obesity among Hispanic-American pediatric patients in the primary care setting?

I used keywords and Boolean phrases extracted from the clinical question to search the relevant databases in the Walden University Library, as well as the internet, for scholarly articles, white papers, and clinical practice guidelines published as far back as needed (Walden University, 2017B; White et at., 2016). Specifically, I used the EBSCO, CINAHL, PubMed, ProQuest, and Ovid databases in the search for scholarly publications to support the project (White et al., 2016). This approach provided evidence-based options for addressing the clinical practice problem and answered the practice-focused question (White et al., 2016).

Published Outcomes and Research

To perform an accurate and strong systematic review, a meticulous, step-wise process was followed, beginning with the formulation of a clear and well-defined research or review question utilizing the PICO method (Choi, Cheng, & Greenberg, 2019; Hersi et al., 2019). Keywords and Boolean Phrases extracted from this question guided the extensive and exhaustive search of the literature for articles and papers to include in the systematic review (Choi et al., 2019). I used specific key terms and Boolean phrases listed in the tables located in Appendix A and Appendix B to conduct an extensive and exhaustive search of the scholarly literature for peer-reviewed, primary, quantitative research articles (Higgins et al., 2019). Searching for articles to include in a systematic review of the literature should be an iterative and flexible process (Higgins et al., 2019). The number of articles should not be limited, and the search must be

exhaustive, going back as far as needed depending on the project topic and availability of applicable literature (Lindy et al., 2010; Wright et al., 2007).

For the purpose of locating articles for inclusion in the systematic review, I used the search strategy outlined in the PRISMA 2009 Flow diagram. A copy of this diagram is located in Appendix C of this study. I used databases relevant to the selected topic to conduct the search of published, unpublished, and grey literature (Choi et al., 2019). I worked with a Walden University Librarian to design a comprehensive search strategy across a variety of databases, including the EBSCO, CINAHL, MEDLINE, Ovid, Google Scholar, ProQuest, and GreyNet International databases (Choi et al., 2019; Lockwood et al., 2017). I maintained log of all database searches, and that log includes the databases searched, the platform from which the database was accessed, the total number of articles that met the inclusion criteria, and the search strategy that I used (Choi et al., 2019). The log that was used for the project is located in Appendix C.

Archival and Operational Data

I extracted autogenerated, deidentified data from the electronic health record (EHR) in the local clinic to support the need for the project. The total percentage of Hispanic pediatric patients seeking care in the local facility and the percentage of those patients who are overweight and obese were the only two data points that I extracted for inclusion. Ethnicity is reported to the office staff by the patient's parent or legal guardian during the first clinic visit and is, therefore, considered to be valid and reliable. This information is subsequently entered into the EHR by the office staff collecting that data. Height and weight are taken by properly trained medical office staff and immediately entered into the EHR by the same staff member. Although there is potential for a small

margin of error, these data are generally considered reliable. I extracted these two deidentified data points by the office administrator from the clinic EHR and provided to me to support the need for the DNP project. I am the owner of the local clinic; therefore, no additional special authorizations were required from the local facility.

Analysis and Synthesis

All articles that I retrieved during the literature search were collected and stored in the JBI's System for the Unified Management, Assessment and Review of Information (SUMARI). I ensured no duplicates were included in the reference manager prior to screening each article for inclusion in the systematic review (Choi et al., 2019). I then screened titles and abstracts to immediately remove studies that were not related to the topic of the project (Choi et al., 2019). I then screened the full text of each article using the predetermined inclusion and exclusion criteria (Choi et al., 2019). For the purpose of the DNP project, each article included all of the following inclusion criteria: (a) qualitative study; (b) peer-reviewed published articles and unpublished studies not yet peer reviewed; (c) studies conducted in the United States involving only Hispanic-American children and adolescents, males and females, from birth through age 18 years whose weight was monitored, collected, and recorded by the researchers over time in the primary care setting to accurately determine the effects of the preventative and/or treatment strategies utilized; and (d) articles written in English (Choi et al., 2019). I excluded all articles not meeting all inclusion criteria from the systematic review (Choi et al., 2019). I then extracted relevant data from all articles meeting inclusion criteria and placed in a review matrix for further analysis (Choi et al., 2019). A copy of the review matrix that I used for this purpose in the project is located in Appendix E.

Articles selected for inclusion in a systematic review must undergo critical appraisal. I accomplished this through the use of validated tools to extract and evaluate pertinent data from each study included in the review to evaluate the level and quality of evidence (Choi et al., 2019; Lockwood et al., 2017). For the purpose of this project, I used the JBI QARI Data Extraction Tool for Qualitative Research to extract data from each article (Appendix F). I used the JBI Critical Appraisal Checklist for Qualitative Research to appraise the evidence presented in each article, including any potential for biases (Appendix G). In accordance with the requirements set forth by the JBI methodology for systematic reviews, this tool was independently completed by two qualified reviewers (Lockwood et al., 2017). In addition to me, a graduate-prepared, family nurse practitioner served as the second reviewer in this step of the systematic review process.

Data extraction is the first step in the data synthesis process (Lockwood et al., 2017). A "finding" is the author's analytic interpretation of the data presented, and each finding is accompanied by an "illustration," or supporting data that informs a particular finding (Lockwood et al., 2017). Utilizing the JBI Critical Appraisal Checklist for Qualitative Research, the reviewers extracted from each study its findings and their illustrations, and a level of credibility was established for each finding based on its corresponding illustration in the article (Lockwood et al., 2017). Data from the critical appraisal checklist was entered in the JBI SUMARI software, and a level of "credibility" was assigned based on the reviewers' perceptions of the degree to which each illustration (researcher's conclusion) was supported by the findings (supporting data): unequivocal, credible, or not supported (Lockwood et al., 2017). "Unequivocal" findings are supported

by an illustration that is beyond reasonable doubt and not open to challenge (Lockwood et al., 2017). "Credible" findings lack clear association with an illustration, leaving them open to challenge (Lockwood et al., 2017). Findings that are "not supported" are findings that are not supported by the data (Lockwood et al., 2017). The second step in the data synthesis process was to develop categories in which to group findings that are similar (Lockwood et al., 2017). In accordance with the JBI method, each category would contain at least two findings per category (Lockwood et al., 2017). The development of at least one synthesized finding(s) of two or more categories was the final step in the data synthesis process for the systematic review (Lockwood et al., 2017). Any deviation from these methods was clearly documented to ensure transparency (Lockwood et al., 2017).

Summary

The purpose of the project was to identify evidence-based, culturally sensitive strategies that have proven effective in addressing obesity among Hispanic-American pediatric patients in the primary care setting. I used a systematic review, utilizing the JBI method and a number of evidence-based tools, to examine those strategies and offer recommendations for use among pediatric primary care providers across the country. In the next section, I discuss the findings, implications, strengths, and weaknesses. I also explore recommendations for translating the evidence into practice.

Section 4: Findings and Recommendations

Introduction

A steady increase in overweight and obese Hispanic-American children and adolescents had been noted in the facility where I practice as a primary care PNP (Office Practicum Medical Software, 2016). The existing approach utilized in the facility to prevent and treat obesity among Hispanic-American pediatric patients in the facility is ineffective. A provider knowledge deficit related to culturally sensitive strategies for the prevention and treatment of obesity was the gap-in-practice largely contributing to this practice problem. Identification of evidence-based, culturally sensitive strategies that effectively reduce obesity among Hispanic-American pediatric patients through a systematic review of the literature was the purpose of this DNP project. I used the following practice-focused question to guide that review: Among Hispanic-American pediatric patients, what culturally sensitive strategies are effective in preventing and treating obesity in the primary care setting?

With the approval of the Walden University IRB and utilizing the JBI method, I undertook a systematic review of the literature to identify evidence-based specific strategies that have proven effective in preventing and treating obesity among Hispanic-American pediatric patients in the primary care setting. I used keywords and Boolean phrases extracted from the clinical question to search the relevant databases in the Walden University Library, as well as the internet, for scholarly articles, white papers, and clinical practice guidelines published as far back as needed to complete a valid systematic review (Walden University, 2017B; White et al., 2016). I collected and stored all articles retrieved during the literature search in JBI's SUMARI. I removed duplicates

from the reference manager prior to screening each article for inclusion in the systematic review. I then screened titles and abstracts to remove articles unrelated to the project topic. Using the predetermined inclusion and exclusion criteria, I then screened the full text of each article for inclusion in the review (Choi et al., 2019). I placed all articles meeting inclusion criteria in a review matrix for further analysis (Choi et al., 2019). I extracted data from each article using the JBI QARI Data Extraction Tool for Qualitative Research, and I used the JBI Critical Appraisal Checklist for Qualitative Research to appraise the evidence presented in each article (Lockwood et al., 2017). Two independent reviewers carefully reviewed each article meeting inclusion criteria, extracted from each article the study's findings and illustrations, and entered this information in the JBI SUMARI where the level of credibility was determined. Level of credibility was assigned based the degree to which illustration was supported by its findings as unequivocal, credible, or not supported (Lockwood et al., 2017). Categories in which to group similar findings were developed, and each category contained at least two findings per category (Lockwood et al., 2017). The development of at least one synthesized finding of two or more categories was the final step in data synthesis for the systematic review (Lockwood et al., 2017).

Findings and Implications

The initial literature search yielded 672 articles, from which 28 duplicates were removed. Of the remaining 644 articles, 18 were removed after screening for relevance. Using the inclusion and exclusion criteria, titles and abstracts of the remaining 626 articles were screened, and 18 articles met inclusion criterion. After a full review of those 18 articles, an additional two articles were excluded because the studies highlighted in

those articles were ongoing, and results were not yet available, leaving a total of 16 articles to include in the systematic review (see Appendix C). All 16 articles included in the review discussed single qualitative studies that offered specific, evidence-based strategies for preventing and treating obesity among Hispanic children and adolescents in the primary care setting.

The common theme (Figure 1) identified in this systematic review of the literature is the need for a close relationship between the individual providing anticipatory guidance in the primary care setting, the patient, and the patient's mother (Bender et al., 2013; Boudreau et al., 2013; Davis et al., 2015; Falbe et al., 2017; Heeman et al., 2019; James et al., 2008; Lilian et al., 2011; Stag et al., 2018; Zoorob et al., 2018). Specific strategies to facilitate such a relationship (Appendix H) include the provision of education and anticipatory guidance in Spanish, involvement of the family in the care plan, use of a promotora, and follow-up home visits or phone calls with the patient and his or her family for at least 6 months (Bender et al., 2013; Boudreau et al., 2013; Davis et al., 2015; Falbe et al., 2017; Goh et al., 2009; Gorin et al., 2014; Heeman et al., 2019; James et al., 2008; Lilian et al., 2011; Lindsay et al., 2014; Ma, 2015; Stag et al., 2018; Tarveno et al., 2018; Zoorob et al., 2018).

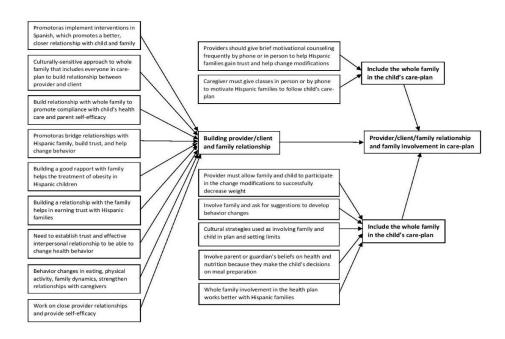


Figure 1. Core themes.

Nine of the 16 studies included in this systematic review suggested the most successful strategy utilized in primary care to prevent and treat obesity among Hispanic-American pediatric patients is the provision of anticipatory guidance in Spanish (Bender et at., 2013; Boudreau et al., 2013; Davis et al., 2015; Falbe et al., 2017; Heeman et al., 2019; James et al., 2008; Lilian et al., 2011; Stag et al., 2018; Zoorob et al., 2018). Hispanic families are most comfortable with and respond well to health care providers who speak their primary language and share some of their cultural beliefs and values (Tarveno et al., 2018; Falbe et al., 2017; Zoorob et al., 2013; Bender et al., 2014; Leung et al., 2017). Establishing a trusting relationship between Spanish-speaking health care workers and the family by respecting cultural influences on topics such as feeding practices can promote compliance with the diet modifications required to successfully prevent and treat obesity among this patient population (Heeman et al., 2019; James et al., 2008; Lilian et al., 2011; Stag et al., 2018; Zoorob et al., 2018). For example, primary

care providers who educated Hispanic-American parents on the preparation of healthy meals in Spanish demonstrated a higher level of success with preventing and treating obesity among the Hispanic pediatric patients in their practice (Bender et al., 2013; Boudreau et al., 2013; Davis et al., 2015; Falbe et al., 2017). This specific strategy promotes relationship building between the patient, the family, and the provider, and it is this single factor that has demonstrated the greatest effect on weight management among Hispanic-American pediatric patients in the primary care setting (Bender et al., 2014; Falbe et al., 2017; Leung et al., 2017 Tarveno et al., 2018; Zoorob et al., 2013).

Five of the 16 studies included in this review cited involvement of the family in the child's health care plan as a strategy that has proven effective in the prevention and treatment of obesity among Hispanic-American pediatric patients in the primary care setting (Boudreau et al., 2013; Goh et al., 2009; James et al., 2008; Ma, 2015; Tarvrno et al., 2018). Successful prevention and treatment of obesity among Hispanic-American children and adolescents requires the development of a weight-loss plan that is culturally acceptable and family-oriented, so engaging the whole family is necessary (Gorin, et al., 2014; James et al., 2008; Stang et al., 2008). Inviting and encouraging the family to participate in patient education, ask questions, and offer suggestions on activities and food choices promotes compliance with treatment plans and weight management among Hispanic pediatric patients (Boudreau et al., 2013; Goh et al., 2009; James et al., 2008; Ma, 2015; Tarvrno et al., 2018).

Four of the 16 studies included in this systematic review suggested the use of a promotora has also demonstrated success in preventing and treating obesity among Hispanic-American pediatric patients in the primary care setting (Bender et al., 2013;

Falbe et al., 2017; Goh et al., 2009; Gorin et al., 2014). A promotora is a Spanishspeaking, culturally informed, health care provider (Gorin et al., 2014; Stang et al., 2014). According to the articles included in this review, use of a promotora in the primary care setting has a significant influence on weight management among Hispanic-American pediatric patients (Bender et al., 2013; Falbe et al., 2017; Goh et al., 2009; Gorin et al., 2014). Clinicians often do not feel comfortable counseling families about obesity, and many believe that counseling will have little to no effect on preventing and treating obesity (Gorin et al., 2014). Further, providers working in primary care settings have very limited time to provide adequate anticipatory guidance, where the average length of a visit is less than 25 minutes (Gorin et al., 2014). Utilization of a promotora in these settings allow for additional time with a Spanish-speaking health care worker who shares the same culture as the patient and their family will promote successful weight management among Hispanic-American children and adolescents (Gorin et al., 2014; Stang et al., 2014). Promotoras have been used extensively to address disease and case management, health information transfer, and health promotion (Gorin et al., 2014; Stang et al., 2014). Their use has proven effective in promoting behavior change in multiple health care settings, including the pediatric primary care setting (Gorin et al., 2014; Stang et al., 2014).

The studies included in this systematic review also suggested providers in pediatric primary care settings provide follow-up counseling to Hispanic-American families either in person or by phone (Stang et al., 2014). Two of the 16 studies suggested that pediatric primary care providers offer follow-up home visits with or phone calls to the family for at least 6 months are effective strategies to prevent and treat obesity among

Hispanic-American children and adolescents (Gorin et al., 2014; Lindsay et al., 2014). Follow-up home visits and/or phone calls add a personal touch to the traditional anticipatory guidance provided in the primary care setting and has been linked to successful weight management among members of this patient population (Gorin et al., 2014; Lindsay et al., 2014). Use of a promotora within primary care clinics would be ideal (Leung et al., 2017). Promotoras can provide follow-up to at-risk Hispanic-American families in a manner that is convenient to them by facilitating phone or telehealth visits to reduce the burden associated with office visits (Leung et al., 2017). This approach would also facilitate safe, continued monitoring of these patients and their families during unforeseen circumstances, such as the current COVID-19 pandemic.

Several culturally sensitive strategies that have proven successful in preventing and treating obesity among Hispanic-American pediatric patients in the primary care setting were identified through the systematic review that serves as the foundation for the DNP project (Acheampong & Haldeman, 2013). Each of these strategies can be implemented in the primary care setting in a cost-effective manner and delegated to someone other than the advanced provider. This is important because primary care providers have very little time and attention to dedicate to providing the level of anticipatory guidance required with the patients most at risk and in need of extensive education, coaching, and encouragement. Utilization of these strategies will decrease morbidity and mortality among Hispanic-American children and adolescents across the lifespan, thereby relieving the significant burden obesity places on the economy and health care systems in communities and states across the country (Acheampong & Haldeman, 2013; White et al., 2016). Their utilization also sets the stage for studying the

efficacy of these four specific strategies, particularly as it relates to examining their impact on overweight and obese children and adolescents in the primary care setting.

The most significant unanticipated limitation associated with the project was the number of studies available for inclusion in the systematic review where the researchers actually monitored the weight of the participants as part of the evaluation process, rendering it difficult to actually assess whether or not the specific interventions were effective in preventing weight gain and/or reducing weight of the participants. For this reason, only 16 studies fit the inclusion criteria for this project. Another unanticipated limitation was the limited number of studies published in the United States, that could be included in the systematic review, which also contributed to the number of articles included in the review. The number of participants included in each of the studies included in this review was yet another unanticipated limitation. Many studies had only 30 to 50 participants, and some case studies only included a single Hispanic family.

There are multiple potential implications for positive social change when the incidence of obesity among Hispanic-American children is reduced. Successful prevention and treatment of obesity in childhood reduces its associated social challenges and psychological disorders, as well as the likelihood of obesity into adulthood (White et al., 2016). Quality of life is increased, and the long-term economic effect on the health care system and society as a whole is decreased, thereby creating positive social change (Acheampong & Haldeman, 2013; CDC, 2017; Davis et al., 2015; White et al., 2016).

Recommendations

A provider knowledge deficit related to culturally sensitive strategies that effectively address the treatment and prevention of Hispanic obese children in the

primary care setting was the gap-in-practice largely contributing to the practice problem (Acheampong & Haldeman, 2013). Careful analysis and synthesis of the 16 articles included in the systematic review identified four main strategies that have proven effective in preventing and treating obesity in Hispanic pediatric patients in the primary care setting, including the provision of education and anticipatory guidance in Spanish (Bender et al., 2013; Boudreau et al., 2013; Davis et al., 2015; Falbe et al., 2017; Heeman et al., 2019; James et al., 2008; Lilian et al., 2011; Stag et al., 2018; Zoorob et al., 2018; use of a promotora in the primary care setting (Bender et al., 2013; Boudreau et al., 2013; Davis et al., 2015; Falbe et al., 2017; Heeman et al., 2019; James et al., 2008; Kayne et al., 2011; Stag et al., 2018; Zoorob et al., 2018); involvement of the family in the child's health care plan (Boudreau et al., 2013; Goh et al., 2009; James et al., 2008; Tarveno et al., 2018; Ma, 2015); and provision of patient and family education by way of follow-up home visits or phone calls for at least 6 months (Lindsay et al., 2014; Gorin et al., 2014).

I am the owner and only advanced practice provider working in the clinic where the clinical problem was identified. A decision is made to designate a clinic nurse of Hispanic descent who fluently speaks Spanish as the promotora. The promotora will provide anticipatory guidance to patients and their families in their native language in the clinic setting, while also providing the recommended follow-up phone calls and home visits with these families via telemedicine. During these visits, the promotora will assess how well the family is doing with their behavior and dietary modifications, discuss any barriers the family is experiencing in implementing behavior changes and dietary modifications, reinforce positive behaviors, and gradually implement new mutually

agreed upon behaviors and dietary changes, as indicated (Goh et al., 2009; Gorin et al., 2014).

Contribution of the Doctoral Project Team

I am the project team leader and was primarily responsible for the performance of literature searches, article retrieval, data compilation and synthesis, and the formulation and presentation of the DNP project findings and recommendations. A family nurse practitioner was the only other member of the project team. In accordance with the JBI methodology for the performance of systematic reviews of the literature, this member served as the required, second reviewer of the articles included in the review.

Strengths and Limitations of the Project

The intense, critical appraisal process required of the JBL method for conducting systematic reviews was the major strength of the DNP project. This method requires the use of multiple, validated tools and two independent reviewers to increase the rigor and quality of the review, while also reducing bias. Despite its strengths, the DNP project also had some major weaknesses, most of which were related to the unanticipated limitations previously outlined in this paper. The most serious weakness was the availability of the number of articles meeting the inclusion criteria for this review. A lack of participants included in each of the studies highlighted in the articles included in the systematic review was yet another weakness of the project. Many studies included in this review had only 30 to 50 participants, and some case studies only included a single family.

Future potential projects to address obesity among Hispanic-American patients was discussed with members of the staff in the local pediatric clinic. Because the four strategies identified in the systematic review will be implemented in the local clinic, one

potential project may include a study to examine the efficacy of those strategies. A systematic review would also be a feasible option for addressing other common health care problems in the clinic and local community, including malnutrition, sedentarism, and lack of access to quality medical care in Hispanic-American children.

Section 5: Dissemination Plan

The purpose of the DNP project was to conduct a systematic review of the literature to identify evidence-based strategies that would address obesity among Hispanic-American pediatric patients in the primary care setting. That review evidenced four specific strategies, and based on those findings, several recommendations for addressing the clinical practice problem in the local clinic is formulated. The proposed recommendations and implementation plan were presented to, discussed with, and well received by the clinical staff during a scheduled meeting. Upon conclusion of that meeting, each clinical staff member verbalized a commitment to their implementation.

Findings of the DNP project are submitted to ProQuest for publication.

Submission to the *Journal of Pediatrics, Journal of Obesity*, and *The Journal of Pediatric Health Care* would also be appropriate in facilitating broad dissemination of the project findings and recommendations to the target audience. Lectures and poster presentations detailing the project findings at the local, state, regional, and national levels would also be appropriate, specifically including the Texas Nurse Practitioner and the National Association of Pediatric Nurse Practitioners annual conferences.

Analysis of Self

Twenty-six years after earning a master of science in nursing with a clinical focus as a nurse practitioner specializing in primary pediatric care, my journey through the DNP program began 5 years ago in 2015. The main goal was to gain additional knowledge and skills that would transform me into a scholar practitioner, utilizing the best available evidence to solve clinical practice problems. Indeed, the DNP program has developed my ability to facilitate the improvement of patient outcomes and advance the

profession of nursing through the use of evidence-based, clinical practice. This journey has facilitated a greater appreciation for translating the best available evidence into practice to solve clinical practice problems encountered in my everyday practice as a primary care PNP working in the primary care setting. Further, the DNP project provided me with a unique opportunity to utilize the best available evidence to inform and improve practice in my own clinical setting. Promoting positive health outcomes through the utilization of evidence-based best practices has been empowering. It has given me the confidence to advocate positive change not only at the local level, but at the state level and beyond as well.

The journey through the DNP program was not, however, without its challenges. Fortunately, those challenges contributed to my transformation into the scholar-practitioner I am today. Scholarly writing was a real struggle for this seasoned clinical practitioner. With the assistance of my project chair, the Walden Writing Center, and a few colleagues, I improved my writing style and successfully completed the DNP capstone project. I also struggled with literature searches, as well as deciding theoretical and systematic review models to support and guide the DNP project, but I tirelessly worked with Walden professors and librarians to overcome those challenges.

Summary

The local pediatric primary care clinic has experienced a steady increase in the incidence of overweight and obese Hispanic-American patients during the past 5 years (Office Practicum Medical Software, 2016). A provider knowledge deficit related to evidence-based, culturally sensitive strategies in the pediatric primary care setting is the gap-in-practice largely contributing to the practice problem. The purpose of the DNP

project was to conduct a systematic review to bridge that gap-in-practice to solve the practice problem. A systematic review of the literature is conducted to identify specific evidence-based strategies to bridge that gap-in-practice. Four evidence-based strategies are identified in that review, including the provision of education and anticipatory guidance in Spanish, involvement of the family in the plan of care, use of a promotora, and follow-up home visits or phone calls with the patient and family for at least 6 months (Bender et al., 2013; Boudreau et al., 2013; Davis et al., 2015; Falbe et al., 2017; Goh et al., 2009; Gorin et al., 2014; Heeman et al., 2019; James et al., 2008; Lilian et al., 2011; Lindsay et al., 2014; Ma, 2015; Stag et al., 2018; Tarveno et al., 2018; Zoorob et al., 2018). Each of these strategies are feasible and will be implemented in the local clinic to address the practice problem. Preventing and treating obesity during the early years will reduce its likelihood into adulthood, decrease morbidity and mortality, increase the quality of life, and decrease the long-term economic effects on the health care system and society as a whole, thereby creating positive social change (Acheampong & Haldeman, 2013; CDC, 2017; Davis et al., 2015; White et al., 2016).

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Appendix A: Keywords

Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	Concept 6
Hispanic-	Pediatric	Strategies	Prevent	Obesity	Primary Care
American					
Latino-	Children	Interventions	Prevention	Obese	Primary Care
American					Setting
Latina-	Adolescents	Initiatives	Treat	Overweight	Primary Care
American					Clinic
Mexican-	Teens	Approach	Treatment		
American					
		Teaching	Management		

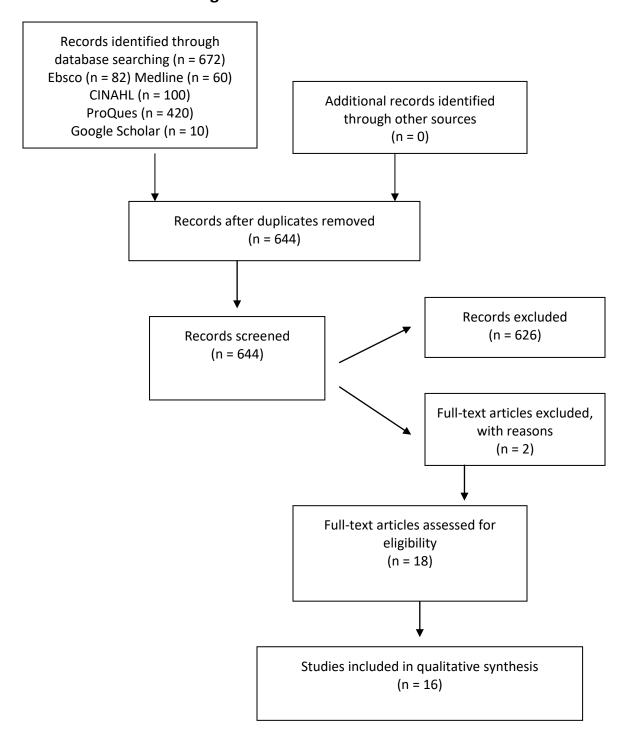
Appendix B: Search Terms

Search Terms Scholar	Ebsco	Medline	CINAHL	ProQuest	Google
Hispanic pediatric obesity/AND strategies	40/1	30/2	75/2	234/1	10/2
Hispanic obese 28 children/AND cultural-sensitive strategies	//0	29/1	20/1	150/1	210/1
Mexican overweight children/AND primary care	14/0	1/3	5/1	36/1	44/1

(Total number of articles from initial search=672/ total number of articles after title review = 18 Total duplicate articles 16. Total articles after abstract review and evaluation = 16)

Appendix C: Prisma 2009 Flow Diagram

PRISMA 2009 Flow Diagram



Appendix D: Data Analysis and Evaluation

Author/ Date	Aim Setting/ Sample	Design Intervention	Results	Limitations Documentation Quality Measures	Level of Evidence
Heerman/ 2019	Hispanic obese children and their family/ 117 participants USA	Qualitative Control Trial Behavior intervention/ focus groups classes	Children lost weight. This study shows that using a provider that shares the same culture, believes and practice helps the family bond with the provider. The provider allowing the family to participate in the child's care-plan also helps in the compliance and positive outcome of the health care modifications.	Some Participants did not attend all classes, which presents the potential for a selection bias	Unequivocal
Tarverno/ 2018	Hispanic obese children and their family/ 49 participants USA	Qualitative Interactive/ tailored sessions	Children lost weight. Since the consultations were done at home the visits were informal which allowed the family to gain trust and be able to learn and comply with the change modifications.	Small sample size Hispanic data was only collected so no comparison to other ethnic groups	Un- equivocal
Falbe/2017	Hispanic obese	Qualitative Control Trial	Intervention reduced BMI	Small sample size	Un- equivocal

	children and families 28 Participants USA	Culturally tailored family-base program/class	on all Hispanic obese children. Three main categories encompassing five themes emerged: a) bridging communication by promotoras, b) promotoras personal qualities, including themes of kindness, caring and shared experiences with patients, and c) impactful task performance, including themes of motivation, positive environment, and self-efficacy.	Only one interviewer coded the transcripts	
Zoorob/ 2013	Hispanic families with obese children USA	Qualitative Control Trial Interactive/ focus groups/ program	The primary outcome was a decrease in children's BMI with secondary outcomes of change of dietary behaviors, preferences for fruits and vegetables, physical	The possibility of cross-contamination of participants in the two interventions since both interventions are delivered in the same environment	Un- equivocal
Goh/2009	Hispanic obese	Qualitative Observation/	activity, and screen time Parents and children	Qualitative research is	Un- equivocal
	children	focused groups/	showed behavior	exploratory and not designed to	

		T .	Ι	T a	I
	and their	classes	changes and	formally test a	
	families		weight lost.	hypothesis	
	182		Program helped		
	Participants		their child and		
	USA		whole family		
	CDIT		by allowing		
			them to		
			participate in		
			their child's		
			care plan.		
			Participants felt		
			appreciation		
			towards the		
			health care		
			worker for		
			taking the time		
			to help by		
			providing		
			government		
			help		
			information.		
			Getting a call		
			from the health		
			care worker		
			weekly showed		
			a sense of		
			caring for their		
			child and the		
			whole family.		
Davis/2015	Hispanic	Qualitative	Mothers gain	This study did not	Un-
	mothers and	Exploratory/	education on	obtain data from	equivocal
	their obese	Interactive/	health and	other ethnic	equivocai
	children				
		classes	obesity and the	groups besides	
	39		children all	Hispanics so no	
	Participants		decreased on	comparisons can	
	USA		their BMI.	be made from	
			Cultural	other ethnic	
			sensitive	groups	
			strategies		
			which allowed		
			the children to		
			learn their		
			Mexican		
			culture as well		
			as the		
			American		
			culture helped		
			the mothers in		
			their health		
			men neathi		

			change modifications. Weekly phone calls by the provider also helped in showing the sense of caring		
Ma/2012	One Hispanic family USA	Qualitative Interview/ case study	Hispanic obese child lost weight Provider spoke Spanish to the family when teaching and also built a good provider/patient relationship. Parent allowed to participate on the child's care-plan which made the experience positive with the outcome of compliance in change modification.	Small sample size One Hispanic family	Un- equivocal
Bender/ 2014	Hispanic obese children and their mothers 43 Participants USA	Qualitative Interactive/ Trained program	Sugar soft drinks had been decreased significantly, consumption of water had significantly increased and overall both mothers and children's BMI had also decreased. The mothers were very happy with the promotoras and	Small sample/ Pedometer data was not taken for several weekdays and several weekends for a more accurate representation of walking patterns.	Un- equivocal

	_	1			,
			believed that		
			they really		
			cared about		
			them and their		
			children.		
			Keeping in		
			contact with the		
			families for		
			fifteen months		
			played a big		
			impact in the		
			behavior		
			change.		
Taverno/	Hispanic	Qualitative	All the children	Small sample	Un-
2018	obese	Descriptive	decreased in	Larger focus	equivocal
====	children	Interactive/	their BMI. The	groups could have	Jan , John
	and their	Focus groups	families were	additional themes	
	family	Teaching	happy with the	additional allomos	
	32	program	results and		
	Participants	program	appreciated the		
	USA		family		
	CDI		involvement		
			especially in the		
			participation of decision		
			making on the behavioral		
			changes. This		
			study showed		
			that culturally		
			sensitive		
			strategies such		
			as building a		
			close		
			relationship		
			with the		
			provider and		
			including the		
			whole family in		
			the child's		
			care-plan help		
			with		
			compliance and		
			promotes		
			healthy change		
			modifications.		

Gorin/2014	Hispanic obese children and their mothers 150 Participants USA	Qualitative Control Trial Exploratory/ Interactive	The group that received only brief motivational counseling (BMC) at their primary care providers did not show any changes with weight in contrast to the groups that received BMC plus phone calls and BMC plus home visits showed a decrease in BMI.	Did not specify	Un- equivocal
Boudreau/ 2012	Hispanic obese children and their mothers 41 Participants USA	Qualitative Controlled Trial Interactive/ Focus groups Trained classes	The controlled group's children lost weight while the others either stayed the same or gained weighted. The intervention contained powered up classes given by community health care provider that educated children and caregivers about healthy behaviors surrounding nutrition, activity, and stress management. The intervention	Small sample size Limited to predominantly Latino population	Unequivocal

_		1			
			received was		
			culturally		
			sensitive		
			coaching to		
			empower		
			families to		
			incorporate		
			learned		
			behaviors and		
			address both		
			family and		
			social barriers		
			to lifestyle		
			changes.		
Kayne/	Hispanic	Qualitative	At the end of	Small number of	Un-
2011	obese	Interview/	the program a	participants/	equivocal
	children	Focus groups	post-test	Another limitation	
	and their	Teaching	showed the	is that fruits and	
	mothers	program	Hispanic	vegetables were	
	37		mothers	asked about within	
	Participants		gaining	the same	
	USA		education and	questions. Even	
			confidence on	though participates	
			healthy cooking	often discussed	
			and goal	motivators/barriers	
			setting. The	to eating fruits and	
			children all lost	vegetables	
			weight and also	separately	
			felt as if they		
			could choose a		
			healthy meal		
			from junk food.		
			The program		
			leaders allowed		
			the families to		
			share healthy		
			cooking and		
			also allowed		
			them to eat		
			together after		
			class which		
			helped create a		
			good		
			relationship.		
			Building trust		
			with the clients		
			makes the		
			Hispanic		
			mothers loyal		

			to the provider and compliance follows with the outcome of their children's success in losing weight.		
Lindsay/ 2011	Hispanic obese children and their mothers 30 Participants USA	Qualitative Control Trial Interactive/ Training Program	The mothers showed a great increase in education and the children all lost weight. The mothers mentioned that the phone calls for three months after the classes helped them comply with the change modifications. They felt as they built a good relationship with the health care provider. They also expressed appreciation on all the help that the health care provider gave them to receive government help to be able to afford buying healthy foods.	Small sample size Findings are based on nonrandom, purposive, and relatively small sample of low income Latino families and Latino providers	Un- equivocal
Stang/ 2018	Hispanic obese children and their families 64 Participants	Qualitative Interview/ Focus Group Training Program	The results showed that the parents increased on health education and the children	The population was from the upper Midwest and findings may not be applicable to all US Hispanics families	Un- equivocal

	TICA		1 1	1.1 1 1	1
	USA		showed a	with pre-school	
			weight and	children.	
			BMI lost.		
			Five themes		
			that were		
			focused on the		
			twelve- month		
			program: a)		
			cultural beliefs		
			and practices		
			are inconsistent		
			with obesity		
			prevention, b)		
			cost and		
			convenience, c)		
			positive		
			parenting		
			practices, d) we		
			want to learn		
			more about		
			being healthy,		
			and e) gardens,		
			parks, gyms,		
			and school		
			meals. Classes		
			were led by		
			Spanish		
			speaking health		
			care workers		
			and taught in		
			Spanish. The		
			course guide		
			was developed		
			around whole		
			family		
			involvement.		
			The mothers		
			were allowed to		
			share		
			experiences on		
			healthy		
			Mexican		
			cooking and the		
			fathers would		
			give physical		
			activity		
			suggestions.		
James/	Hispanic	Qualitative	Mothers gained	Small sample	Un-
2008	obese	Interactive/	health		equivocal

children	Training	knowledge and	The study	
and their	classes	both the mother	included the father	
mothers		and child lost	in a limited role	
32		weighted.		
Participants		Parents and		
USA		children		
		completed		
		weekly		
		readings on		
		nutrition and		
		physical		
		activity topics		
		and set weekly		
		goals using		
		self-monitoring		
		tools that were		
		reviewed at the		
		weekly group		
		meetings.		
		Parents were		
		encouraged to		
		share their		
		progress and		
		ideas and help		
		one another in		
		healthy meal		
		prepping. The		
		whole family		
		was invited to		
		field trips to		
		grocery stores		
		to help parents		
		choose healthy		
		snacks for the		
		children.		

Lindsay/	Hispanic	Qualitative	The results	Small sample	Un-
2015	obese	Observation	showed the	Findings are based	equivocal
	children	Interview	mothers gained	on a non-random,	
	and their	Training	education,	purposive sample	
	families	program	confidence and	of low income	
	44		self-efficacy	Hispanics and no	
	Participants		and the	other ethic	
	USA		children lost	comparison	
			weight.		
			The health care		
			provider		
			understood the		
			culture of the		
			families and		
			involved their		
			beliefs, values		
			and practices.		
			Allowing them		
			to keep their		
			Mexican		
			traditions but		
			also teaching		
			American		
			culture helped		
			in negotiating		
			on healthy		
			behavior		
			changes.		
			Including the		
			whole family in		
			developing a		
			heathy care		
			plan for their		
			child also		
			helped with		
			compliance and		
			success.		

Appendix E: Literature Review Matrix

Author(s) & Publication Year	Population & Setting	Study Purpose & Intervention(s)	Total Participants	Outcomes & How Measured	Time Period	Notes

Appendix F: JBI QARI Data Extraction Tool for Qualitative Research

Reviewer	Date	
Author	Year	
Journal	Record Nu	umber
Study Description Methodology		
Method		
Phenomena of interest		
Setting		
Geographical		
Cultural		
Participants		
Data analysis		
Authors conclusions		
Comments		
Complete	Yes 🗆	No □

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Findings	Illustration form Publication (page number)	Evidence				
		Unequivocal	Credible	Unsupported		
Extraction of finding	gs complete	Yes 🗌	No 🗆			

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Reference: Lockwood C., Porrit K., Munn Z., Rittenmeyer L., Salmond S., Bjerrum M., Loveday H., et al. (2017). Chapter 2: Systematic reviews of qualitative evidence. In: Aromataris E, Munn Z (Editors). *Joanna Briggs Institute Reviewer's Manual*. Retrieved from https://reviewersmanual.joannabriggs.org/

Appendix G: JBI Critical Appraisal Checklist for Qualitative Research

Revie	ewerDate				
Auth	orYear		_Reco	rd Number	
		Yes	No	Unclear	Not applicable
1.	Is there congruity between the stated philosophical perspective and the research methodology?				
2.	Is there congruity between the research methodology and the research question or objectives?				
3.	Is there congruity between the research methodology and the methods used to collect data?				
4.	Is there congruity between the research methodology and the representation and analysis of data?				
5.	Is there congruity between the research methodology and the interpretation of results?				
6.	Is there a statement locating the researcher culturally or theoretically?				
7.	Is the influence of the researcher on the research, and vice- versa, addressed?				
8.	Are participants, and their voices, adequately represented?				
9.	Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?				
10.	Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?				
	all appraisal: Include Exclude Seek funents (Including reason for exclusion)	rther inf	。		

Reference: Lockwood C., Porrit K., Munn Z., Rittenmeyer L., Salmond S., Bjerrum M., Loveday H., et al. (2017). Chapter 2: Systematic reviews of qualitative evidence. In: Aromataris E, Munn, Z (Editors). *Joanna Briggs Institute Reviewer's Manual*. Retrieved from https://reviewersmanual.joannabriggs.org/

Appendix H: Key Strategies

Successful culturally-sensitive strategies to treat and prevent Hispanic pediatric obesity

Theme: Building a Good, Close Relationship Between Provider, the Hispanic Child, and mother

Action: The provider that is teaching the classes must use culturally-sensitive strategies as teaching in Spanish, bond with the whole family and include their culture when developing health change modifications. The primary care setting providers may want to invest in the use of a Promotora (health paraprofessionals) as part of the intervention team.

Whys and Whats: Promotoras are also known as community health workers, they are trusted, trained, and respected members of the community. They provide informal community-based health-related services such as health education, referral and follow-up, basic preventive health care, and home visiting services.

Theme: Family Involvement in Child's Health Care Plan

Action: Include the whole family in classes, activities and health change modifications when treating Hispanic obese children.

Whys and Whats: Treating Hispanic obese children requires the development of a weight-loss plan that is culturally acceptable and family-oriented so engaging the whole family in addition to the child is necessary. Parents play an important role in developing a home environment that could foster positive dietary behaviors and developmental of lifelong habits contributing to weight status and the engagement of the family within interventions to promote an overall healthy lifestyle.

Theme: Education and Change Modifications Must be Done Personally

Action: Classes, activities, and counseling should be done in-person or by phone, for a certain period of time, to be successful in treating and preventing Hispanic obese children.

Whys and Whats: The idea of providing classes in the primary care setting by a promotora for at least three months followed by call or home visits for another three months have been proven to be successful. The Hispanic families are repeatedly being reminded by the promotoras of change modifications that were developed in the classes. The families feel a bond and a sense of care from the provider when taking the time to call or visit for a period of time.